# Health disparities experienced by ethnic minority and majority populations – an analysis based on self-reported health and health service data

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## ABSTRACT

The population health of ethnic minorities in Thailand lags behind as Universal Health-care Coverage Scheme progresses among majority populations. We analyze their difficulties in using health services and show the complexity of health disparities experienced by different ethnic populations by using census, survey and qualitative data collected by the Access to Care in Communities Project of the Program for HIV Prevention and Treatment in rural Northwestern Thailand from 2012 to 2016. The results show that Chinese and Lahu groups have the most difficulties in getting healthcare for different reasons (mainly language barrier and ineligibility for health insurance among Chinese and economic constraints for Lahu), while Northern Thai as majority also reported delaying using public health services for various reasons, such as not having enough health knowledge. The complexity is also found within ethnic groups and poses great challenges for healthcare providers to tailor interventions for those ethnic minorities.

## INTRODUCTION

This paper intends to show the differences in self-reported health data and the complexity of health disparities experienced by ethnic groups in a small geographical area in rural northwestern Thailand. There are at least 2 million members of ethnic minorities, and at least 6 million recent trans-border migrants living in Thailand, many of whom are themselves members of ethnic minorities. These sub-populations are not epidemiologically isolated from the ethnic majority population of Thailand, but many of them are constrained by legal, socioeconomic and cultural factors in their knowledge of health and health services and their use of available public and private health services (Kunstadter, 2013).

Previous research among different ethno-linguistic communities near the Myanmar border in northwestern Thailand[1] showed significant differences in knowledge of HIV, use of HIV-related

[1]The study area is located near drug producing sites in neighboring countries and is still the main area of drug smuggling in Thailand with high rates of IV drug use.

health services, and stigmatization of People Living with HIV/AIDS (PLWHA). Among the ethnic minority groups (Chinese, Lahu, Hmong and Tai Yai) included in our research area, the Chinese group, with continued large-scale immigration from Myanmar and China, has the least HIV knowledge and the highest level of HIV stigma. On the other hand, Lahu community of Nongkiow, a village close to the Chinese village of Arunothai, has worse socioeconomic status than Chinese but better knowledge of HIV and much lower HIV stigma, but much poorer self-reported health status. These differences suggest the ethnic minority groups in this area may perceive and evaluate their own health and sickness differently, may have different experiences in getting health care, and may have very different health behaviors.

Thailand has Universal Health-care Coverage (UHC) Schemes that allow universal very low-cost access to government prevention, treatment and care services for all the citizens of Thailand regardless of ethnicity and nationality, as well as for some recent immigrants. However, the reality of healthcare usage among ethnic minorities is far from the goal of UHC with various barriers to utilize the available medical resources. Ethnic minorities and trans-border migrants are generally disadvantaged but vary considerably in socioeconomic resources available for use for health services. They also vary among themselves and in comparison with the local ethnic Thai majority with respect to reported constraints to access to services. Minorities and especially recent migrants are generally less likely to health insurance coverage. They are also likely to have less Thai language ability, less education and less income. However self-reported data on health could be misleading for assessing the wellbeing of those groups. To improve their access to healthcare, the complexity of ethnic minorities' health experiences should be taken into account for further interventions.

## DATA & METHODS

The study area is an ethnically diverse rural lowland and upland area on the Thai-Myanmar (Burma) border. Large numbers of ethnic minorities and migrants live in ethnically homogeneous communities in which more than 90% of the residents in a community are members of the specified dominant ethnic group. Census, survey and qualitative data were collected by the Access to Care in Communities Project (ATC) of the Program for HIV Prevention and Treatment (PHPT) from 2012 to 2016.

To control for geographic factors associated with use of services and health information, the communities selected are all at least 20 km from the district hospital, but all the communities are within 10 km of a Rural Community Health Improvement Hospital (RCHIH, still commonly called anamai or health stations). Data were collected by trained native speakers of the community language. Consenting women with at least one child born within five years of survey were eligible for inclusion in the survey, along with their consenting husbands or partners.

Census data include age, sex, household composition, marital status, religion, and ethnicity. In addition to personal characteristics collected by census data, ATC survey data include questions about socioeconomic status (education, occupation, income, self-evaluated financial condition, etc), reproductive health, family planning, self-reported health and use of health services. Survey respondents were asked an open-ended question about their experience with constraints to access to health services, and a series of 30 questions about specific reasons which they may have experienced which caused them to delay or not use needed services (e.g., cost of services, availability of transportation, unable to leave work).

**Table 1- Census and Survey Data of Communities**

| | Chinese | Hmong | Lahu | Tai Yai | Northern Thai | Total |
|---|---|---|---|---|---|---|
| Number of communities | 7 | 2 | 12 | 7 | 3 | 31 |
| **Total Numbers of Women and Men in the Census by Ethnic Group** | | | | | | |
| Women | 4617 | 1130 | 3021 | 1658 | 876 | 11302 |
| Men | 4414 | 1118 | 2906 | 1549 | 1045 | 11032 |
| Total in Census | 9031 | 2248 | 5927 | 3207 | 1921 | 22334 |
| Censused households | 1485 | 335 | 1191 | 708 | 542 | 4261 |
| Mean Household Size | 6.08 | 6.71 | 4.98 | 4.52 | 3.54 | 5.24 |
| **Total Numbers of Women and Men Surveyed in ATC Project by Ethnic Group** | | | | | | |
| Women | 370 | 179 | 393 | 170 | 52 | 1164 |
| Men | 261 | 150 | 306 | 148 | 36 | 901 |
| Total Surveyed | 631 | 329 | 699 | 318 | 88 | 2065 |

Table 1 shows the study population in our data. The ethnic population differ in size partly because of the distribution of ethnic groups in the study area, and partly because of our interest in the Chinese community given their known divergence from the other groups. Northern Thai population is small because of their very low fertility and the high proportion of young adults who have moved temporarily or permanently to urban areas to find work. Both qualitative data from interviews and quantitative data from census and surveys are coded, categorized, analyzed and compared across different ethnic groups to give an overview of health disparities experienced by the ethnic minorities.

## RESULTS

As Table 2 show (highlighted cells representing the most unfavorable situation among five groups), ethnic minority groups have very different needs to break their own barriers for healthcare.

Chinese respondents have the lowest secondary education graduation rate, the worst language ability and lowest insurance coverage among all groups. This reflects that Chinese group has the largest population of new/first generational immigrants who are ineligible for health insurance and could hardly go to see a doctor without a translator:

- almost 30% had difficulties because of the lack of Thai language ability.
- 20% of Chinese respondents were unable to go for health services if there is no one to company,
- around 25% delayed going or didn't go because they didn't have insurance.

In contrast to Chinese, the Lahu group has better Thai language ability, much better health insurance coverage (>90%) but worse financial situation. The mean and median income of Lahu are both the lowest among five groups although the maximum income earner in all five groups is also Lahu. Further, Lahu reports the worst health conditions among all five – although most people rated themselves as in at least fair health, almost three quarters of Lahu respondents reported that they were so ill or injured that they could not work at some time during the last 12 months. This might relate to the poor financial situation and their physical workload. Except for the lack of Thai language ability,

- almost half of the Lahu respondents delayed or were unable to go for health services because they did not have enough money for transportation and treatment;
- 30% of Lahu respondents tried traditional methods first; and around 20% bought medicine from drug stores before going for health services during the year prior to survey.

For Lahu, the difficulties they encounter tend to stop them going to see a doctor as their "unable-to-go" proportions for various questions are very high.

In contrast to Lahu, very few Northern Thai respondents reported they were "unable-to-go" for any reason, but very high "delayed going" proportions in several questions. For instance, Northern Thai respondents in general reported the best socioeconomic status, but they delayed going to hospital because they could not leave house or children. Northern Thai has a very small and nuclear family structure. Unlike Hmong and Chinese living with extended families, the help for housework or childcare received from other family members is quite limited for Northern Thai. Interestingly, inconsistent with previous research showing that Northern Thai group have the best health knowledge about HIV, 20% of Northern Thai delayed going because they thought they did not know enough about the diseases, while other groups had only small proportions considering not knowing enough about disease as a barrier for healthcare. In addition, as the most advantaged group, Northern Thai had the highest proportion reporting that they delayed going to hospital because they feared or had experienced scolding from the healthcare providers. There were other important reasons that Northern Thai delayed going, such as when they were seriously ill but thought were not, trying medicine from drugstore or trying traditional methods first, but Northern Thai rarely reported that they were *unable* to get access care.

**TABLE 2 - Ethnic variations in socioeconomic status, and use of health services**

| Variables | | Chinese | Hmong | Lahu | Tai Yai | Northern Thai |
|---|---|---|---|---|---|---|
| **Socioeconomic Status** | | | | | | |
| Graduated Secondary School | % | 11.41 | 39.2 | 12.02 | 31.10 | 54.53 |
| Can speak, read and write Thai | % | 28.84 | 84.80 | 45.35 | 64.98 | 93.18 |
| Median Income | THB | 60,000 | 50,000 | 45,500 | 100,000 | 81,000 |
| Mean Income | THB | 85,502 | 74,586 | 72,326 | 110,692 | 145,573 |
| Self Assessed Financial Condition Poor or very poor) | % | 21.40 | 10.33 | 27.18 | 14.87 | 9.09 |
| Have health insurance | % | 58.57 | 97.57 | 91.40 | 87.74 | 100 |
| **Self-reported health** ( Poor or very poor) | % | 1.90 | 2.42 | 5.73 | 2.20 | 2.27 |
| Have disease or infection that require long-term treatment | % | 3.97 | 6.08 | 8.17 | 7.55 | 21.59 |
| So ill or injured that couldn't work in last 12 months | % | 31.32 | 21.58 | 74.39 | 16.04 | 47.73 |
| **Difficulties to seek healthcare** | | | | | | |
| | Unable % | 15.76 | 3.34 | 20.37 | 2.83 | 6.82 |
| Lack money for transportation or treatment | Delayed % | 18.31 | 8.81 | 25.82 | 0.63 | 25.00 |
| Lack of Thai language ability | Unable % | 11.76 | 1.22 | 8.31 | 0.31 | 0.00 |
| | Delayed % | 17.33 | 1.22 | 11.75 | 0.94 | 1.14 |
| Lack of someone to company | Unable % | 20.16 | 0.00 | 11.02 | 0.31 | 2.27 |
| | Delayed % | 3.97 | 3.34 | 13.16 | 0.94 | 5.68 |
| | Unable % | 2.54 | 0.00 | 4.29 | 0.31 | 0.00 |
| Couldn't leave house or children | Delayed % | 2.54 | 0.30 | 8.87 | 0.00 | 19.32 |
| Feared or experienced healthcare provider scolded | Unable % | 2.38 | 0.91 | 7.30 | 0.31 | 2.27 |
| | Delayed % | 2.38 | 1.52 | 6.87 | 0.00 | 9.09 |
| | Unable % | 3.80 | 0.92 | 3.29 | 0.32 | 0.00 |
| Didn't know enough about the disease | Delayed % | 1.58 | 4.59 | 7.01 | 1.28 | 20.45 |
| | Unable % | 1.59 | 0.61 | 4.01 | 0.31 | 2.27 |
| Serious ill but thought was not serious | Delayed % | 2.23 | 5.47 | 7.87 | 6.29 | 19.32 |
| Tried medicine from drug store first | Unable % | 5.94 | 3.04 | 18.03 | 0.31 | 3.41 |
| | Delayed % | 6.73 | 18.54 | 22.46 | 6.29 | 26.14 |
| | Unable % | 3.67 | 3.34 | 13.32 | 0.31 | 1.14 |
| Tried traditional methods first | Delayed % | 1.91 | 13.68 | 16.91 | 0.63 | 15.91 |

Northern Thai's concerns and needs for healthcare system are totally special among all five groups. They have high aspirational expectations for understanding their disease, communicating well with the doctors and treating themselves before seeing a doctor. They reported the highest proportion (22%) of having a disease or infection that requires long-term treatment. That could result from high exposure rate of healthcare system for Northern Thai to get early diagnosis and treatment for some chronic conditions. The Northern Thai example shows that even if healthcare coverage reaches 100%, more problems and different expectations for healthcare system will arise when health conditions, health perceptions and health behaviors are all changed.

Hmong and Tai Yai generally have better socioeconomic situations than Chinese and Lahu, although Hmong have lower median income than Chinese. For many questions, Hmong and Tai Yai's responses are in the middle of the range, with responses to some questions similar to Chinese and some questions closer to Northern Thai. Generally, the reported difficulties are quite few for these two groups, especially Tai Yai. This may indicate a phase after achieving almost universal health coverage but before realizing new demands for a better healthcare system.

Further analyses of the correlation between socioeconomic status and the difficulties of using health services show that those respondents with more resources regardless of their ethnicity are less likely to report difficulties. The specific definition of "Rich in Resources" respondents are those who has completed primary education, could speak Thai, have health insurance and have motor vehicle in household. Table 3 shows the consistent pattern across groups as Table 2, and "Poor in Resources" respondents are more likely to experience difficulties in seeking healthcare. For those "poor" respondents in Northern Thai, almost similar percentage of respondents experienced health difficulties as other ethnic minority groups. One exception is shown in Northern Thai as the "rich" group has higher proportions reported not knowing enough about disease, which again may reflect Northern Thai's high aspirational demands. In addition, analyses within ethnic groups were also conducted to see the difference in same-ethnic communities with different population compositions. As Table 4 shows, those big communities with a larger population including Arunothai of Chinese and Nong Khiow of Lahu have more constraints to access to health services than those small communities with a smaller population including Kae Noi of Chinese and Lahu and other small Lahu communities. This may due to the bigger proportion of new immigrants who have lower socioeconomic status a and have more barberries to seek care in larger communities.

## DISCUSSION

From these results, we can conclude that the details of health disparities experienced by different ethnic groups vary a lot and need different interventions to address. For example, Chinese group's use of health services could be improved by arranging some Chinese-Thai bilingual translators in district hospitals and by assisting the efforts of sub-district officials to help new immigrants get health insurance.

For the Lahu group, more detailed analyses of their health conditions are necessary. The cause of their exceptionally high illness and injury rates in past 12 months should be notified. The efforts to close equity gap for Lahu are made more difficult because of their generally low socioeconomic status, especially their low income, which needs to be improved at the same time.

The Northern Thai group poses some new problems for health care providers to address, such as long waiting time, health workers' attitudes, health knowledge education, self-assessment of illness, and how to make a choice between traditional, over-the-counter treatment versus healthcare in modern hospitals. Similar challenges will become more common as universal healthcare coverage scheme advances. The complexity of different intervention needs in this ethnic-diverse area implies more tailored interventions are needed at regional level to ensure the universal coverage and equal access to healthcare for everyone.

REFERENCE

Kunstadter, Peter. "Ethnicity, socioeconomic characteristics and knowledge, beliefs and attitudes about HIV among Yunnanese Chinese, Hmong, Lahu and Northern Thai in a north-western Thailand border district." *Culture, health & sexuality* 15, no. sup3 (2013): S383-S400.

**TABLE 3 – The health services use among "Rich in Resources" vs "Poor in Resources" respondents**

| Variables | % of unable +delay | Chinese | Hmong | Lahu | Tai Yai | Northern Thai |
|---|---|---|---|---|---|---|
| Lack money for transportation or treatment | Poor | 41.06 | 18.82 | 54.87 | 6.17 | 56.25 |
| | Rich | 8.82 | 9.84 | 28.00 | 0.64 | 26.39 |
| Lack of Thai language ability | Poor | 36.51 | 2.40 | 29.45 | 2.47 | 0.00 |
| | Rich | 0.00 | 2.46 | 0.44 | 0.00 | 1.39 |
| Lack of someone to company | Poor | 24.95 | 3.53 | 32.84 | 1.85 | 18.75 |
| | Rich | 1.46 | 3.28 | 6.17 | 0.64 | 5.56 |
| Couldn't leave house or children | Poor | 6.48 | 8.24 | 17.16 | 0.62 | 43.75 |
| | Rich | 0 | 1.23 | 4.85 | 0.00 | 13.89 |
| Feared or experienced healthcare provider scolded | Poor | 5.67 | 4.71 | 17.58 | 0.62 | 18.75 |
| | Rich | 1.46 | 1.64 | 7.05 | 0.00 | 9.72 |
| Didn't know enough about the disease | Poor | 4.86 | 12.94 | 11.65 | 2.53 | 6.25 |
| | Rich | 0.73 | 2.89 | 7.49 | 0.65 | 23.61 |
| Serious ill but thought was not serious | Poor | 4.25 | 9.41 | 14.19 | 1.23 | 31.25 |
| | Rich | 2.22 | 4.92 | 7.05 | 0.64 | 19.44 |
| Tried medicine from drug store first | Poor | 12.63 | 36.47 | 44.49 | 1.23 | 43.75 |
| | Rich | 12.78 | 16.39 | 32.16 | 0.64 | 26.39 |
| Tried traditional methods first | Poor | 1.22 | 24.71 | 33.69 | 1.85 | 12.50 |
| | Rich | 7.41 | 14.34 | 23.01 | 0.00 | 18.06 |

**TABLE 4 – Health services use in communities with different population composition**

| Variables | | Large Chinese | Small Chinese | Large Lahu | Small Lahu |
|---|---|---|---|---|---|
| Lack money for transportation or treatment | Unable % | 19.82 | 6.70 | 26.48 | 16.10 |
| | Delayed % | 23.04 | 7.73 | 35.89 | 18.78 |
| Lack of Thai language ability | Unable % | 16.13 | 2.05 | 8.71 | 8.03 |
| | Delayed % | 21.89 | 7.18 | 15.33 | 9.25 |
| Lack of someone to company | Unable % | 28.57 | 1.53 | 11.85 | 10.44 |
| | Delayed % | 4.38 | 3.06 | 15.33 | 11.65 |
| Couldn't leave house or children | Unable % | 3.69 | 0.00 | 3.48 | 4.85 |
| | Delayed % | 2.76 | 2.03 | 9.76 | 8.25 |
| Feared or experienced healthcare provider scolded | Unable % | **3.23** | 0.51 | 7.67 | 7.04 |
| | Delayed % | 3.46 | 0.00 | 10.10 | 4.61 |
| Didn't know enough about the disease | Unable % | 1.61 | 8.63 | 2.09 | 4.13 |
| | Delayed % | 1.38 | 2.03 | 8.71 | 5.83 |
| Serious ill but thought was not serious | Unable % | 1.84 | 1.03 | 4.53 | 3.64 |
| | Delayed % | 2.76 | 1.03 | 8.71 | 7.28 |
| Tried medicine from drug store first | Unable % | 4.38 | 9.47 | 11.15 | 22.82 |
| | Delayed % | 7.60 | 4.74 | 31.71 | 16.02 |
| Tried traditional methods first | Unable % | 3.23 | 4.67 | 6.97 | 17.76 |
| | Delayed % | 2.53 | 0.52 | 18.12 | 16.06 |