INJECTION PRACTICES
IN THE THIRD WORLD

A case study of Thailand

Action Programme on Essential Drugs

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Much research work, particularly in developing countries, at present goes unreported. The reasons for this include the intense competition to publish in the scientific press, and difficulties in matching the research resources of developed countries. The DAP research series was established to provide a forum for the rapid distribution of data and findings relevant to critical areas of drug policy and use. The Action Programme has a firm commitment to national operational research as part of its direct country support. It is also strongly committed to making the findings of such studies widely known and accessible. While every effort is made by the Programme to support studies of the highest possible quality, research skills and resources will vary from country to country. Documents in the DAP research series reflect this variation, and range from reports of very small scale studies, undertaken with minimal resources, to major global research involving substantive financial, scientific and editorial input.
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CHAPTER ONE

1. AIM AND OBJECTIVES

Many studies have reported on the widespread use of bio-medical drugs in developing countries, often without qualified medical advice. The informal and private sector is frequently the main supplier of drugs and types and numbers of private providers are numerous. They include shop owners, injectionists, paramedicals in private practice, drug stores, pharmacies and medical doctors. In most developing countries injections are particularly popular. This has lead to a very widespread abuse of injections causing concern about the transmission of infectious diseases such as HIV, hepatitis, and poliomyelitis (Wyatt 1993 and 1984, Man 1986, Guyer et al. 1980, Michel 1985, Reeler 1990).

However, at the time when this research project was designed, very little was known about the extent to which legitimate and non-legitimate providers were administering injections. Cunningham’s famous study of informal "injection doctors" in Thailand was almost unique in having sought both qualitative and quantitative information about injection practices (Cunningham 1970). Most other studies had been on the use of bio-medical drugs in general and had only en passant mentioned the problem of injections.

It was therefore decided to carry out a research study in Thailand with the following objectives:

1. Gain knowledge of the extent to which injections are sought by clients and administered by different types of health care providers in an urban and a rural setting in Thailand.

2. Explore the causal and contextual factors behind the popular demand for injections.

3. Suggest ways of reducing the popular demand for injections and of alleviating unsafe injection practices resulting in health risks.

Mahidol University was instrumental in the implementation of this study. The Department of Public Health provided medical expertise as well as making arrangements for the practical aspects of the field work. Expertise in medical anthropology was provided by Institute of Anthropology, University of Copenhagen. The two principal investigators represented the Department of Public Health and the Institute of Anthropology respectively. Funding was generously supplied by the Research Council of the Danish International Development Agency (DANIDA). Technical and financial support was also provided by the WHO Action Programme on Essential Drugs.
Injection practices in the third world:
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The aim of this report\(^1\) is to provide health care planners, nongovernmental organizations and consumer groups with a short overview of the results of the research project on injection practices in Thailand. The emphasis here is on how the results can be used in ways which are relevant to the efforts to improve the health of populations in Thailand and other developing countries. As such the results are complementary to the results from the WHO research on injection use in Indonesia, Senegal and Uganda\(^2\).

While it is hoped that the results will be put to practical use by health planners and others, it must be cautioned that the results presented in this report are representative of only one area in Thailand. There are wide cultural and socio-economic variations in the different regions of Thailand. Neither the general development process nor the health care system has developed in the same way in different areas. Thailand has traditionally been a country of tolerance and a richness of cultures and subcultures has flourished, not the least in the health scene.

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\(^1\) The present report is supplementary to a Ph.D. dissertation named "Patient or Customer: Social Empowerment in the Context of Commercialization" by Anne V. Reeler.

\(^2\) Injection practices research, WHO/DAP/92.9.
CHAPTER TWO

2. RESEARCH METHODOLOGY

2.1 Introduction

While many of the originally planned data collection methods were used, some had to be modified, both in light of the broadening of focus and because of the local culture. The main emphasis, however, remained on using a mix of quantitative and qualitative methodologies to collect the information. This strategy was chosen because each type of methodology would yield different types of information and because such a mixture would enable not only a cross validation of data, but also a more sophisticated perspective on the data.

The research area was located in the Northeast of Thailand, in the province of Udon Thani. The area was selected according to the following criteria:

1. It had to be an area where the researchers had good relations with some local health workers.
2. It had to be an area where there was a significant number of informal injection doctors.
3. It had to be an area where there were obvious physical and socio-economic differences between the urban and the rural areas.

The third criteria, urban-rural differences, was necessary in order to investigate whether increased access to health-related information and a larger number of accessible treatment providers would lead to significantly different treatment strategies.

2.2 Methods used in the rural setting

The major part of the field work period, that is nine months out of twelve, was spent in the rural setting. As the majority of Thais still reside in the countryside, it was felt that the main emphasis should be here. Compared to the urban setting, it was also a much more open and rewarding environment. An important factor here was the friendship and cooperation of the popular health centre midwife, Noi. Noi acted as research assistant and translator (one of the investigators knew some Thai but not enough to conduct the interviews on her own). This investigator lived with Noi and followed her in her daily work in the health centre. Noi was also important in defining and adapting the research methods and instruments, so that they were suitable in the local cultural context.
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In the period January to September 1991, the following data collection methods were employed in the village:

1. In-depth interviews with key informants in the village such as the village chief, the diviner, knowledgeable elder people, health centre staff etc.

2. Participant observation in the health centre and the village.

3. A survey of all the households in the village (209) using a semi-structured questionnaire. Socio-economic data were collected as well as data on illness episodes in the last two weeks, treatment strategies and costs of received treatment. This survey was conducted during the dry season and therefore respondents were at home in almost every house.

4. Focus group discussions on the classification of medicines, perceived quality of treatment providers, and concepts of diseases, body strength and quality of blood.

5. Analysis of the health centre and drug use records in a four week period, selected to coincide with the time of the survey.

6. A survey of local grocery shops which also sell a large range of bio-medical drugs. This survey included a stock inventory and questions to the shop keeper about weekly sales and dosage instructions to clients.

7. Selected elderly people were interviewed about their personal experiences with injections with special emphasis on differences between the past and the present.

8. As an experiment, school children were asked to make stories or drawings about the use of medicines and injections.

All of the above methods were quite effective in the rural setting with the exception of the drawings by school children. As the researchers were not able to monitor the explanations given by the children's teacher, when the home work assignment was given, it was suspected that the outcome had been biased somewhat towards "correctness".

The original research planned to ask the households to keep a health calendar too. But after discussions with Thai key informants and a Thai anthropologist, it was decided that this method was inappropriate in the local setting. Several of the above methods, for instance the analysis of clinic records, were additions to the original research methodology.

Some time was spent in Ban Phang³, the nearby district town, where interviews of the doctors at the public hospital and the personnel in the drug stores were undertaken.

³ Ban Phang is a pseudonym.
2.3 **Methods used in the urban setting**

Data were collected in an urban slum area, called Motak⁴, in Udon Thani city during three months. The data collection proved to be much harder in this setting than in the rural setting. People in the chosen slum area were often suspicious and reserved and most of all busy. Some people actively avoided or refused to talk with the researchers. Such refusals were also experienced in the big pharmacies and in the private hospital in Udon Thani.

Part of the problem in the slum area was that so many people lived there illegally. Consequently, the possibility that the research team might be connected with the government authorities made them nervous. Another important reason was that the research assistant in the slum area did not live in this area. Although the local health volunteer did introduce the principal investigator to the slum people, this did not solve the confidence problem. As the daughter of a not very popular slum chief (now deceased), she was not entirely trusted herself.

Because of this problem of trust, some data collection methods could not be used successfully in the slum area. Focus group discussions, for instance, require not only that the participants are comfortable with the researchers but also with each other which was not the case in the slum area.

In the end the following data collection methods were used:

1. A sample of 43 slum households was selected randomly from a sampling frame of 145 inhabited houses. A sample size of 40 households was deemed desirable on the basis of the available time. These households were visited and interviewed, using a questionnaire containing the same key questions as in the rural setting. The questionnaire had been modified in other aspects such as economic data and water supply which were different in the rural and urban communities. Two households refused to be interviewed.

2. A survey of drugs for sale in the local grocery shops was conducted. This included stock inventories of the drugs and questions to the sales persons about weekly sales and dosage instructions. However, these questions were rarely answered adequately and answers were sometimes inaccurate.

3. Selected elderly people were interviewed about their personal experiences with injections starting with the first time they ever heard about injections and the first time they received one. They were also asked about the effectiveness of injections and other topics.

4. In-depth interviews were carried out with key informants such as the community leader, the health volunteers and the NGO coordinator.

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⁴ Motak is a pseudonym.
5. Participant observation was conducted at night when people were home from work. However, this was often hard to do because people were busy and tired.

6. The health volunteer was asked to tape record some conversations regarding drug purchases in the grocery shops. She managed to do so with several conversations but she was feeling rather nervous about it and eventually this method was abandoned.

7. Participant observation was carried out in the big public hospital. A number of interviews were also conducted with the doctors there, using the standard interviewing schedule for providers. Most of these doctors also had private practices and the questions sought to highlight differences between these two types of practice on an individual level.

8. Interviews of doctors in a private hospital were also attempted but only one doctor agreed to talk with the researchers.

9. A number of bio-medical and herbal pharmacies in Udon Thani city were interviewed on weekly sales of drugs, dosage instructions etc.

2.4 Evaluation of methodologies

In retrospect, the mixture of methodologies was very useful in both rural and urban settings. It allowed for flexibility and cross-validation of data. An example of this is the shopkeeper in the slum area who denied selling Yachut (4-6 different pills in a plastic bag, a very popular and illegal type of medicine in Thailand). This was compared with the survey data in which several respondents stated that they had bought Yachut from her. The shopkeeper was obviously nervous about the consequences if she told the truth.

The focus group discussions in the rural village were particularly informative, especially the later ones when the researchers had more experience with this method. Focus groups were always selected naturally. This meant that the principal investigator would walk around the village until she found a group of people, most often women, seated together. She would then approach them and ask permission to ask them some questions. They always agreed and they would often invite her to share a snack or a drink of iced water with them. Questions were asked concerning concepts of body strength and blood and/or they were requested to sort cards with names of local illnesses or samples of commonly used medicines. If people were losing interest, the session would be shortened. No session should be longer than half an hour.

The analysis of secondary data was also a very useful research method. It is time effective in that it can be done at the convenience of the researcher. The limitation of the method is that written data are often scanty in developing countries. Such data may also be "guarded" by government personnel who are worried about what the data could reveal or just plain scared of sharing information. On one occasion permission was obtained from a high ranking public health officer to copy old health centre records, only to be denied such access by a low-level paramedic staff member.
The survey yielded a very large amount of data, maybe too large. It was time consuming to visit all the households in the rural village but it was also very rewarding. Often much more information was given than was sought by the questionnaire and note was taken as much as possible of this more qualitative information.

The in-depth interviews on injections which were carried out with elderly people were rewarding in both rural and urban settings. These interviews yielded not only information on types of health care available in the past but also more general information on how things have changed for Thai people. The semantics interviews were also useful in this respect.

In conclusion, the two most important aspects of this research project’s methodology were the combination of qualitative and quantitative data collection methods; and the inherent flexibility in the project which allowed for modifications and changes according to local conditions.
CHAPTER THREE

3. RESEARCH SETTING

3.1 Socio-economic indicators

Thailand is rapidly moving towards becoming a 'newly industrialized' country. During the past 20 years it has moved from an agricultural subsistence economy towards an export oriented industrialized economy. Average annual income has risen substantially but Thailand still suffers from the well known third world distribution problems. Most of the country's income is centered in Bangkok and it is earned by a comparatively small urban elite (Taylor et al. 1972).

The Northeastern region of Thailand, which contains approximately a third of the total Thai population of 57,196,000 (World Health Organization 1993: 184), has been and continues to be the poorest part of the country. Researchers have pointed out that "The difficulty faced by the farmers of the Northeast,.....is a shortage of the capital that is necessary to introduce technology which will raise the productivity of labour. At the moment the statistical expansion of production in the Northeast merely means that the region is slowly filling up, under the impetus of demographic increase, with more and more farmers of a roughly similar level of desperate poverty" (Phongpaichit 1982: 31). The province of Udon Thani is part of this Northeastern region.

The majority of social services are still concentrated in the cities although most Thais live in the countryside. During the past ten years there has been a steady stream of rural Thais migrating towards Bangkok in want of jobs in factories or on construction sites. This flood of people has been increased by the recent years of drought in Thailand which have forced many people away from their farms in search of other means of livelihood. While some manage to improve their living standards, many of these migrants end up in the informal sector trying to seek out a meagre existence through the sale of food, services (i.e. prostitution) etc.

For many Thais life may therefore have become harder although the country is booming economically. The consequent migration to Bangkok and other countries also has its social costs. Families are often separated and children left with single mothers or grandparents in the villages of origin. However, this does not mean that family ties are severed. Most migrants send part of their salaries back to their villages in order to finance the building of a new house or the education of children or siblings. And on major Buddhist holidays most migrants travel home to their families in the rural villages.

The educational level has improved substantially in recent years. So has the life expectancy and general health of the population. The number of primary health care facilities in the rural areas has increased dramatically. Most children have been immunized against common childhood diseases and infant mortality had fallen to 38/1000 by 1988. Thailand has
also implemented a very successful family planning programme which has stabilized the population growth. The total fertility rate has been estimated at 2.6 for 1985-90. The contraceptive prevalence in 1991 was 58.2% for reproductive women (World Health Organization 1993: 183-186).

Table 1 shows some of the major socio-economic indicators for Thailand and the changes from 1970 to 1980:

**Table 1**

Socio-economic indicators

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>1970</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross domestic product per capita at 1972 prices (baht$)</td>
<td>4,126.8</td>
<td>6,141.3</td>
</tr>
<tr>
<td>Average annual growth rate of GDP</td>
<td>7.2</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of population in urban areas</td>
<td>13.2</td>
<td>17.0</td>
</tr>
<tr>
<td>Literacy level (percentage literate among population aged 10 and over):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Both sexes</td>
<td>81.8</td>
<td>88.8</td>
</tr>
<tr>
<td>* Male</td>
<td>88.9</td>
<td>92.5</td>
</tr>
<tr>
<td>* Female</td>
<td>74.8</td>
<td>85.3</td>
</tr>
<tr>
<td>Percentage of population engaged in farming activities</td>
<td>79.3</td>
<td>72.5</td>
</tr>
<tr>
<td><strong>Sanitation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of private households with:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Electric lighting</td>
<td>18.9</td>
<td>43.0</td>
</tr>
<tr>
<td>* Piped water</td>
<td>12.4</td>
<td>18.1</td>
</tr>
<tr>
<td>* Latrine</td>
<td>31.3</td>
<td>54.5</td>
</tr>
<tr>
<td><strong>Health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life expectancy at birth:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Male</td>
<td>57.7</td>
<td>61.0</td>
</tr>
<tr>
<td>* Female</td>
<td>61.5</td>
<td>65.0</td>
</tr>
<tr>
<td>Population per physician</td>
<td>8,642.0</td>
<td>7,055.0</td>
</tr>
<tr>
<td>Population per hospital bed</td>
<td>864.0</td>
<td>687.0</td>
</tr>
<tr>
<td>Number of hospitals</td>
<td>209.0</td>
<td>402.0</td>
</tr>
<tr>
<td>Number of health centres</td>
<td>2,226.0</td>
<td>4,728.0</td>
</tr>
</tbody>
</table>

(Pejaranonda and Santiporn 1991:114)

$1\text{ US}\$ = 25.00 bahts (1994)
Some of the above figures were collected in different periods and none of the data are newer than 1980. However, they have been included to show the national trends. In the section on the public health system, selected key indicators for health from 1991 have been listed.

Thailand is unique in that it has never been colonized as is the case with all of its neighbouring countries. But economically and politically Thailand has been closely linked with the United States of America. During the Vietnam war American military personnel used Udon Thani as a base for bombing missions to Vietnam. This province was also used as a recreational area for American soldiers, thereby creating a service industry aimed at catering for this economically powerful group. When the Americans withdrew from Vietnam, the province was hard hit financially. However, some of the American investments, such as a high quality road network, have had a lasting beneficial impact on the region’s trade and economy. A certain cultural impact of the American presence has also been felt but, as always, Thailand has assimilated foreign influences in a very Thai way.

The dominant force in the Thai culture is Buddhism. About 95% of all Thais are Buddhists and the ethics of the religion pervade their entire culture and outlook on life. As Keyes puts it: "....Theravada Buddhism, either in its traditional popular forms or in its more recent reformed guises, has continued to provide, at least until quite recently, the grounding for the world view that makes life in the rural areas meaningful" (Keyes 1977: 106). Improving one’s Karma, by making merit and abstaining from breaking the five precepts of Buddhist teachings, is a central feature in the Thai culture.

3.2 Changing disease pattern

The disease pattern in Thailand has changed over the years. Earlier the leading causes of morbidity were epidemic diseases like cholera, smallpox and malaria. Such diseases were believed to be caused by evil spirits and people would try religious rites and making merit to protect or cure themselves. Needless to say, hundreds of thousands died from these diseases.

Vaccine therapy was introduced in Thailand in 1840 through smallpox inoculation. Impressed by the achievements of vaccine therapy, King Rama III of Siam (Thailand) in 1881 ordered a mobile team of physicians to carry out mass vaccinations free of charge. In subsequent years, preventive and control related measures were carried out in many Thai communities. These included vaccination, public health education, provision of safe drinking water, and isolation of illness cases.

Today smallpox is eradicated in Thailand as in the rest of the world. Cholera is under control and diseases such as yaws, leprosy, plague and tuberculosis have been almost eradicated or brought under control. The disease pattern in Thailand is now increasingly characterized by non-infectious diseases such as cancer, heart disease and accidents. Malaria, unfortunately, has re-emerged as a major public health problem. This is due to the migration caused by changing economic structures in Thailand and other developing countries; and drug resistance caused by the irrational use of drugs in many countries. Furthermore, AIDS
threatens to become a very serious problem in Thailand where there were 27,853 HIV positive cases registered as of 14 May 1991 (World Health Organization 1993: 40).

Table 2
Leading causes of morbidity

<table>
<thead>
<tr>
<th>Cause group</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhoeal diseases and other enteritis</td>
<td>20</td>
</tr>
<tr>
<td>Motor vehicle accidents</td>
<td>13</td>
</tr>
<tr>
<td>All other accidents</td>
<td>13</td>
</tr>
<tr>
<td>Pyrexia of unknown origin</td>
<td>10</td>
</tr>
<tr>
<td>Bronchitis, emphysema and asthma</td>
<td>9</td>
</tr>
<tr>
<td>All other infectious &amp; parasitic diseases</td>
<td>8</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>8</td>
</tr>
<tr>
<td>Peptic ulcer</td>
<td>7</td>
</tr>
<tr>
<td>Malaria</td>
<td>7</td>
</tr>
<tr>
<td>Dengue hemorrhagic fever</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>101</strong></td>
</tr>
</tbody>
</table>

(World Health Organization 1993: 186)

No explanation is given for the fact that the total percentage is 101. As can be seen from the above, infectious and parasitic diseases are fairly low down on the list of major causes of morbidity. Resembling the disease picture in industrialized countries, motor vehicle related accidents are the second largest cause of morbidity in Thailand. The leading causes of mortality are different from the causes of morbidity. Table 3 gives a list of the rate per 100,000 population.

The mortality causes are not the typical death causes seen in a developing country. They reflect the changing Thai society where the expansion of health facilities and immunization coverage and improved sanitation have prevented the case fatalities seen earlier in connection with infectious diseases.
Table 3
Leading causes of mortality

<table>
<thead>
<tr>
<th>Cause group</th>
<th>Rate per 100 000 in 1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease of the pulmonary circulation &amp; other forms of heart disease</td>
<td>47.3</td>
</tr>
<tr>
<td>Other accidents, including late effects</td>
<td>21.4</td>
</tr>
<tr>
<td>Malignant neoplasms of other &amp; non-specified sites</td>
<td>20.1</td>
</tr>
<tr>
<td>Diseases of the digestive system other than oral cavity, salivary glands</td>
<td>19.0</td>
</tr>
<tr>
<td>and jaws</td>
<td></td>
</tr>
<tr>
<td>Diseases of the respiratory system other than the upper respiratory tract</td>
<td>13.7</td>
</tr>
<tr>
<td>Transport accidents</td>
<td>12.4</td>
</tr>
<tr>
<td>Cerebrovascular diseases</td>
<td>10.4</td>
</tr>
<tr>
<td>Diseases of the nervous system</td>
<td>10.0</td>
</tr>
<tr>
<td>Homicide and injuries purposely inflicted by other persons</td>
<td>9.3</td>
</tr>
<tr>
<td>Malignant neoplasms of digestive organs and peritoneum</td>
<td>9.2</td>
</tr>
</tbody>
</table>

(World Health Organization 1993: 186)

3.3 The public health sector

The history of medical institutions in Thailand starts with the establishment of the Department of Public Health under the Ministry of the Interior in 1918. The responsibilities of the Department expanded and in 1942 the Ministry of Public Health was formed. The control of many infectious diseases in Thailand was enabled by several subsequent factors: the advent of more advanced medical knowledge about the causes of diseases, the principles of epidemiology and the acknowledgement of the importance of sanitation combined with new medical technology and the geographic expansion of health facilities.

Reflecting the changes in disease pattern and new priorities, the new Village Health and Sanitation Project was implemented in 1960. This project targeted maladies such as dysentery, typhoid, gastroenteritis and parasite infections.

Today the emphasis in Thai public health care is on prevention rather than cure. The concept of Primary Health Care Services now includes programmes for maternal and child welfare, school health service, nutrition promotion, environmental sanitation, mental health and lately also the prevention and control of HIV-infection.
The public health services in the rural areas are structured as shown on the organizational chart below:

(Line of Command)
Line of Supervision and Coordination

PCMO = Provincial Chief Medical Officer
OTHSP = Office of Technical and Health Service Promotion

(World Health Organization, 1988, DAP/88.5)
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Available information on human resources for health is incomplete. The table below summarizes what is known:

<table>
<thead>
<tr>
<th>Category</th>
<th>Public</th>
<th></th>
<th>Private</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td></td>
<td>In hospital</td>
<td>Outside hospital</td>
<td>In hospital</td>
<td>Outside hospital</td>
</tr>
<tr>
<td>Physicians</td>
<td>8,056</td>
<td>190</td>
<td>1,483</td>
<td>...</td>
</tr>
<tr>
<td>Dentists</td>
<td>1,126</td>
<td>188</td>
<td>116</td>
<td>...</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>1,164</td>
<td>746</td>
<td>189</td>
<td>...</td>
</tr>
<tr>
<td>Nurses</td>
<td>31,600</td>
<td>3,219</td>
<td>10,928</td>
<td>1,479</td>
</tr>
<tr>
<td>Midwives</td>
<td>154</td>
<td>1,340</td>
<td>531</td>
<td>7,966</td>
</tr>
<tr>
<td>Dental auxiliaries and assistants</td>
<td>43</td>
<td>294</td>
<td>593</td>
<td>...</td>
</tr>
<tr>
<td>Pharmacy assistants</td>
<td>861</td>
<td>173</td>
<td>244</td>
<td>...</td>
</tr>
<tr>
<td>Environmental health personnel</td>
<td>95</td>
<td>599</td>
<td>240</td>
<td>...</td>
</tr>
<tr>
<td>Other institutionally trained personnel</td>
<td>1,478</td>
<td>3,258</td>
<td>1,706</td>
<td>7,924</td>
</tr>
<tr>
<td>Nurses/ aids, attendants, auxiliaries</td>
<td>13,144</td>
<td>817</td>
<td>1,120</td>
<td>790</td>
</tr>
</tbody>
</table>


(World Health Organization 1993: 189)

In 1977 a new and expanded primary health care programme was initiated in Thailand. This programme included the training of village health workers to provide first aid, treat common diseases and manage a village health fund which provides essential drugs such as paracetamol, oral rehydration salts and chloroquine in areas with malaria. According to Nitayarumphong (quoted in Le Grand et al. 1989), 98.4% of all villages were covered by village health workers (Le Grand et al. 1993: 1024). There was one government health centre for every 10 villages and 1 hospital for every 100 villages (ibid: 1024). But only 27.1% of the public health expenditures were in 1989 spent on primary health care (World Health Organization 1993: 189). In 1983 the health expenditure was 4.6% of the Gross National Product (GNP) and the 1985 per capita expenditure on health was US$ 38 of which US$ 26 were paid directly by the consumer and US$ 12 were financed through taxes etc. (World Health Organization 1988:35). In 1988 the health expenditure was 5.7% of the Gross National Product (World Health Organization 1993: 184).

In 1991 the second evaluation of the global strategy for health for all by the year 2000 indicated that the per capita GNP had grown to US$ 1,065.8 (equivalent of 26.645 baht). The maternal mortality was down to 0.2/1000 births. Safe water was accessible to 78.3% of the rural population and 73.7% had some form of sanitation. Immunization rates overall were:
DPT (% infants immunized) 74.4
Measles (% infants immunized) 58.1
Poliomyelitis (% infants immunized) 74.4
BCG (% infants immunized) 93.8
Tetanus (% pregnant women immunized) 63.3

(World Health Organization 1993: 184)

As mentioned before the number of health care facilities have expanded significantly. A report based on data from 1981 indicated that there were a total of 4,728 health centres in Thailand (Pejaranonda and Santipaporn 1991); while another report based on data from 1993 states that there are now 7,880 health centres in the country. Furthermore, there are 604 community hospitals (10-90 beds) at the district level and 72 general hospitals. In addition, there are 15 regional hospitals at the provincial level (World Health Organization 1993: 187). In spite of this, the overall population coverage in terms of local health services (defined as access to essential drugs⁶ is only 59% (ibid: 184).

3.4 Public health in Udon Thani

The above figures, however, cloud important inequalities between the regions in Thailand. The Northeastern part of Thailand, of which Udon Thani is a part, had a population of 17,814,000 in 1984 and 15,294 hospital beds. The Bangkok Metropolitan alone had a population of 5,923,000 and 19,379 hospital beds. While Bangkok only had a third of the population of the Northeast, the city actually had more hospital beds (World Health Organization 1988).

There are other figures which show the inequalities between regions in terms of health care. In the Fourth Five Year plan (1977-1981) provision was made to introduce free medical care for the poorer sections of the population. The following categories were eligible for free care:

(a) single people with an income of less than baht 1,500 a month;
(b) married couples whose total income was less than baht 2,000 a month;
(c) their children under 20, and over 20 years if they were mentally or physically disabled.

⁶ Defined as availability of affordable and safe drugs within one hour of walking.
In addition, children under five whose parents were poor and people over 60 were entitled to free medical care (Mills 1991: 1241-42).

The Northeast has both the highest percentage of its population classified as poor and the highest total number of poor. Twenty five percent of the Thai population were classified as living in absolute poverty following World Bank criteria and 50% of these poor live in the Northeast. In spite of these figures "...those regions which had the greatest numbers of poor people received relatively less of the Free Medical Care Budget, especially the Northeast" (Mills 1991: 1244). The per capita allocation in the Northeast was as low as 4.7 baht as compared to Baht 8.4 for Bangkok or an average of baht 6.3 for the kingdom as such (survey figures from 1975/1976)(ibid).

It is estimated that there are about 200 health centres in Udon Thani province which is a 100% increase compared to 10 years ago (Dr Chin, former chief of public health Udon Thani, personal communication). The number of bio-medical drugstores (license 1-5) has also increased, while those specializing in traditional medicines have decreased in number from 136 to 75. However, the number of factories making traditional medicines has increased from 12 to 14. The explanation may be that people in the rural areas show less and less interest in traditional medicines and there are therefore fewer traditional pharmacies in these areas. On the other hand, urban people with higher purchasing power seem to be quite interested in traditional medicines which may account for the two new factories.

This trend provides an interesting contrast to the official policy of promoting herbs for home growing and use. The tendency in the population seems to be a specialization and urbanization of herbal medicines while the bio-medical drugs are taking over the rural markets. However, herbs are still not used in public hospitals on a routine basis and there is no official control over herbal remedies (i.e. contra-indications, side-effects).

In the city of Udon Thani itself there are 3 public hospitals and 3 private hospitals. Furthermore, there is a mobile public clinic under the auspices of the queen mother and one night-time venereal disease clinic. Private medical clinics number 49, all of these belonging to doctors. There are 14 private dental clinics and 8 dental technicians’ clinics. There are only 5 clinics for traditional medicines.

3.5 The private health sector

Much less is known about the history of private bio-medical health care in Thailand. Characteristic today is that most of the personnel employed in the public sector, especially doctors, also have private practices on the side. This is the case even with the lower level staff of primary health care centres. In addition, there are private hospitals, full-time private practitioners and specialists, pharmacies, and drug stores.

The informal sector of bio-medical providers is also very large. It consists of people with very limited, often non-existent, medical training, who diagnose and dispense drugs to clients. They do this to supplement their income and/or add to their social status in the community. Village groceries almost always sell drugs, including antibiotics. And the provision of injections by informal providers has been a profitable business in many areas.
(there are an estimated 20 of these in the district of Udon Thani). Some pharmaceutical companies promote their products by sponsoring travelling cinemas; accompanying salesmen urge the audience to buy their drugs before or after the movies.

Although it is hard to get exact information about the private sector there seems to be a general trend of formalization. Previously most private providers were informal ones such as injection doctors, travelling vendors of medicines, market stalls etc. Today private providers seem to be increasingly formalized. People seek treatment from the private practices of medical doctors or buy their drugs in licensed drug stores. State control with the private sector has expanded although it is far from being complete yet. And customers regard evidence of government-controlled training as a desirable qualification of a provider.

3.6 Consumption and regulation of bio-medical drugs

The estimated total expenditure on drugs in 1985 was 1,040 million US$, 208 million US$ for the public and 832 million US$ for the private sector. 53% of the total health expenditure is spent on drugs. The public health sector used 34% of its expenditure on drugs while the same figure for the private sector amounted to a staggering 61% (World Health Organization 1988: 35). Thailand has succeeded in being 82% self-sufficient in the formulation of drugs, otherwise an even larger amount of foreign exchange would have been spent on the purchase of drugs abroad.

Thailand’s National Drug Policy was first established in 1981. The aim was to ensure the adequate supply of safe and good quality drugs to all people, reduce the wastage of drugs, strengthen quality control, investigate possibilities for using indigenous raw materials and explore the therapeutic potential of traditional drugs, especially in primary health care. A national list of Essential Drugs was drawn up for use by all government institutions. This list specifies which drugs should be used at which level of health care facility. The drugs are listed by generic name only.

The Essential Drugs list has been revised several times, most recently in 1987. (Some of the doctor respondents felt the list was very much in need of a new revision). The list now contains 369 items. Standard prices for these items have been determined and manuals for rational prescribing have been distributed to government health facilities.

The list of 369 Essential Drugs should be seen in the context of a huge pharmaceutical market in Thailand with more than 27,000 different drug items. This figure does not include drugs produced by the Government Pharmaceutical Organization which supplies government institutions. More than 30% of the before mentioned registered drugs are combination drugs.

Government hospitals are obliged to spend 80% of their subsidized budgets on essential drugs. For other hospitals receiving government subsidy, the corresponding figure is 60%. Income generated by the hospital itself can be used for drug purchases without restrictions.
Bio-medical drugs are divided into 4 groups by the Thai Food and Drug Administration:

1. Household remedies which can be sold anywhere, even in groceries and supermarkets.

2. Non prescription drugs/ready-packed drugs which can be sold in any licensed drug store without a prescription. They can be dispensed by a nurse or another medical professional.

3. Dangerous drugs which can only be sold in a licensed drug store of class one by a pharmacist. No prescription is necessary, though.

4. Specially controlled drugs which can only be sold by a licensed drug store of class one by a pharmacist. A prescription is required.

However, one can obtain most drugs without prescriptions and the personnel in drug stores are rarely people with any medical or pharmaceutical training. The drug stores or pharmacies may be owned by a pharmacist but he or she does not stay in the shop all day. Instead a relative may be employed to serve the clients. Although more pharmacists have been trained, there is still a national shortage of pharmacists, especially in the rural areas.

According to The Drug Study Group the drug consumption in Thailand has gone from 367 baht per capita per year in 1982 to 1,443 baht per capita per year in 1991 (Kiatying-Angsulee et al.1991). And the leading products are pain-killers and cold medicines such as Tamjai (thumjai), Tiffy, Antacil, and Ya Buadhai (IMS Pharmaceutical Index 1991). The consumption of diazepam, a psychotropic, is also on the rise in the provinces. This may be because diazepam is one of the favorite drugs for informal injection doctors to administer.

The above figures should be seen in the context of the rising expenditures on drug advertisements in the Thai media (excluding radio). In 1985 more than 168 million baht were spent on drug advertisements; in 1990 the figure was more than 480 million baht (Kiatying-Angsulee et al. 1991).

3.7 The rural village Ban

Introduction

The village Ban7 is located in the Northeastern province of Udon Thani, about 75 km south of the Laotian border. The village is fortunate in having an asphalt road connecting it to the district town of Ban Phang on one side and Na Gang on the other side.

As one enters Ban one is surrounded by cassava fields and low bush lands. The trees look very green on a background of red and rock hard soil. Soon wooden houses on stilts start to dominate the road sides and people can be seen sitting on big wooden platforms in the

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7 All names have been changed. In Thai language the word Ban may mean village or house depending on the context.
shade under their houses. On the right hand side of the road, a brick building with an open space in front can be identified as the local primary school.

Further down the road to the right is the post office and about 200 meters from the asphalt road is the health centre. The health centre consists of a fairly new brick building and an old wooden building. On one side of the health centre are the houses of the staff. One is occupied by Noi but the other one is empty because two staff members live in another village.

On the other side of the health centre, there is a view of a small wooden house and the sala. A sala is a construction with an elevated platform, roof and pillars but no walls. This building is normally used for village meetings and other community activities but this sala is surrounded by water. In Ban the temple sala is used for village meetings instead.

Near the staff houses is the largest village pond/well. The small wooden house in the nearby tree contains the powerful female water spirit.

Further down on the left hand side of the road, in what could be termed the heart of the village, is the local temple. It has yet to be completed; the villagers are collecting funds for this purpose. The temple grounds are surrounded by a low brick wall which, at intervals, display small doll-like brick houses. These small decorated houses contain the bones of deceased people and sometimes offerings are placed at their bases.

A fairly large dirt road runs along the temple on the other side, diagonally to the asphalt road. Several groceries and food shops are situated on this road as well as numerous houses. A network of small roads eventually lead to the rice fields. Between the last houses and the rice fields on one side, marking the boundary between the village (culture) and the bush and fields (nature), one can find the wooden houses of the male and female spirits and the 'Buddha spirit'.

People in Ban collect rain water in big clay jars. This water is used solely for drinking. There are also a number of small water ponds and water pumps in Ban. This eases the women's burdens somewhat but most households have to walk quite a distance to get water for cleaning and cooking. There are also a number of petrol pumps providing gas for the fortunate who have a motor bike. Only two people in the village own a car, the most common means of transportation being one's legs, the bus or sharing a taxi.

Three rice mills in Ban enable people to have their rice milled locally. One man also owns a tractor which he rents out.

**Political and economic features**

There are 209 inhabited households in Ban (some houses are empty because of migration). At the time of the research there were 1137 people who considered Ban Kaw San their home. Of these 575 were males and 562 were females. It should be cautioned that quite a number of these people were not actually staying in Ban Kaw San at the time of the survey. Many men and women were working in Bangkok or on construction sites in other parts of Thailand. Some men had gone to countries in the Middle East or Asia to work for some years. At the time of the survey there were 479 males and 515 females present in Ban.
Injection practices in the third world:
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Ethnically and linguistically the people of this area are close to the Laotian people. They call themselves Khon Issan which means "the people from the Northeast". They feel very little connection with what happens politically in Bangkok; for them the village and tamboon (subdistrict) are the important entities. In the case of Ban, the head of the village is also the head of the tamboon. (A tamboon is governed by a council consisting of village heads, elderly people, and representatives of agriculture and public health). Most villagers' cognitive political universe is limited to the tamboon.

Quite the opposite seems to be the case with regard to people's economic universe. Although very few rural villages in Thailand today have self-sustaining village economies, Ban depended to a surprisingly high extent on income from Bangkok or foreign countries. At the time of the inquiry, 87 households or 42% of all households in Ban Kaw San had one or more people working outside the province. A newspaper article in 1991 reported that 80,660 workers from the Northeast had registered with the labour department for jobs in foreign countries (The Nation, 11/4 1991) and these were only the official figures. Places of work included Bangkok, the Northern province of Payao or Singapore, Brunei, Saudi Arabia and Libya. The men from the village always tried to go where there was already somebody else from Ban working, who could facilitate the necessary arrangements.

The motive for migration is to earn much higher wages than they could in Thailand. The men often spend a couple of years abroad during which they send money back to the village. This money was normally spent on building a new house or used in general household consumption rather than invested in productive enterprises. In the end, the surplus from this emigrant labour was not that great because the loans used to finance tickets and job agencies, had to be paid back to agencies, banks and local money lenders with high interest.

The main productive activity in Ban is still rice, though. People in the village grow rice to eat and, if there is any surplus, it is sold in the nearby district town. Many farmers also grow cassava which for these villagers is solely a cash crop. As previous attempts at establishing irrigation projects have all failed, the harvest depends on an adequate amount of rain during the rainy season. This also excludes the possibility of harvesting more than one crop of rice per year.
Table 4
Main occupations in Ban

<table>
<thead>
<tr>
<th>Occupations</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer</td>
<td>495</td>
</tr>
<tr>
<td>Not working (old, sick etc.)</td>
<td>214</td>
</tr>
<tr>
<td>Students</td>
<td>178</td>
</tr>
<tr>
<td>Working abroad or in another province</td>
<td>143</td>
</tr>
<tr>
<td>Labourer</td>
<td>30</td>
</tr>
<tr>
<td>Teacher</td>
<td>20</td>
</tr>
<tr>
<td>Truck owner/driver, miller, carpenter</td>
<td>19</td>
</tr>
<tr>
<td>Functionary</td>
<td>12</td>
</tr>
<tr>
<td>Shopkeeper</td>
<td>10</td>
</tr>
<tr>
<td>Office work</td>
<td>9</td>
</tr>
<tr>
<td>Other occupations(^8)</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1137</strong></td>
</tr>
</tbody>
</table>

The above table includes children who are categorized as student if they go to school or not working if they are too young to go to school.

Eighty percent of the households in the village earned between 10,000 baht and 99,999 baht a year. Only three households indicated that they had no cash income at all. However, nobody in Ban Kaw San is so poor that he or she cannot eat rice everyday. There are a couple of very poor people in the neighbouring village but they have the possibility of going to the temple in the morning to eat rice. In general, there is not much malnutrition in Ban Kaw San. Most people are able to supplement their rice diet with eggs, vegetables, fruits, and sometimes fish. Buffalos are used in the field and only on very special occasions are these slaughtered.

More than 70% of the households had one or more jars for collecting rain water and only 17% had no latrines. Most houses had a radio and/or a television which brought them in contact with urban culture and national events.

\(^8\) Maid, seamstress, garage work etc.
Injection practices in the third world:
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Social organization

The majority of households in Ban consist of three generations, normally an elderly couple with their children and sons-in-law and grandchildren. Most households (157 out of 209 households) have between 4 and 7 inhabitants. The villagers are matrilocal, and the newly wed husband normally becomes part of his father-in-law's production unit. More often than not people find their marriage partners within Ban and the neighbouring village.

The obligatory number of school years have been changed from 4 years to 6 years in the recent past. Accordingly, the older generation has mostly 4 years of schooling while the younger generation is now getting 6 years. In Ban only 19 people are illiterate while 139 residents of the village had more than 6 years of schooling.

Thais in general are very sociable people and the people in Ban are no exception. One will rarely find anybody sitting alone in the village. Neighbours and relatives group together on the platforms under the stilted houses and share food, work and child care. Major rites of passage such as marriage, house initiations and funerals always call for big parties where everybody from Ban and the neighbouring village is invited. Hundreds of people come by to eat sticky rice⁹ and other food items; and to drink local whisky, mixed with alcoholic tonics. Very often there is gambling for money and a few people in the village have actually lost their houses that way. Such a party will last from 3 to 5 days depending on the wealth of the host.

Elderly people are important in all these matters. They are respected for their age and wisdom and they are often knowledgeable about Buddhist rituals and events. In marriages the elderly people of the village have to bless the unions by tying cotton strings ("tying the spirits") around the wrists of the groom and bride.

Religious features

People in Ban are devout Buddhists. There is a resident monk in the local temple and a varying number of boys doing service as novices. In Ban religious activities such as early morning donations of food to the monk and novices, special ritual occasions and money raising activities are mainly carried out by elderly women. While men can gain merit for themselves and their parents by becoming monks, women do not have this option. Instead, women gain their merit by donating food to the Sangha (order of monks) and by participating conscientiously in Buddhist ritual events.

All Buddhist rituals and festivals are observed and celebrated in Ban and everybody participates. Not only do people gain merit by sponsoring and participating in these festivals, they are normally also great and pleasurable feasts.

There are no conflicts between Buddhism and the belief in spirits and ghosts. In fact "...most peoples in Theravada Buddhist societies believe that spirits and ghosts can interfere with their lives, that the constellation of heavenly bodies at birth can affect their ability to act, that deities can cause improvements in fertility and potency" (Keyes 1977: 87). Appropriate

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⁹ This is a special kind of glutinous rice which is preferred by Northern and Northeastern Thais.
attention is given both to temple activities and to the ritual maintenance of the spirits. Spirits are believed to dwell below the human domain while deities are located above the level of humans.

Ban has three spirit houses. One contains an old Buddha image and this spirit is considered the most powerful. The second spirit house contains a male spirit and a female spirit. These spirits guard the village and have to be asked for permission when people want to move to or from the village. If somebody has a spirit caused disease (which is rare) or misfortune, it is also to these two spirits that offerings should be given. The third spirit is the female water spirit who watches over the village’s main water pond. Sometimes sick people, who have failed to respond to medical treatment, turn to the female water spirit for help. Tasteless jokes or throwing things in the direction of the female water spirit could make her angry. Her anger would cause the pond to dry out.

The belief in spirits is very much alive in Ban, and indeed the rest of Thailand, and, according to our key informants, it has not diminished over the years. It is normally the old people in Ban who teach about and take care of the spirits, especially the full moon offerings. The Buddha image receives flowers, food and monk robes while the other spirits receive more earthly gifts such as whisky, every day clothes and food.

The diviner

The diviner in Ban is an old skinny man from one of the poorer households. He learned about divination rituals from a diviner in another village 40 years ago. Now he helps about 20 people per month. Most of these people seek his help to find their lost buffalos. Very few come because of a persistent illness but it happens. In any case, the ritual is the same. The diviner calls the spirits using a little metal bell, a leaf with rice and a one baht coin. If the bell shakes at the end of the ritual, it means that the client has done something wrong and the wronged spirit must be placated. He will then refer the client to the spirit specialist.

Seven to eight times a month he is possessed by spirits without any warning. They will speak through his mouth for about ten minutes and afterwards he cannot remember what they have said. He states that he has no control over this process.

The spirit specialist

The spirit specialist is a middle-aged man with powerful, unusually burning eyes. He takes care of the three spirits in Ban, making sure that people donate money for offerings after the harvest. He was elected to his position by the villagers and both his father and his grandfather were spirit specialists.

Most of the spirit specialist’s clients come because of wishes for the future or for good luck. In fact, only 1-2 people per year come to see him because of sickness. Typical spirit caused sicknesses are headache, stomach pain and muscle pain. If it truly is a spirit caused disease, then medicines cannot help. The spirit specialist listens to his clients after which he visits the spirits to apologize on behalf of the clients. He does not specify what wrong has
been done. But when people feel that their good fortune has been restored, they come back to thank the spirits and to offer food, clothes and whisky.

As can be seen from the above, pleading with spirits is more often done in cases of misfortune than in cases of illness. However, there may be other areas of Thailand where spirits are a more often cited source of sickness and cure (Golomb 1985).

3.8 The urban slum dwelling Motak

Introduction

The research assistant in the urban setting was a nurse at Udon Public Hospital. The principal investigator and her worked together for three months conducting interviews in both the urban slum and the pharmacies of Udon Thani.

Ban Motak is reached through a narrow asphalt road which leads from the centre of Udon Thani city, past the prison and a temple, to the slum dwelling. The first impression is one of an overwhelming stench. The reason for the foul smell is soon revealed. Only half the people have toilets here and the surrounding wet marsh area is used for defecation as well as washing. In addition, some people in Motak breed and keep pigs. As they are not allowed to occupy new areas (most of the present dwellings are illegal), the pigs are kept underneath people’s houses.

In spite of the frequent flooding of the area very few houses are built on stilts. Most of the houses are sheds made out of cheap corrugated iron. The majority of houses line the narrow asphalt road while a few are connected to the road by narrow dirt dikes/bridges. On both sides of these bridges is water which in the rainy period gets quite deep. During the fieldwork a tragedy occurred in these waters. A boy lost his shoe in the water and fell in while trying to recover it. He drowned before anybody heard his cries.

While the temple in Ban was physically located so that it could provide a natural and sacred centre for the village, this is not the case in Ban Motak. On the contrary, the Motak dwellings only start where the temple grounds end. The effect is striking: symbolically as well as physically and legally Ban Motak is on the periphery of the established society. And indeed, an observer gets a strong feeling of marginality and powerlessness in this setting.

Ban Motak has a couple of groceries and a number of small food shops. There are also several spirit houses most of which are placed on the borderline between the buildings and the swamp and fields (belonging to people outside Motak) but in different places. The sala (meeting hall) is unfinished indicating a rather low level of community activity, an impression which was later confirmed by NGO activists.

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10 The slum settlement’s name has been changed.

11 Nongovernmental organizations
There is very little electricity in Ban Motak and sanitation is almost non-existent. Drinking water has to be bought. Except for the public health efforts, the authorities have provided no facilities out of reluctance to do anything which may be perceived as an official recognition. When mapping the area, ferocious dogs were often encountered. Many people are not at home and the remaining look busy and reserved.

The team often had to work at night by the light of torches. Sometimes they were bothered by men intoxicated with alcohol or other drugs.

**Political and economic features**

Ban Motak is the biggest and poorest of the 12 shanty towns in Udon Thani city. There are 147 houses of which 145 are occupied. The health volunteer estimates that there are about 1000 people in Ban Motak. A precise figure cannot be given because people keep migrating to and from the settlement. 41 households were selected but one household refused to participate, therefore the size of the sample was 40. There were 173 people living in those 40 dwellings of which 92 were men and 81 women. Because of the limited time available it was not possible to interview all the 145 households. The team often had to come back many times to find somebody at home.

There are several food and grocery shops and stalls in Ban Motak. There is no health centre or pharmacy but Udon Thani city is close by, offering a range of private and public health care services. A mobile clinic from Udon Thani public hospital visits twice a year, and immunizations and other public health activities are carried out regularly. In addition, there are several health volunteers who have a small supply of essential medicines. The shops in Ban Motak also sell a large number of medicines.

People in Ban Motak often had more than one job. They worked as labourers on construction sites or in supermarkets ("rubjongs"); and as samroj drivers (rickshaw drivers). Most people were only employed part time and only as long as there was a need for them. This economic insecurity was in fact even worse than the small wages on which people had to subsist. It made it very hard to plan for the future or make any kind of long term investment. Some people bred pigs but this required an initial investment which could be quite hard for the slum people to acquire. Because of the general lack of physical space in Motak, these pigs had to be kept under people’s houses which endangered the general health of the slum population.
Most people in Ban Motak were migrants from other districts within Udon Thani province or from other provinces. This caused a number of problems with the authorities. No public investment was being made in the area because that would be acknowledging that people had a right to be there. The law states that people have to be registered in that area in order to send their children to the local schools. Very often people did not even have their "house registration" document from their original province because that had been left behind in their home provinces. Without this document, most people in Ban Motak had no legal identity vis-a-vis the local authorities and could therefore not apply for a change in the residence papers. The consequences of this were that some people could not register their children for school, receive the free health care reserved for the very poor or even cash money orders sent to them by children abroad.

There were thus many social problems in Ban Motak. People were poor and they worked hard. Sometimes they had to go back to their home provinces for the harvest but because of the drought and other factors, they would have to migrate seasonally to Udon Thani. Fourteen adults in the comparatively small sample were illiterate. Some children of school-age were not going to school and would no doubt remain illiterate. Prostitution is common in Ban Motak with young girls working in Udon Thani city or in holiday resorts such as Pattaya.

Drugs and alcohol abuse were also common and violence was sometimes the result. Unfortunately, the team realized too late that addictive pain-killers such as Buadhai and Tamjai would not be mentioned by the respondents when asked about medicine consumption during the past two weeks. A possible explanation for this could be that these drugs have become such an integrated part of people’s lives, "something one does to get started in the morning", that they were not considered drugs anymore. One woman was interviewed, whose

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12 This category was never mentioned by people in the rural village.
husband had become permanently psychologically disturbed and unable to work due to prolonged consumption of these pain-killers and amphetamines. Being a truck driver on long night trips between Udon Thani and Bangkok, he had consumed these drugs for years in order to stay awake on the trips.

There seemed to be many internal conflicts in Ban Motak. The village headman, for instance, did not command the respect of a large part of the community. It was very hard the get the slum dwellers to work together to achieve a common goal. Several nongovernmental organizations had tried to implement various projects in Ban Motak but without any success. Some of the projects may not have been that appropriate but often there was a general lack of leadership and community feeling which doomed the projects from the start. One organization, however, has remained active in the area. It is a Catholic aid organization. This organization provides food for the under-fives as malnutrition is common in Ban Motak. It also sponsors school for selected children. The organization has, with somewhat less success, also tried to start income generating projects in the slum.
CHAPTER FOUR

4. THERAPY OPTIONS

4.1 Introduction

This section describes the types of treatment and providers available to people in the various geographic settings. It also attempts to give an impression of how the health care system has changed and developed in a micro setting over the past 30 years.

Data from 16 in-depth interviews in Ban concerning the history of injections in the village are used for this part of the research. Injections are a memorable and powerful biomedical technology. It was therefore assumed that people would be able to remember the circumstances under which they received their first injections. The open-ended questions included: when people had their first injection, who administered it, how many injections they had per year 30 years ago and how many they had per year now.

Observations and records of people’s present strategies of resort are also used. The main emphasis is on what people in Ban do today if they feel sick. The description will therefore include not only the treatment options available in Ban itself but also the treatment sources in the nearby district town and Udon Thani city itself. However, the more detailed discussion of where people seek treatment in specific cases of illness and why, will be found in a later chapter. Data from the urban slum will be used only in specific cases where it is appropriate.

4.2 The history of injections in Ban

The very first injection experience was in 1928 when one of the male respondents received an injection for fever from the military doctor during his military training. The next injection experience occurred in 1946 when a Vietnamese man established himself as an informal injection provider in the nearby district town. The respondent’s husband got an injection from him for his epilepsy. In 1951 an injection was administered by a private general practitioner in the capital city of the province, Udon Thani, which is about 50 km from Ban. The female patient got an injection for bone and muscle pain in her arm.

During the next ten years sources of injections were local informal providers, presumably travelling around to villages as described by Cunningham (Cunningham 1970).

Around 1960, several new injection sources emerged within Ban. A Laotian man came to settle in Ban, bringing medicines and injectables from Laos (at least the respondents believed that the medicines were from Laos). The same year the now wealthy rice miller started his own travelling injection business. His service was based on the training he received as a soldier in the Thai military and a subsequent course given by a pharmaceutical company.
in Bangkok. At the same time, the man who later became headman of the village, had begun to work as an injection apprentice to the rice miller. He eventually started his own injection business which flourished in Ban and surrounding villages. In addition, one respondent with abdominal pain reported visiting the hospital in Udon Thani for an injection in 1961. A private clinic in the district town provided an injection for the beri-beri symptoms of a female post-partum patient in 1966.

In 1971 the informal injection provider from Laos was still in business when three respondents remember using his services for symptoms such as diarrhoea and paralyzed legs. The headman of Ban was also strong in the injection business in those days, administering injections to people with fever and other symptoms. However, some respondents were now starting to use the injection services of Udon Hospital for bone pain and abdominal pain. And more importantly, a health centre was built by the villagers around 1971, reflecting the increased availability of public health services from the 1970s onward.

In the beginning of the 1980s, the hospital set up in the district town in 1979 was attracting patients with more serious ailments such as goiter. At the same time, in the subdistrict of Ban alone there were 5-6 travelling informal injection providers who travelled by motorcycle to visit clients in the neighbouring villages. Their number and business drastically declined, however, when the first government-financed public health centre was built in Ban (approximately 1985), which offered much improved facilities and equipment. Today this centre is a major source of injections and other types of bio-medical medicines in Ban, complemented by private practitioners in the district town. As a result, none of the neighbouring villages has any informal injection providers left, the business of the rice miller in Ban has declined substantially, and nobody has filled the vacuum of the deceased headman of Ban in terms of providing injections.

As can be seen from the above, villagers have had other treatment options than herbs. Long before there was any organized Thai health care in Ban and other rural areas, private initiatives had already selected the marketable technology from different sources and made it available, at a profit, to consumers. The very first exposure to injections in Ban, according to the research data, was related to an individual’s military training; and the military was also the original source of the rice miller’s later flourishing business. The articulation of structures, which Van der Geest illustrated within the health system (Van der Geest 1988), applies equally to structures between widely different sectors of society. The knowledge that was acquired in the military was put to use in the health market place in order to provide an income. In the case of the village headman, this knowledge also served to add to his status in the social hierarchy.

It is also remarkable how easy it is for attractive health goods or technology to flow across national borders. The fact that the medicines were believed to have come from Laos probably added to their attractiveness. One can speculate on how the "injection doctors" from Vietnam and Laos got their knowledge and equipment in the first place. It is likely that the French colonial establishment in Indochina imported some of this technology. Enterprising natives then turned this technology into a ticket to a better life in Thailand which had never been exposed to colonization. However, without any written records, this supposition is very difficult to substantiate.
4.3 Present therapy options for rural villagers

Today the people in Ban have many therapy options. In Ban itself there are 6 grocery shops which sell a number of bio-medical drugs.

These shops are open most of the time and they constitute very accessible treatment sources. If the patient does not feel like going to a shop himself, a child can be sent to purchase the necessary drug. In addition it is cheap, one can buy one or two pills at a time which makes this option much cheaper than the health centre (unless one belongs to the group entitled to free treatment).

The grocery shops themselves are inviting. Colorful packages of dried food or sweets hang from the doorway and inside one can find all sorts of necessities, i.e. washing powder, eggs, baskets, beer. The shop owner may be a man or a woman, in any case a person who relates to villagers in many other capacities than as a therapy provider. He or she may be a neighbour, a relative, or a friend. There is always time for a chat about local matters of interest and the interaction is marked by equality and friendliness.

The health centre is staffed by a junior sanitary officer and two midwives who have one and a half years of training. Technically it is open from 8 in the morning until 4 in the afternoon, consultation hours for patients being from 8 till 12 am. However, some patients may also come in the afternoon. Fees for paying patients are normally 20 baht.

Noi is a very dedicated public health servant. She was often disturbed in her dinner or woken up in the middle of the night by patients and she always responded positively and professionally. She also carefully kept the records in the health centre and carried out educational activities in the village and in the school conscientiously.

The other two staff members in the health centre are married to each other and live in a different village.

The health centre itself is a white brick building which consists of an examination room with a bed, an office where records are kept and medicines dispensed, a smaller room used for sterilization and tests and a small toilet. Along one side of the clinic there is a narrow veranda with a bench for waiting patients. This bench would often be occupied by waiting patients and accompanying relatives. Sometimes some elderly women would come by simply to have a chat with Noi. Next to the clinic is a wooden building which is only used for deliveries. Behind this building is a round cement fire place where disposable needles and other garbage are burned.

The use of family planning is very high in the village and almost all children are vaccinated against the targeted childhood diseases. Children's growth is also monitored and Noi educates mothers on appropriate nutrition. Sanitation could be better in the village; some households did not have toilets or rain water jars for drinking water. Noi has tried to alleviate this situation through public education and occasional government incentives such as free building materials for toilets. But some villagers are still without these facilities.
Theoretically the services of the health centre are supplemented by the activities of the health volunteers and the cooperative village drug fund in the neighbouring village. However, during the time of field work it does not seem that anybody had used these treatment options.

Difficult illness cases are referred to the district hospital in Ban Phang which also supervises the general activities of the health centre. The midwives have the option of using a radio-telephone in urgent cases. Twice a year a doctor is supposed to come from the district hospital so that the villagers can bring their health problems to a more specialized person. Such a visit was scheduled twice during the field work. Each time it was announced at a village meeting and repeated over the headman's loud speakers. But both times the visit was canceled with very little notice and a lot of villagers walked in vain to the health centre.

Besides monitoring the before mentioned routine public health activities the hospital in Ban Phang also carries out more periodic public health interventions. Once in a while, a message will go to the health centre staff that they should collect faeces samples for a check for intestinal worms. Or a team will come from the hospital to supervise the collection of pap smear tests from women to check the incidence of cervical cancer.

There is also an informal injection provider in Ban. This is the rice miller who now sees only a limited amount of clients. He is in general busy with his business. The rice miller is described in detail elsewhere.

In addition, there is a traditional healer in village 3 which is close by. This healer is about 70 years old and a farmer by occupation. He sees only one patient every 2 or 3 months. Most of his cases are accidents, broken bones, knife wounds or tumors. His most recent case from Ban was a small boy who had his finger almost cut off. He treated this patient as he treats other patients, by blowing on the wound, applying a plant oil and singing to bring out his internal force. His patients normally come to him after they have tried the hospital or the health centre. This healer is a strong believer in injections himself, getting about 10 a year for leg pain. The district hospital or the health centre administers them.

4.4 The district hospital in Ban Phang

It takes about 15 minutes to drive to the district town of Ban Phang. The town is not big; it basically consists of two shopping streets and the surrounding private houses. The hospital itself is situated close to the main street. There is a small vegetable and meat market and a number of groceries and drug stores. The main traffic on the streets consists of buses, motorbikes and buffaloes. The town feels hot and dusty.

People from Ban may go to the outpatient department of the hospital in Ban Phang if they feel that the treatment from the health centre in Ban has not improved their symptoms. They may also choose to visit the hospital if they have to go into town for another reason.

The hospital can perform simple operations; more complicated conditions are referred to Udon Thani hospital.
Fees at the district hospital range from 20 to several hundreds of baht for prolonged stays in the hospital. Poor, young children and old people are according to the general rules treated for free.

The hospital has 45 beds and in July 1991 there were 72 patients. Many patients were sharing a bed. Most of the patients were from one village where everybody ate buffalo meat at a party and all the guests got serious diarrhoea. There were also cases of children with dengue fever. They were receiving IV fluid.

The district hospital is crowded, both in the in-patient department and the out-patient department. It looks clean and well-functioning. There are 4 doctors and a number of nurses. All of the 4 doctors have private clinics in Ban Phang where they give consultations during lunch hours and in the late evening and night.

4.5 The private clinics in Ban Phang

The 4 doctors see varying numbers of patients in their private clinics which are the only ones in Ban Phang. The director of the hospital sees about 100 patients a day in his private clinic compared to 50 patients a day in the hospital. The other 3 doctors see from 20 to 40 patients in their private clinics compared to 60 to 80 patients per day in the hospital. The total daily patient load in the out patient department of the hospital is approximately 250. Approximately 190 patients daily visit the same doctors in their private clinics in Ban Phang.

Two of the doctors said that they used about 200 medicines in their private clinics and one said he used about 70 different drugs. Most of the drugs in these private clinics are purchased directly from sales representatives of the pharmaceutical companies. Two of the doctors also use pharmacies in Udon Thani city and Bangkok, and one doctor said he also purchases from the Government Pharmaceutical Organization.

Half of the doctors did not feel there was any difference between the patients who come to see them at the hospital and the patients who come to their private clinics. However, the other two stated that private patients were normally wealthier than public patients.

All of the doctors agree that their primary motive for working in the private sector is economic. Their salaries in the public hospital are so low, that they feel they have to supplement them with income from their private clinics at night.

4.6 The drug stores in Ban Phang

There are 3 drug stores in Ban Phang town. In the following they will be presented separately for each of the key questions.

Sangtong Drug Store

This drug store is owned by a couple. The wife used to be a nurse at Ban Phue hospital but she left to help her husband in his pharmacy. She was needed both in sales and
in stock control. He has taken a 3 months training course for drug store owners organized by the Ministry of Public Health in another province (Korat). There is one more person working in the drug store as a sales assistant.

Sangtong drug store sells about 100 different brands of medicines, including herbal medicines. More than 50 of these are pain relievers and about 10 are injectables. The drug store personnel do not administer injections. The injectables include:

<table>
<thead>
<tr>
<th>Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin B-1-6-12</td>
</tr>
<tr>
<td>Paracetamol</td>
</tr>
<tr>
<td>Neurobian = B-1-6-12 Complex</td>
</tr>
<tr>
<td>Sanparin = antipyretic</td>
</tr>
<tr>
<td>Pyrana = antipyretic</td>
</tr>
<tr>
<td>Glucose 50% (some people drink this instead of taking it as IV fluid)</td>
</tr>
</tbody>
</table>

The main clients of the drug store are patients (40%), and providers (60%) - public health personnel with private clinics and informal providers such as "injection doctors". Private doctors buy only IV fluid from this drug store. Most clients buy 2 kinds of medicines at an average cost of 10 baht. Weekly sales come to about 3,000 baht.

The five most sold drugs in the drug store are:

1. Tanjay pills, pain-killer
2. Buadhai pills, pain-killer
3. R-Velon pills, pain-killer
4. Pyrana pills, for cold and fever
5. Vikool pills, an antipyretic drug for children.

Approximately 20-30 customers come to the drug store per day of whom about 5 people buy injectables. The pharmacy buys its stock from 3 pharmaceutical companies and one pharmacy in Udon Thani city.

When asked about the definition of Essential Drugs, the owner says they are: Multivitamins, Paracetamol, Aspirin, Antibiotics, Cough relievers and Chlorpheniramime.
Porpsat Drug Store

The wife of the owner is the respondent for the research. She has only a high school exam but her husband took the before mentioned 3 months training course in Korat. In addition, her father’s sister helps with the sales.

Porpsat drug store sells about 50 different kinds of medicines of which 5 are injectable drugs. The drug store personnel do not administer injections. The injectables are the following:

<table>
<thead>
<tr>
<th>Injectable Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin B-1-6-12</td>
</tr>
<tr>
<td>Ravifort = vitamins</td>
</tr>
<tr>
<td>Paracetamol = pain-killer</td>
</tr>
<tr>
<td>Bombit = B-1-6-12</td>
</tr>
<tr>
<td>Kanamycin = antibiotic</td>
</tr>
</tbody>
</table>

The main clients of the drug store are shopkeepers (50%), and patients (50%). They are almost never visited by "injection doctors" or public health personnel with private clinics. Most clients will buy only one drug and the average cost is about 10 baht. Weekly sales come to about 1,000 baht (this figure may be some what underestimated).

The five most sold drugs in the drug store are:

1. Buadhai pills, pain-killer
2. Tanjay pills, pain-killer
3. Ravifort pills, multivitamins
4. Yamong creme for insect bites
5. Admag M for stomach pain.

They see about 12-13 clients a day of which maybe one or none will buy injectables.

The drug store buys its supplies from 5 pharmaceutical companies and 2 pharmacies in Udon Thani city.
When asked if she has heard about Essential Drugs, she says she knows about them because patients have come from public health clinics and asked for them. When asked what they are, she says: "Paracetamol, Chlorpheniramine and Ampicillin powder".

**Sangtay drug store**

This is the most popular drug store in Ban Phang. The owner who is also the research respondent has had the same 3 months training course as the other two drug store owners. His wife, who has had no training, helps him with the sales in the shop.

Sangtay drug store has more than 500 different brands of medicines. None of these are injectables. He does not sell IV fluid either. But his weekly sales are between 7,000 and 14,000 baht.

His main groups of clients are shopkeepers (30%), and patients (60%). Informal providers, village volunteers and other public health personnel with private clinics make for altogether 10%. Most clients will buy 3-4 drugs at a time because they are normally also buying for people who are too busy to come themselves. The average cost per client is about 30 baht.

The five most sold medicines in Sangtay drug store are:

1. Tanjay powder, pain-killer
2. Buadhai powder, pain-killer
3. Yatat Nam Kaw (Salol 2 g, Anise oil 0.132 ml, Menthol 0.176 g) for gastric pain and diarrhoea
4. Tiffy, for cold and fever
5. Antacil gel, for cold.

Between 20 and 30 clients come to the drug store every day.

The owner uses many suppliers, more than 10 pharmaceutical companies whose representatives will visit him once a month or once every two months. He also buys some supplies from a pharmacy in Udon Thani.

All the drug stores in Ban Phang have a license number 2 which means that they are only allowed to sell over-the-counter drugs (OTCs). Yet they all stock and sell antibiotics which are not OTCs.

**4.7 The provincial capital city of Udon Thani**

Udon Thani city is normally the ultimate treatment resort for the rural villagers of Ban. It is a journey which is only undertaken if everything else has failed. At the same time Udon
Injection practices in the third world:  
A case study of Thailand

Thani city is of course often the first treatment resort for the urban slum dwellers of Ban Motak.

Udon Thani is a fairly big city. There are numerous shops of all types, hotels, restaurants, brothels as well as a large military base and an airport. There are secondary schools and a teachers' college. Traffic is dense with samrois, motorbikes and cars crowding the streets.

More detailed information will be given on some of the treatment possibilities in Udon Thani city, although collecting information in the city often proved to be very difficult. Since most public doctors also work in the private sector, some information on private practice was obtained from them when interviewed at Udon Thani public hospital. Only one doctor at the selected private hospital agreed to talk with the research team. Some of the pharmacies in Udon city also refused interviews. In general, the closer is the city, the more secretive did the private sector become. Maybe this was because the providers were closer to state authority and tax officials.

4.8 Udon Public Hospital

Udon public hospital is a big hospital with 60 to 70 doctors. Among these doctors are specialists such as a cardiologist, a radiologist etc. Consenting doctors were interviewed and general proceedings in the out-patient department were observed.

The building itself is quite imposing. It has several floors and three wings. The out-patient department is in the centre wing. One passes through corridors leading to the in-wards as well as a staircase leading to offices upstairs. The waiting room is big and airy. The windows have no glass and the wind blowing through the room makes the temperature more bearable. To the left is the pharmacy where prescribed medicines are sold. In the middle are some desks where nurses note the details of the waiting patients. Behind them are several doors leading into the physicians on duty. Each has a separate examination room where patients are diagnosed and prescribed medicines.

There are lots of people in the hospital. Outside samrois drivers wait to get customers and inside little shops sell snacks. It is difficult to estimate how many of the people inside are patients and how many are accompanying relatives. Busy nurses and doctors are seen occasionally.

Because it was impossible to be in the examination rooms, most of the time was spent watching people in the waiting room or people buying drugs from the hospital pharmacy. There would be anywhere from 50 to 100 people waiting to see a doctor, the atmosphere was patient and calm.

The average time which a patient spent inside an examination room with a doctor was 1-2 minutes. Frequently, the patient would have waited about 2 hours for his or her turn to be examined.
Six doctors from Udon Public Hospital were interviewed. Two of these were specialized in internal medicine, two were specialized in pediatrics, one was specialized in clinical, tropical medicine and one was a surgeon. Five of these doctors had private clinics and one had a part-time job at a private hospital. They worked in the private sector for economic reasons while their public duties were carried out because of a sense of civic duty or because the disease pattern and treatment possibilities were more interesting in a public hospital. In general, the doctors agreed that the patients who came to their private clinics were of a higher socio-economic standing than patients at the public hospital. Often the illness complaints of private clinic clients would also be less serious than those of public hospital patients. The doctors also agreed that it was necessary for Thailand to have both a public and a private health care system. The public health care system alone would be unable to cope with the patient load.

The hospital follows the Essential Drugs list of the Thai Food and Drug Administration (FDA). There are 3 categories of drugs in the hospital. First category drugs can be prescribed without limits. This category consists of essential drugs. Second category drugs are expensive and can only be prescribed with permission from the director. Third category drugs can only be prescribed if the patient has enough money to pay for them himself. Presumably injectables can be found in all three groups.

All of the doctors were aware of the Essential Drugs policy of the hospital and 5 out of 6 doctors knew about the concept of Essential Drugs and found it appropriate for Thailand. But one doctor felt that essential drugs were of lower purity and lower therapeutic potency than imported (brand name) drugs. This doctor, however, still found the concept appropriate for Thailand because of the limits on financial resources. None of these doctors had heard anything about the concept of Essential Drugs at their universities. But the youngest of these doctors had finished his university training in 1983 and Thailand’s National Drug Policy was first drawn up in 1981 so 1983 would maybe have been too early to expect an impact on university curricula.

4.9 Wattana Private Hospital

Wattana hospital is situated on the other side of the lake from Udon Public hospital. The buildings look new and very clean and there is ample parking space. There are plenty of places to sit inside and the waiting area looks cool and comfortable. Nobody is waiting, though, the couches are empty and the building seems quiet.
CHAPTER FIVE

5. RESULTS: THE EXTENT OF INJECTION USE

5.1 Treatment strategies

During the months of February and March 1991 a survey of all the households in Ban was conducted. A representative, often a woman, from each household was asked about demographic and health-related issues, particularly if any household member had been sick and/or used drugs during the last two weeks. The research team was also interested in people’s treatment strategies, that is which provider was visited first. In the case of chronic diseases the recall period of two weeks provided the basis for identifying the first provider visited.

A total of 173 people in Ban were either sick in the past two weeks or consumed some kind of medicine during the same period (see Table 6).

Forty two of these people did not seek any treatment. The survey covered 1137 people and the percentage who was sick during a two week recall period therefore is 15%. In comparison 24% of the sample population in the urban slum were sick. Interestingly, 25% of the sick people in Ban did not seek any treatment while the corresponding figure from the urban slum is 15%. In other words, more people in the urban area sought treatment for their symptoms. A possible explanation may be that there is no time to assume a sick role in the urban slum; time is of too much importance.
Table 6
Illnesses/symptoms in Ban during survey period

<table>
<thead>
<tr>
<th>Illness/symptom</th>
<th>Number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic diseases</td>
<td>30</td>
</tr>
<tr>
<td>Colds</td>
<td>25</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>13</td>
</tr>
<tr>
<td>Headache</td>
<td>10</td>
</tr>
<tr>
<td>Cough</td>
<td>10</td>
</tr>
<tr>
<td>Peptic ulcer</td>
<td>6</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>6</td>
</tr>
<tr>
<td>Fever</td>
<td>6</td>
</tr>
<tr>
<td>Back pain</td>
<td>6</td>
</tr>
<tr>
<td>Tiredness</td>
<td>5</td>
</tr>
<tr>
<td>Upper respiratory infection</td>
<td>5</td>
</tr>
<tr>
<td>Dental problems</td>
<td>5</td>
</tr>
<tr>
<td>Abscess</td>
<td>4</td>
</tr>
<tr>
<td>Spots</td>
<td>4</td>
</tr>
<tr>
<td>Vertigo</td>
<td>4</td>
</tr>
<tr>
<td>Wound/cut</td>
<td>4</td>
</tr>
<tr>
<td>Chickenpox</td>
<td>3</td>
</tr>
<tr>
<td>Fungus</td>
<td>3</td>
</tr>
<tr>
<td>Eye problems</td>
<td>3</td>
</tr>
<tr>
<td>Pain in various limbs</td>
<td>3</td>
</tr>
<tr>
<td>Sores</td>
<td>2</td>
</tr>
<tr>
<td>Allergy, rashes</td>
<td>2</td>
</tr>
<tr>
<td>Goiter</td>
<td>1</td>
</tr>
<tr>
<td>Air in stomach</td>
<td>1</td>
</tr>
<tr>
<td>Liver pain</td>
<td>1</td>
</tr>
<tr>
<td>Muscle pain</td>
<td>1</td>
</tr>
<tr>
<td>Neurotic (health centre diagnosis)</td>
<td>1</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1</td>
</tr>
<tr>
<td>Itches</td>
<td>1</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>1</td>
</tr>
<tr>
<td>Ear problems</td>
<td>1</td>
</tr>
<tr>
<td>Heart problems, acute</td>
<td>1</td>
</tr>
<tr>
<td>Kidney problems</td>
<td>1</td>
</tr>
<tr>
<td>Total sick people</td>
<td>171</td>
</tr>
<tr>
<td>Healthy but using medicine</td>
<td>1</td>
</tr>
<tr>
<td>Antenatal care</td>
<td>1</td>
</tr>
<tr>
<td>Total people who were sick or used medicines</td>
<td>173</td>
</tr>
</tbody>
</table>

The forty two sick people who did not visit any provider to get treatment or buy medicines are excluded from the following tables. This means that 131 people, including 2 healthy ones, visited a treatment provider. Their first choice of treatment provider was as follows:
Table 7
First choice of treatment provider

<table>
<thead>
<tr>
<th>Provider</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Centre</td>
<td>60</td>
</tr>
<tr>
<td>Shop, local</td>
<td>23</td>
</tr>
<tr>
<td>Private clinic</td>
<td>19</td>
</tr>
<tr>
<td>Drug stores</td>
<td>8</td>
</tr>
<tr>
<td>District hospital</td>
<td>6</td>
</tr>
<tr>
<td>Other public hospitals</td>
<td>5</td>
</tr>
<tr>
<td>Friends/relatives</td>
<td>4</td>
</tr>
<tr>
<td>Herbs from bush or garden</td>
<td>3</td>
</tr>
<tr>
<td>Dental clinic, Ban Phang</td>
<td>1</td>
</tr>
<tr>
<td>Dental clinic, Udon Thani</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>131</strong></td>
</tr>
</tbody>
</table>

The most used provider was the health centre followed by the local grocery shops. Next came the private clinics in Ban Phang and the drug stores in that town.

The health centre's popularity has much to do with Noi's high standing with the villagers. Many women liked to come and chat with Noi or other women waiting for their turn. The local shops are easy and cheap to use so the high number of customers is to be expected. It is more surprising that 19 people went straight to a private medical clinic in Ban Phang. It shows that there is a certain purchasing power in the village and that many activities are linked to the economic sphere of the district town. A first choice visit to a private provider in Ban Phang is normally combined with other business in the district town.

5.2 **Number of households**

Out of the 209 inhabited households in the rural village Ban, in 55 households one or more members of the household had received at least one injection (or infusion); this means 26.32% of the households.
5.3 **Type of injections**

The number of households in which at least one member had received one of the following types of injections is given below:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunizations:</td>
<td>1</td>
</tr>
<tr>
<td>Contraceptive:</td>
<td>0</td>
</tr>
<tr>
<td>Therapeutic:</td>
<td>50</td>
</tr>
<tr>
<td>IV fluid/infusion:</td>
<td>12</td>
</tr>
</tbody>
</table>

The total number of households, which fulfill the above criteria, is 63 because some households are counted in more than one category.

**Re immunizations:** in general the questions related to therapeutic injections; therefore there may have been more immunizations than one. However, immunizations tend to take place periodically.

**Re contraceptives:** the public health policy is to give oral contraceptives for 3 years and then to give contraceptive injections the next 3 years.

**Re therapeutic:** therapeutic injections also include vitamin injections administered for complaints such as headache and tiredness. Furthermore, the number 50 only reflects the number of households in which one or more members received an injection. It obscures the fact that there were sometimes more than one member receiving injections and that people often received more than one injection per illness case.

**Re IV fluid/infusions:** many of the people who received IV fluid also received injections, either separately or into the IV fluid. There is therefore some double counting.

The percentage of households which received therapeutic injections therefore becomes $50 \times 100/209 = 23.92\%$

The percentage of households which received IV fluid therefore becomes $12 \times 100/209 = 5.74\%$

5.4 **Children and injections**

The total number of children in the age group 1-6 years was 100. The number of children in the age group 1-6 years who received one or more injections including IV fluid
was 10. The percentage of children in the 1-6 year age group who received injections was therefore: $10 \times \frac{100}{114} = 8.77\%$.

Twenty five children in the age group 1-6 sought treatment. This means that 40% of these children received an injection as part of their treatment.

No children under the age of one received therapeutic injections or IV fluid. But four of the children receiving injections were only 1 year old. They received injection for conditions such as fever and cough, cold, diarrhoea and a cold with a high fever.

5.5 Gender and injections

The study population in Ban consisted of 575 males and 562 females, giving a total population of 1137. However, some people were away on migrant labour in other places in Thailand or abroad, namely 96 males and 47 females. The actual study population therefore becomes 479 males and 515 females.

There were 173 people in Ban who indicated some illness in the past two weeks (including the 3 cases of people who were not sick but who visited a treatment provider anyway). There were 68 male cases which means that a percentage of 14.20 of the male sample were sick. There were 105 sick or treatment seeking females, that means a percentage of 20.39 of the women.

The number of women who received one or more injections was 37. This means that $37 \times \frac{100}{515} = 7.18\%$ of the female study population received an injection (or IV fluid) in the past two weeks.

The number of men who received one or more injections was 21 (not including 1 immunization). This means that $21 \times \frac{100}{479} = 4.38\%$ of the study population received an injection (or IV fluid) in the past 2 weeks.
5.6 **Injections per treatment provider**

Percent patients who received one or more injections during their first visit to:

<table>
<thead>
<tr>
<th></th>
<th>Formula</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health centre:</td>
<td>25 x 100/60</td>
<td>42%</td>
</tr>
<tr>
<td>Hospital B.P.:</td>
<td>2 x 100/6</td>
<td>33%</td>
</tr>
<tr>
<td>+ Other hospitals:</td>
<td>2+0 x 100/6+3</td>
<td>22%</td>
</tr>
<tr>
<td>++ Hospital U.T.:</td>
<td>2+0+0 x 100/6+3+2</td>
<td>18%</td>
</tr>
<tr>
<td>Private clinics:</td>
<td>15 x 100/19</td>
<td>79%</td>
</tr>
</tbody>
</table>

As can be seen from the above table injections are administered most frequently by private medical doctors. The same doctors are working in the hospital in Ban Phang but here it is only 33% of the patients which receive an injection. If one includes the figures from the other public hospitals in the figures from the hospital in Ban Phang, the percentage of patients who receive injections at this level of public health care is as low as 18%. This is a significant difference from the 79% seen in the private sector. The fact that 42% of the patients at the health centre receive an injection is probably due to the social relations between the villagers and the midwife. In addition, the midwives may have been worried that the villagers, if refused an injection, would utilize the services of the informal injection doctor.

5.7 **Injections and specific illness conditions**

If one looks specifically at the numbers and types of injections administered for trivial or vague conditions (cold, diarrhoea, tiredness), the figures look as follows:

There were 22 cases of colds in the sample and five of these received an injection: 5 x 100/22 = 22.73% of the sample. All of these injections were unknown therapeutic injections.

There were 6 cases of diarrhoea in the sample and five of these received injections and/or IV fluid: 6 x 100/6 = 83.33% of the sample received one or more injections and/or IV fluid. One person only received IV fluid, another person a combination of IV fluid and an unknown injection. Two people received one unknown injection each and the last person received a NOSPA injection from the health centre and 4 injections from the rice miller.

There were five cases of vague symptoms such as tiredness, no appetite. Four of these received IV fluid or therapeutic injections: 4 x 100/5 = 80%. Two of these cases received
only IV fluid, one person got one unknown injection and the last person got a vitamin and a diazepam injection from the health centre and one unknown injection from the district hospital.

5.8 Number of drugs

Average number of drugs per patient during the first visit to:

<table>
<thead>
<tr>
<th>Location</th>
<th>Formula</th>
<th>Drugs/patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groceries</td>
<td>$23 + \frac{2}{23}$</td>
<td>1.09</td>
</tr>
<tr>
<td>Friends</td>
<td>$4+\frac{1}{4}$</td>
<td>1.75</td>
</tr>
<tr>
<td>Rice miller</td>
<td>No first visit</td>
<td></td>
</tr>
<tr>
<td>Drug store</td>
<td>$8+\frac{7}{8}$</td>
<td>1.88</td>
</tr>
<tr>
<td>Health centre</td>
<td>$55+\frac{42+22+5}{60}$</td>
<td>2.07</td>
</tr>
<tr>
<td>Hospital B.P.</td>
<td>$6+\frac{5+4+1+3+1}{6}$</td>
<td>4.17</td>
</tr>
<tr>
<td>+ Other hospitals</td>
<td>$25+\frac{3+3+2}{6+3}$</td>
<td>3.67</td>
</tr>
<tr>
<td>++ Hospital U.T.</td>
<td>$25+\frac{8+5}{6+3+2}$</td>
<td>3.45</td>
</tr>
<tr>
<td>Private clinics</td>
<td>$17+\frac{15+14+11+6+2}{19}$</td>
<td>3.42</td>
</tr>
</tbody>
</table>

The number of drugs per patient is lower in the informal sector than in the formal sector. With the exception of the health centre the public facilities administer three to four drugs per patient. It is questionable whether this polypharmacy is rational and necessary. From an economic point of view it is certainly expensive for the public health system.

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13 These figures include those from the hospital in Ban Phang.

14 These figures include those from the hospital in Ban Phang and from other hospitals. In other words, all public hospitals have been added to one category.
5.9 **Unknown drugs**

The percentage of people who received one or more unknown drugs (including unknown injections) during their first visit is given below:

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groceries</td>
<td>4 x 100/23 = 17.39%</td>
</tr>
<tr>
<td>Friends</td>
<td>1 x 100/4 = 25%</td>
</tr>
<tr>
<td>Rice miller</td>
<td>0</td>
</tr>
<tr>
<td>Drug store</td>
<td>5 x 100/8 = 62.5%</td>
</tr>
<tr>
<td>Health centre</td>
<td>10+5 x 100/60 = 25%</td>
</tr>
<tr>
<td>Hospital B.P.</td>
<td>5 x 100/6 = 83.33%</td>
</tr>
<tr>
<td>+ Other hospitals</td>
<td>5+3 x 100/6+3 = 88.89%</td>
</tr>
<tr>
<td>++Hospital U.T.</td>
<td>5+3+2 x 100/6+3+2 = 90%</td>
</tr>
<tr>
<td>Private clinics</td>
<td>16 x 100/19 = 84.21%</td>
</tr>
</tbody>
</table>

The extent to which administered drugs are unknown to the patients reflects several aspects of the patient-provider interaction. At the lower levels of the informal sector, groceries, friends and the lower level of the formal sector, the health centre, people are well aware of the identity of the received drugs. In many cases it may have been the patients’ social groups who have decided on the diagnosis and the appropriate drug treatment. In the higher echelons of the formal sector, however, such decisions are made by the doctors. Very little communication about the drugs seems to take place; between 83 and 90% of the patients are unaware of the names of their drugs.

5.10 **Summary**

The data have shown that a large number of households receive therapeutic injections regularly. Although the figures are small, it is disturbing that as much as 25% of the children in the 1-6 years age group who sought treatment, received an injection. Slightly more women than men seem to get injections which may be related to the sex of the health centre staff. The two midwives are female and men were saying they were embarrassed to receive injections in the buttocks from a woman. Women, on the other hand, felt relaxed at the health centre.
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Contrary to the research expectations informal injection sources did not figure at all in the list of first chosen providers. Injections seem to be almost entirely administered by formal providers in Ban. More than 22% of the cold cases were treated with an injection. In the case of diarrhoea 83% of the sample had an injection. Tiredness was treated with IV fluid or an injection in 80% of the cases.

The number of drugs administered seemed to be rising proportionately to the level of formalized expertise sought. In public hospitals and private medical clinics 3-4 drugs were administered per patient. It seems hard to justify this on medical grounds and it is costly for the public health system.

Finally the analysis showed that the patients who visited highly specialized providers, doctors, in either a public or a private setting knew less about their drugs than those patients who went to an informal provider. The responsibility for the diagnosis and the patient-provider communication seem to vary according to the degree of formalization. Thus higher training of the provider does not seem to be linked to better health education of patients.
CHAPTER SIX

6. RESULTS: THE CAUSAL AND CONTEXTUAL FACTORS IN THE POPULARITY OF INJECTIONS

Culturally rooted concepts and perceptions influence every stage of the therapeutic process from its very beginning to its very end.

6.1 Concepts relating to the body, disease and discomfort

Body balance

Concepts of the body and illness in Northeastern Thailand are a syncretism of Ayurveda, indigenous/classical Thai medicine and more recent biomedical contributions. The body is held to be made of four elements, water, air, earth and fire. The water body element embodies all fluids in or coming from the body. Such fluids can be blood, pus, perspiration, urine etc. The fire body element covers digestion and metabolism. The physiological and anatomical parts of the human body (non-liquid) constitute the earth body element. The air body element is defined as the air/breath/gas that circulates in and out of the human body. This element must not be confused with some kind of wind element (Ratarasarn 1989: 88).

The body elements must be kept in balance as an excess of any element will cause illness. Such an excess can occur because of poor nutrition, food which is inappropriate to an individual’s bodily configuration, heredity or possibly spirit intervention (Weisberg 1984). Keeping the body healthy, therefore, is a matter of adjusting the body with good nutrition, regular intake of medicines as needed and careful use of available healers during acute episodes of illness.

In general, health knowledge is generated within the family. All of the respondents listed their parents as their main source of information regarding sickness and health. Next on the list would be other relatives. Health centre or the media would come third in importance as a source of health knowledge. None of the villagers in Ban referred to the 4 body elements in their explanations although this was probably an underlying pattern in their concern with balance and health. They often stressed the above mentioned ways of keeping the body healthy.

Concepts of strength are linked to perceptions of the quality of the blood. While a number of people are aware that some characteristics can be inherited from the parents, in general non-hereditary factors are stressed. Strength is defined most often by a person’s ability to do hard physical work and by that person’s resistance to disease. Men are often perceived as stronger than women because of their ability to do hard physical work. Strength can be visually recognized by the redness of a person’s face (the redder, the better).
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The quality of one's blood influences a person's strength. The blood has to be thick and red. If it is thin and black, it means that the person is weak and liable to get sick. Therefore it is important to eat well and exercise to maintain good quality blood. Vitamins are also stressed as being essential to maintaining good blood and health. The high consumption of multivitamins and vitamin B in Ban, indicates that the villagers eat vitamins as a regular part of their everyday diet. According to Weisberg, vitamins are assumed to be analogous to body elements just like blood pressure is perceived as a measurement of the "wind" element (Weisberg 1984a: 177). Some respondents also mentioned traditional herbs as contributing to good health.

According to the villagers, it is necessary to change one's blood once in a while to get rid of the "bad blood". One way of doing this is to donate blood at the periodic blood donation events in the village. That way a person's body may generate new blood to replace the donated blood. Donating blood in Ban is not done out of any sense of civic duty but to strengthen one's own health. It is the responsibility of the doctors to make sure that the bad blood is not given in blood transfusions to innocent patients.

The respondents in the different focus group discussions did not all agree about the advantages or disadvantages of menstruation as a type of blood change. Some people feel that menstruation, like childbirth, is detrimental to women's health. Other people feel that these opportunities for generating new blood would make women extra strong.

Some medicines are perceived as being bad for the blood. Pain killers, such as Buadhai and Tamjai, will make a person's blood bad. But other medicines, and especially injections and IV fluid, will make the blood good. The interviewed women explained that they always feel better after vitamin injections. And the observation that patients in hospitals always receive IV fluid is taken as proof that IV fluid is good for the blood (in some areas of Thailand the IV fluid is actually red like blood). Anita Hardon points to a similar trend in The Philippines where doctors' prescriptions are perceived as recipes for future self-medication practices (Hardon 1991).

Diseases and inferior food can dilute a person's blood. As a result of weak blood, one may feel vertigo, tiredness and loss of appetite. Such symptoms are taken very seriously in the popular health culture. They indicate problems with the blood which must be treated before things get any worse.

Causes of disease

According to Ratarasarn (1989: 90-110) Thai classical medicine describes the etiology of diseases as follows:

1. Imbalances and malfunctions of the 4 body elements and the corresponding organs cause diseases. For instance: diseases caused by the water/liquid element would result in abnormality of the urine. Such diseases would be considered renal diseases.

2. It is known that some diseases are caused by external "germs" but the origin of these germs is not clearly understood. Intestinal worms are an example of such a germ
caused disease. In general, observing a patient’s discharges is an important diagnostic tool.

3. It is recognized that some diseases are caused by the individual’s exposure to the natural environment, particularly an unfamiliar environment. Examples of this are a new geographic location, a jungle, extreme hot or cold temperature, unfamiliar air etc. Being exposed to unfamiliar air or extreme temperatures can cause flu or pneumonia, according to Thai classical medicine.

4. Overlapping with the concept of germ-induced diseases are the concepts of infectious diseases. Examples of these are cholera, smallpox, and chicken pox.

5. Endogenous diseases include congenital abnormalities, diseases and germs which have developed in an individual’s body "automatically" and finally diseases of obscure origin; cancer and epilepsy are examples of this category of diseases.

6. Allergic reactions are responses to "disagreeable and external" substances. Whether or not an individual has allergic reactions depends on his or her immune system.

7. Emotional disturbances can be the results of disorders of the bile, varieties of fever and "poisonous or deadly" blood.

8. Psychosomatic diseases are recognized in Thai orthodox medicine as diseases caused by the unhappy condition of an individual’s mind or psychic strain. Such strains can induce and increase the susceptibility to disease and illness. According to Thai medicine the victims of psychosomatic diseases are frequently prominent political leaders who are deprived of the power and territory. An example of this is given in the Ratanakosin historical chronicles: King Anu of Vientiane who lost to king Rama III’s Bangkok army in the first part of the 19th century "suffered from the fatal disease of bloody vomit...and died within 7 days" (Ratarasarn 1989:108).

While the above classification of the causes (and symptoms) of diseases represents the scholarly version of Thai medicine, the villagers concepts of disease causation are simpler. According to them an imbalance in body elements or a dilution of a person’s blood will make a person prone to disease. A change of seasons also influences the body balance which makes people liable to get sick. Person to person transmission is not often mentioned as a cause of disease. And bacteria are believed to be a problem only in water. Acid food or upsetting the digestion (body functioning) by not keeping to proper meal times, can also cause sickness.

All of our respondents agree that there are more diseases today than in the old days. Some people point out that children are less sick (probably due to vaccinations). The reason why adults are suffering more today is indicated to be chemical pollution. Many respondents complain that food today contains chemicals. It is also quite common to see dead fishes in the canals or to get rashes from using this water. Given the high use of fertilizers in Thai agriculture, such observations are not surprising. Insecticide poisoning was also mentioned by a former public health official as a growing problem (Dr Chin, personal communication).
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When the respondents were asked to group or categorize a number of common local diseases, the results were not very consistent from one group of respondents to another. It is an accepted fact in Thai culture that "...one never quite knows the cause of an illness...." (Weisberg 1984a: 173). The observations confirm that people in Ban actually care less about what caused their sickness and more about what to do about it. It was much easier getting people to talk about various medicines than about diseases. One should caution here that the research methodologies employed in the two questions were slightly different. In the case of the medicines, actual samples were shown to people while in the case of diseases, local disease terms were written on cards.

A list of local illness categories is given below:

**Table 8**

Local illness categories
(as listed by the research assistant in Ban)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kaywat: fever, cough, runny nose</td>
</tr>
<tr>
<td>2.</td>
<td>Puatong: pain in the stomach</td>
</tr>
<tr>
<td>3.</td>
<td>Gapok: pain in the stomach</td>
</tr>
<tr>
<td>4.</td>
<td>Puathoa: headache</td>
</tr>
<tr>
<td>5.</td>
<td>Nyaj: tiredness (fatigue), no appetite</td>
</tr>
<tr>
<td>6.</td>
<td>Tongsia: diarrhoea</td>
</tr>
<tr>
<td>7.</td>
<td>Buatong, Bit: dysentery</td>
</tr>
<tr>
<td>8.</td>
<td>Adjian: vomiting</td>
</tr>
<tr>
<td>9.</td>
<td>Boatgarnnyaj: muscle pain</td>
</tr>
<tr>
<td>10.</td>
<td>Buatsaodo: bone pain</td>
</tr>
<tr>
<td>11.</td>
<td>Talaye: vertigo</td>
</tr>
<tr>
<td>12.</td>
<td>Paceo: rash</td>
</tr>
<tr>
<td>13.</td>
<td>Tum: spots (like chickenpox)</td>
</tr>
<tr>
<td>14.</td>
<td>Namuuh: runny nose but no cough and no fever</td>
</tr>
<tr>
<td>15.</td>
<td>Tok kaaw: vaginal discharge</td>
</tr>
<tr>
<td>16.</td>
<td>Akcaep: abscess</td>
</tr>
<tr>
<td>17.</td>
<td>Paah: wound</td>
</tr>
</tbody>
</table>

As is generally the case, the popular categories are based on symptoms rather than causes. Attention is given to getting treatment and alleviation of the symptoms rather than seeking the underlying cause of the symptoms. This list of local illness terms refers to a different medical orientation than the one which informs the bio-medical categories.

**Tolerance level of discomfort**

The consumption of pain-killers in Thailand is very high and on the rise. Part of the reason for this is the easy availability of medicines today. Before, when people fell sick, they had to use herbs for recovering. These herbs were time consuming to prepare and slow to take effect in the body. People had to cope with a good deal of pain and discomfort because there were no alternatives. Now, however, nearly every grocery shop sells pain-killers and in the slum area it is common to keep some packages of pain-killers at home. In the rural area, many women reported their first experiences with injections during childbirth. It is unknown
what the pharmaceutical contents of these injections were but reportedly they helped alleviate the pain.

This easy availability of effective pain-killers, both from the formal and the informal health care system, may have changed people's tolerance level for discomfort. Pain that before was accepted as an unavoidable part of life, is not so acceptable now because people have effective remedies for it. In the words of one of the respondents: "(Before) There was no medicine to take or nowhere to buy like nowadays. But these days, when people get even a little sick or painful, they often go to see a doctor".

Some researchers have even talked about a psychological dependency on pain-killers in Thailand (Srigernyung et al.1991). Many pain-killers used to contain caffeine which is addictive. But the Ministry of Public Health was quite adamant about implementing a ban on this ingredient and it has been removed as an ingredient in these products15. However, this does not seem to have slowed down the consumption of pain-killers. As the physical reason for addiction disappeared with caffeine, the continued high consumption of pain-killers would seem to support a psychological dependency theory. In this theory the demand for pain-killers is seen as a result of the increasing levels of social disintegration and stress in Thai society.

6.2 Therapeutic expectations and perception of medicines

Therapeutic expectations

One set of cultural factors which is important in eventually constituting the clinical reality, are therapeutic expectations (Kleinman 1980). Patient as well as provider have certain expectations regarding etiquette, treatment style, and therapeutic objectives. These expectations can be very different from patient to provider, from patient to patient and from provider to provider (this also depends on the sector which the provider represents). Often problems in the therapeutic interaction arise when patient and provider have different expectations.

Patient expectations about etiquette vary according to the type of provider. A provider in the professional sector will be expected to be formal but polite, competent but secretive, meticulous but fast. The provider on the other hand will expect the patient to be very polite and aware of the status differences between them, attentive but ignorant, and, hopefully, compliant. Neither part is likely to expect the patient to ask a lot of questions. It is not common in Thai culture for a person of inferior status to ask questions or to admit incomprehension to a socially superior person. Conflict and confusion will arise if either part does not conform to common role expectations.

Treatment expectations are likely to be very different in the folk sector. Provider and patient are closer to each other in terms of social status. The provider may be a fellow villager as is the case with the informal injection provider in Ban. A possible diagnosis may even be discussed between the folk sector provider and the patient. And since the patient is

15 However, since the very popular tonics are not controlled by the FDA, the ban on caffeine does not apply to tonics.

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also a paying customer, he or she is likely to exert some influence on diagnosis and treatment schedule. The etiquette in the folk sector is therefore one of less formality and more equality.

In the popular sector the interactions are taking place between equals and neither part needs to show any special respect or deference. The provider may be the neighbour who owns a small grocery store or a relative. In this type of self-medication the diagnosis is often made by the patient himself and the provider merely sells or supplies the wanted medicines.

The patient's expectations concerning the style of treatment will also depend on the provider sector. In a professional setting a patient will expect to receive high technology care, while in a folk sector some biomedical equipment may be present but not to the same extent as in the professional sector. In the popular sector, the setting or style of treatment is not characterized by any high technology biomedical equipment or any sense of formality.

The therapeutic objectives may vary widely from patient to provider and from one sector to another. A patient may wish to recover as quickly as possible, to be legitimized in a certain sick role or to escape reality for a while. The professional provider on the other hand may wish to achieve a biomedical cure and/or to ensure patient satisfaction (see next chapter). A folk provider may wish to achieve patient satisfaction or to confirm his own social status in the community. In the popular sector therapeutic objectives range from profit and future business to helping a dear relative.

Perceptions of medicines

As mentioned earlier medicines are believed by villagers to be essential in health care. Thai people truly believe that there is "a pill for every ill". Weisberg's and the team's observations on this subject are quite similar: "The appropriate drug or treatment may only be found through a process of trial and error: one reason village patients pop from one healer to another is to search for "the" cure, which is felt to be out there, somewhere, if one can only find it. Also, since an afflicted part of the body (or the entire body, if the illness invades the entire system) must be treated before the illness' harmful effects become irreversible, speed is essential" (Weisberg 1984a: 177). The concept of speed is very important in explaining villagers' treatment seeking behavior and preferences for certain routes of medication administration.

As pointed out by Weisberg, biomedicine fits nicely into such a framework of speed and a process of trial and error. Villagers expect biomedicine to correct imbalances among the body elements much faster than could be expected of herbs. Furthermore, biomedicine is available everywhere and in a form which is ready for immediate consumption. As described by Bledsoe and Goubaud in the reinterpretation of pharmaceuticals among the Mende in Sierra Leone, biomedicine has been reinterpreted and subsumed under some preexisting categories (Bledsoe and Goubaud 1988). Vitamins, for instance, are perceived as analogous to elements. Blood pressure is perceived to be a measurement of the "wind" (or air) element. And intravenous drips constitute a replacement of energy, almost like a complex tonic of the kind which is so popular in Thai culture (Weisberg 1984a: 177). In Ban intravenous drips are also used by young men to stock up on energy before they go abroad for work.
Six of the grocery shops in the village Ban sell medicines. The number of medicines sold vary from 3 in one shop to 50 in the biggest shop. The shopkeepers buy their supplies from drug stores in the nearby district town. None of the shops sell injectables or syringes, nor do they sell IV fluid. As will be seen later, these shops are often people’s first treatment resort for trivial symptoms. Most people know exactly what medicines they want to purchase. If they do not, the shopkeepers, who have no medical or pharmaceutical training, will try to advise them. Sometimes the shopkeepers use their experience with other clients as a basis for giving advice, sometimes they read the package inserts of the pharmaceuticals.

Table 8
Best selling drugs in grocery shops

The following allopathic drugs were the 14 best selling items for the six shops taken together:

<table>
<thead>
<tr>
<th>Name of drug</th>
<th>Total week sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Buadhai, pain-killer</td>
<td>240 tablets</td>
</tr>
<tr>
<td>2. Buadhai, powder</td>
<td>160 packs</td>
</tr>
<tr>
<td>3. Raviton, vitamins</td>
<td>320 tablets</td>
</tr>
<tr>
<td>4. Tanjay, pain-killer, powder</td>
<td>270 packs</td>
</tr>
<tr>
<td>5. Tanjay, small pack</td>
<td>20 packs</td>
</tr>
<tr>
<td>6. Bura, pain-killer</td>
<td>288 tablets</td>
</tr>
<tr>
<td>7. Tiffy, for fever and cold</td>
<td>180 tablets</td>
</tr>
<tr>
<td>8. Nutacold, for cold</td>
<td>124 tablets</td>
</tr>
<tr>
<td>9. Thiamine HCL, vitamins</td>
<td>100 tablets</td>
</tr>
<tr>
<td>10. R-Velop, pain-killer</td>
<td>100 tablets</td>
</tr>
<tr>
<td>11. Heroycycin, for abscess</td>
<td>65 capsules</td>
</tr>
<tr>
<td>12. Heromycin, for babies</td>
<td>20 capsules</td>
</tr>
<tr>
<td>13. Admag M, for stomach pain</td>
<td>80 tablets</td>
</tr>
<tr>
<td>14. Pyran, for cold and fever</td>
<td>80 tablets</td>
</tr>
<tr>
<td>15. Yachut, 1 bag with 5 different pills, for bone pain</td>
<td>75 pills</td>
</tr>
<tr>
<td>16. Jawad powder, for fever in baby</td>
<td>60 packs</td>
</tr>
<tr>
<td>17. Mag-77, for stomach pain</td>
<td>60 tablets</td>
</tr>
</tbody>
</table>

Referring to earlier discussion about the lower tolerance level for pain, it is interesting to notice that 1,218 pain-killer tablets or powders were sold during one week in the village, more than any other type of medicine. These medicines were probably also consumed as people normally buy only the amount needed for immediate consumption. It was also rare for people to be storing medicines at home.

The amount of pain-killers sold is the equivalent of all inhabitants in Ban, even babies, taking at least one pain-killer per week. This is a rather high consumption of pain-killers, given that there were no special disease factors at work. It would seem that Thai people in this village, and certainly also in the slum area, regard pain-killers as a regular feature of their daily lives.

The above listed drugs and two cough syrups and a worm medicine (Brown Mixture, Baby Cough Syrup, and Hexin Tapeworm Drug) were presented during a number of focus group discussions and the participants were asked to classify them. The women in the focus
groups grouped the medicines according to symptoms. For instance Mag-77 and Admag M for stomach pains, Ravifort and Thiamine as vitamins, Heromycin for abscesses and Tiffy, Nutacold, Pyrana for colds. The main difference between the various focus groups' classifications seemed to be whether the pain-killers such as Bura, Buadhai, and Tamjai were grouped separately for pain or together with the cold medicines. Yachut was some times grouped with the pain-killers; in other cases the women said the therapeutic effect depended on the specific type of Yachut and this is not evident from appearance.

The syringe and needle were also presented to the focus groups. The women agreed that injections could be used for all symptoms. There were different opinions as to how many times syringes and needles could be used.

In general, medicines were not perceived as being potentially dangerous if taken in moderation. Weisberg has made the same observation: "They (the villagers, AR) find no danger in seeing an injection doctor, a physician, and a druggist within 24 hours and receiving drugs from each" (Weisberg 1984: 178). Drugs, injections and IV fluid can in fact make one's blood better. However, pain-killers such as Tamjai and Buadhai were recognized to be powerful and addictive. These drugs would also make one's blood bad (like Yachut) and could be the cause of peptic ulcers and convulsions. Some women stated that they could actually feel these strong medicines working inside their bodies and that they would make them sweat.

The villagers feel that one should use medicines only as long as symptoms are present. One should stop taking medicines as soon as symptoms abate. "Otherwise, one would create an imbalance among the elements and court further illness and physical disaster" (ibid:179).

Interestingly, some women stated that when they buy "shop-medicine", they have to eat a lot of it to recover. The survey data showed that when people buy medicine in the grocery shops, they normally buy only one type of medicine. When they go to private doctors, they often end up with 4 different types of pills. Maybe the respondents meant that they would have to eat more of the same type of medicine if it was from a shop to achieve the same effect as a treatment schedule from a professional provider. The villagers were also asked if the power of a drug varied according to the healer. In other words, would a specific pain-killer be as effective if it was bought in a shop as if it was dispensed by a doctor or another type of provider. To this they always answered that there would be no difference in the effect of the drug. But the villagers do feel that a professional provider would choose a more effective/appropriate drug or a more effective combination of drugs than healers in the two other sectors.

When asked about the advantages and disadvantages of the different routes of administration of medicines, the majority of women agreed that pills, capsules and liquids work in the same way. They are digested in the stomach and later absorbed by the body. Injections, however, are more powerful and quick because they go directly into the blood where the medicine will "run in the blood vessels". All the observed injections in the health centre were given in the buttocks, not intravenously, but that did not seem to affect people's perception of the way injections work.
Injections are not perceived as being any more risky than oral medicine except in cases of allergic reactions. Some people feel that injections should not be given to children, because children are less strong than adults.

6.3 Patient-provider exchange and evaluation

This last category of cultural factors relates to the therapeutic encounter itself. The patient may be in a state of acute discomfort or pain and he will expect the provider to have an appropriate reaction, most likely an injection. The health care setting may be embarrassing to the patient if there is no privacy or he is ashamed of his condition (as is often the case with venereal diseases). The sex of the provider may also be important. In Ban young men are reluctant to use the health centre because the midwife is a young woman. In general such factors may often lead to a choice of a folk or popular provider although their drugs may not be so effective as those of the professional provider. But if the prime concern of the patient is to conceal his condition or obtain fast treatment, a choice of a folk healer or a popular provider would be more rational. In these settings the client can be fairly sure of convenience, privacy and a drug/drug administration of his choice.

The patient-provider exchange and the subsequent evaluation of the encounter by the patient also depends on the explanatory models of the two parties. These interactions will be discussed in detail in the next chapter. The explanatory model of the patient, although specific to this particular illness episode, is rooted in the medical culture of his therapy management alliance. The rationality of his choices are therefore dependent on cultural as well as individual factors. The provider, on the other hand, is equally influenced by culture although this is primarily the culture of his profession and institutional setting. However, a positive evaluation of the treatment outcome is not necessarily dependent on congruence of the explanatory models of the provider and patient.

6.4 Monetary factors

Monetary factors include direct costs as well as indirect costs. These latter include the time it takes to get to the chosen treatment provider and the time one has to wait before seeing the provider. The rural people would, if their symptoms were not too serious, normally start with self-medication. They would purchase the drug in a grocery shop as a first therapy choice. Such a shop is easy to get to and there are no special opening hours which have to be kept. In such a shop one can also purchase one pill or one capsule at a time for as little as 1 or 2 Baht. This is of course important for people who do not have a lot of cash.

If the shop medicine did not help, the typical rural patient would proceed to the village health centre which is also within easy reach for all the people in Ban. Very old people, children under seven and very poor people are entitled to free drugs. All others have to pay for the drugs, often a set fee of 20 baht. As can be seen from table 4, the majority of patients went to the health centre as their first treatment choice. The reasons for this are varied. Many people come because they like the midwife (Noi). The health centre is also able to administer injections, something which is not part of self-medication practices in Thailand. Finally, some
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A case study of Thailand

of the patients who went to the health centre probably evaluated their symptoms as serious enough to require professional attention.

Persistent illnesses would be brought either to the hospital in the district town of Ban Phang or to a private doctor’s clinic in the same town. Most people would try to get a ride with somebody going to Ban Phang to sell cassava or for other purposes. Otherwise a bus could be taken for a small fee but this would be quite time-consuming. So would waiting at the district hospital for that matter so it really had to be quite serious for people to choose this option. The rules for fee paying in the hospital are the same as in the health centre. But a private clinic would normally charge between 40 and 100 baht.

Only rarely would a rural patient venture into the provincial hospital 50 km away. A visit to Udon Thani general hospital would be costly in terms of transportation, expenditures on food, time lost etc. In addition, few Thais would undertake such a hospital visit without being accompanied by a relative, so the cost of the trip would in fact be double.

In the research, no urban slum people visited more than one provider. This provider was most often a local grocery shop, a drug store/pharmacy or a private clinic in Udon Thani city. All of these were in walking distance although most people would buy when they went to work or hitch a ride with a samrooi driver going into town.

Few of the people who had “poor-cards” entitling them to free treatment at the public hospital, used these rights. People explained that they did not have the time to wait their turn at the hospital. Personal observation at the outpatient department at Udon Hospital confirms that the average waiting time often was 2-3 hours. Most slum people have temporary manual jobs with very low salaries. This means that they cannot afford to lose a day’s income nor dare they be absent from work for hours at a time or they might be fired. This also means that relatives and friends in the slum rarely have time to accompany the patient to the hospital.

It seems ironic that the poorest people, namely the people in the slum area, are the people who use the public health facilities the least. As can be seen from the above, other factors such as work patterns and limited social relationships are more important in determining treatment seeking strategies than direct costs of services.
CHAPTER 7

7. CONCLUSION AND RECOMMENDATIONS

7.1 Summary of results

The research data showed that in 26% of the households at least one person had received an injection in the past two weeks. By far the majority of these injections were therapeutic injections. Even more disturbing is the fact that almost 9% of all children between 1 and 6 years received an injection and four of these children were only one year old. In terms of the number of children who sought treatment, as many as 40% received an injection as part of their treatment. Another interesting point is that twice as many women as men received injections recently.

Based on earlier research (Cunningham 1970) and research from other developing countries, it was expected that the majority of injections would be administered by the informal health care sector. That is by "injection doctors", pharmacies, and private individuals. However, in this research area at least, this is not the case. All the patients, at the level of first visited provider, received their injections from the formal health care system. Forty two percent of those patients who went to the health centre first were administered an injection. In the district hospital 33% of all patients received at least one injection. And in the private medical clinics the figure was as high as 79%.

When correlating the data for specific, trivial or vague illness conditions and the rate of injections, twenty three percent of the people who complained about a cold received an injection and 83% of the diarrhoea cases received at least one injection. People who had vague symptoms like tiredness and no appetite received an injection or IV fluid in 80% of the cases.

Some of these figures are small but seen in the context of the research study's qualitative information they make sense. It is strongly believed that injections are the most powerful form of treatment, injections "run in the blood". Although some people had actually experienced abscesses in connection with injections in the informal sector, most people denied that there was any risk in receiving injections. While aware that sharing needles could transmit HIV infection, consumers and providers alike were not aware that sharing a syringe could entail the same risk. Formal providers were well aware that there were other diseases like hepatitis which could be transferred through the injection equipment. Most of the providers were also conscious that injections were a very expensive form of treatment. But social pressure and/or business considerations resulted in the administration of injections anyway.

Injections are only part of the drug treatment which people receive. The average number of drugs per patient ranged from 1.09 in groceries to 4.17 in the district hospital and 3.42 in the private medical clinics. In the informal sector it was less than 2 drugs per
customer. The health centre dispensed on an average 2.07 drugs per patient. Future studies could look at prescribing habits in the hospitals and the economic consequences of the over-prescribing of pharmaceuticals.

Respondents were also asked if they knew the names or characteristics of the drugs they had received. In general, knowledge was higher in the informal sector where the responsibility for diagnosis lies with the customer. In the formal sector (public hospitals and private clinics) 84 to 90% of the patients received unknown drugs.

To sum up, the data have shown a general over-consumption of drugs and injections. Contrary to expectations, the problem seems to be most pronounced in the formal sector, especially in the public hospitals and private clinics. Where there is a combination of a profit motive and formality, as in the private medical clinics, as many as 79% of first visit patients receive one or more injections. The lack of patient awareness of the received drugs reflects a lack of communication between patient and provider in the higher levels of the formal sector and possibly a protection of future business in the private, formal sector.

7.2 Recommendations

Given the strong popularity of injections and the present characteristics of the public and private health care system, it is unlikely that consumption of injections will decrease in the coming years. Nor is it likely that increased training of providers will make a difference since they were already well aware of the irrationality of most administered injections. As the informal sector's administration of injections is limited and seems to be decreasing, specific measures to train or control this sector in this respect are not necessary.

In essence, the question becomes: How does one limit the consumption of irrational injections while retaining a positive attitude towards vaccinations and Depo Provera injections?

Health care planners could take as a starting point people's own explanatory models. Thai people believe that injections are the most powerful form of medicine, that injections "run in the blood". Furthermore, they do not believe that injections have any side-effects. But given the general emphasis on moderation in a Buddhist culture such as the Thai, a message could be phrased to stress the concept of moderation in connection with the consumption of drugs and injections. The idea of a balance between four body elements could also be used to explain that too much power, in the form of an injection, might upset the internal body balance. It could also be considered to try to replace injections with another popular symbolic health technology, i.e. blood pressure equipment.

In addition, some Thai people believe that children are more vulnerable than adults and that they therefore should not be given injections. This notion should be emphasized in consumer education.

The research showed that parents were more important as a source of health education than the media or the health centre. While appropriate use of drugs might be incorporated in
the general health education in schools, it would be important to aim simultaneous health education at the mothers.

Health education on the appropriate use of drugs and injections should be carried out on different levels by different agents. More information on essential drugs should be incorporated in the training of health care workers (including doctors) at all levels. At the same time consumers should be educated on how to ensure that their purchasing power gets them better health, not just more drugs. Professional associations, non-governmental organizations and consumer groups could participate in such efforts using locally adapted means of communication. Broadcasts on radio or television, cartoons or pamphlets, songs or drama are examples of communication devices aimed at the public.

In this endeavour it is important to recognize that there are significant differences between urban and rural areas. The problems of drug use are not the same in the two types of areas and messages and educational tools must reflect these differences. An example of this is that the consumption of Yachut seems to be high in the urban area while the irrational use of injections seems to be the main problem in the rural area.
**LITERATURE LIST**


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