



CHAPTER 2

HEALTH CARE PROVISION AND FOREIGN PATIENTS IN NAN PROVINCE

This chapter consists of two parts. The first part is about health care provision in Nan province. The second part will describe the characteristics of foreign patients who receive health care services in Nan province.

2.1 Health Care Provision

The health service systems in Nan province include both public and private sectors. The public sector expands its medical service coverage at all levels while the private sector only invests in hospitals and clinics at the larger districts. As for the health administration, the administrative structures of the public health organizations at all levels are supported and evaluated by Nan Provincial Public Health Office. At present, public health organization has been its structure reforming into smaller organizations by decentralizing their authorities into operational levels. These attempts would cause the adjustment of working processes of decentralized organizations to be responsible for the health of the whole population. In addition, other health service activities such as health insurance, family planning, safe drinking water and sanitary latrines have high coverage. These would provide benefits and achievement to good health as well.

For the public health facilities, there is Nan general hospital which provided tertiary care and supports other health facilities by referral systems. In addition, in district level there are 12 community hospitals, which covered 85.7% of the districts in 2001. At Tambon level (subdistrict level), there are 120 health centers which accounted for 100% coverage. Additionally, there are also 28 community health centers located in remote village areas (see Table 2.1).

For private health facilities, there are scatter of private clinics and drug stores around the province while there is only one private hospital, which provide only outpatient

Table 2.1 Public Health Facilities in Nan Province: 2001

District	Ministry of Public Health				Other Ministry	
	General Hospital	Community Hospitals	Health Centers	Community Health Centers	Hospitals	Health Centers
	No./Beded	No./Beded	No.	No.	No./Beded	No.
Maung	1/430	-	16	1	1/60	1
Mae Charim	-	1/30	7	1	-	-
Ban Laung	-	1/30	4	-	-	-
Na Noi	-	1/30	7	2	-	-
Pua	-	1/90	11	2	-	-
Tha Wang Pha	-	1/30	14	2	-	-
Wiang Sa	-	1/60	22	4	-	-
Tung Chang	-	1/30	3	4	-	-
Chiang Klang	-	1/30	8	1	-	-
Na Muen	-	1/30	4	1	-	-
San Tisuk	-	1/30	3	1	-	-
Bo Klua	-	1/10	5	3	-	-
Song Kwae	-	1/10	3	3	-	-
Phu Piang	-	-	9	1	-	-
Chaleamprakeat	-	-	4	2	-	-
Total	1/430	12/410	120	28	1/60	1

Source Nan Provincial Public Health Office (2000)

services. Although, the government has also provided an equal opportunities for both private and public facilities based on market competition. When focusing on location, it is found that private health care facilities are more concentrated in area with large population such as Maung district, Pua district, and Wiang Sa district. The proportion of the number of bed per population in Nan province is 1:592 which lower than the proportion of number of bed per population from the 8th National Health Development Plan indicator is 1: 500.

In terms of health resource and personnel, there is maldistribution of health personnel such as doctors, dentists, pharmacists and nurses. In Nan province there is 1 doctor per 7,758 population (8th National Health Development Plan indicators is 1:3,300), 1 dentist per 23,275 population (8th National Health Development Plan indicators is 1:9,800), 1 pharmacist per 11,922 population (8th National Health Development Plan indicators is 1:5,200) and 1 registered nurse (professional nurse) per 940 population (8th National Health Development Plan indicators is 1:900).

In addition, there are number of supporting health personnel and other personnel of whom the work is related to health such as Tambon health personnel, Village Health Volunteers, sisters in local nutrition centers and child development centers.

For the health care financing, after the government established the universal coverage scheme in fiscal year 2002 in Nan Province the budget allocation was changed from annual budget plan to capitation. The health facilities must then manage for their cost efficiency. At this situation on health budget, came from two main source as follow respects: (1) Public expenditure was channeled mainly through the annual budget of the Ministry of Public Health (MOPH) and public welfare which accounted for 89.8% of overall health expenditure. Contributions from other governmental agencies accounted for 2.6% and state enterprises 5.7%; and (2) Private expenditure still played a minor role despite sheer development in health insurance system. Contribution from the workmen' compensation fund remained 1.9% of the overall health expenditure

Considering to health status, the reduction of population growth rate in past five years in Nan province has affected the change of population structure especially in children under 15 years old decreasing from 25.4% of total population in year 2000 to 22.6% in year 2001. In the same period, the proportion of working-aged (15-59 years old)

increase from 64.5% to 65.9% of total population and the old aged (over 60 years old) increase from 10.1% to 11.5%.

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) have been increasing insignificantly. The MMR increase from 0.7 per 1,000 livebirths in 2000 to 0.9 in 2001 where as the increase of IMR was 18.2 per 1,000 livebirths in 2000 to 19.5 in 2001. Considering to the causes of death, maternal is mostly dead from pregnancy complications and HIV infection.

The five major leading causes of deaths in Nan province are as follows; (1) Chronic Obstructive Pulmonary Disease (COPD) 89.2 per 100,000 population; (2) Malignant neoplasm 77.4 per 100,000 population; (3) AIDS and HIV infected 64.3 per 100,000 population; (4) Senility 48.9 per 100,000 population; and (5) Chronic Renal Failure (CRF) 34.7 per 100,000 population, respectively. In addition, suicide, homicide, accident and other injuries have increasing trend in top-ten rank also.

The five major leading causes of morbidity per 100,000 population of outpatients in public health facilities year 2001 were (1) Diseases of the respiratory system (73,576), (2) Diseases of the musculoskeletal system and connective tissue (49,978), (3) Symptoms, sign and abnormal clinical and laboratory findings, not elsewhere classified (47,025), (4) Diseases of the digestive system (37,643) and (5) Diseases of the circulatory system (22,450).

For in-patients, the five major leading causes of morbidity per 100,000 population were (1) Chronic lower respiratory diseases (799), (2) Diseases of the musculoskeletal system (657), (3) Other diseases of the digestive system (573), (4) Hypertensive disease (564) and (5) Other intestinal infectious diseases (553).

In addition, the five major infectious or epidemic diseases are as follows: (1) Diarrhea 1,843 per 100,000 population; (2) Fever and pyrexia Unknown Origin (PUO) 774 per 100,000 population; (3) Conjunctivitis 317 per 100,000 population; (4) Pneumonia 207 per 100,000 population; and (5) Food poisoning 175 per 100,000 population, respectively.

2.2 Foreign patients

Nan province shares 277-kilometeres border with Lao People Democratic Republic (Lao PDR) in 7 districts. There are 13 thoroughfares for people to cross the border as follows: (1) International checkpoint (Hauykon international checkpoint-Chaleamprakeit district), (2) Temporary checkpoints (Banhauysatang-Thungchang district and Banmaichaydan-Songkwae district) and (3) Informal thoroughfares (10 thoroughfares) along the border which located in 6 districts (Wiangsa district, Maecharim district, Boklua district, Chaleamprakeat district, Nanoi district and Songkwae district).

After border opening in 1994, data of number of Thai and Laos those crossed the border shows that Laos tends to cross over to Thailand more than Thai to Lao PDR. The proportion of Laos crosses over to Thailand compare to Thai crosses over to Lao PDR at Hauykon checkpoint is average 1.62 from 1994-2000. At Banhauysatang checkpoints the proportion is 12.73 and Banmaichaydan checkpoints is 5.12 (see Table 2.2).

There are 6 community hospitals and 28 health centers that provide health care services for foreign patients. After opening the borderline in 1994 to 2000, the average foreign patients those seeking for health care services per year were 3,329 cases. The average proportion of foreign patient compare to Thai patients in health center is about 0.92%, in the outpatient department (OPD) of hospital is about 0.90% and in-patient department (IPD) is about 4.75%.

The highest average proportion between Thai and Laos patients in health center is Chondan health center of 2.68% and Numripattana health center is the second rank with 1.50%. For hospitals, Tungchang hospital has the highest proportion with 3.09% of OPD and 13.82% of IPD.

The distribution in term of the gender shows that most of them are female. The proportion of male to female is 1:1.33 (see Table 2.3).

For age distribution of foreign patients, in the range of age 25-34 years is the highest with 25-28%, 15-24 years of 15-22% and 35-44 years of 12-16%. For children (age under 14 years old), 0-4 years children ranks highest in seeking for health care services (see Table 2.4).

TABLE 2.2 Number of Thais and Laos Crossing the Border: 1994-2000

Years	Hauykon checkpoint		Banhausatang checkpoint		Banmaichaydan checkpoint	
	Thai	Laos	Thai	Laos	Thai	Laos
	1994	1,653	2,974	-	-	-
1995	5,903	14,376	-	-	-	-
1996	3,583	10,591	128	9,769	4,950	24,390
1997	7,702	7,791	431	8,942	9,002	31,700
1998	7,418	7,031	1,430	7,415	6,580	40,250
1999	3,828	4,973	606	5,836	8,650	41,645
2000	3,958	7,269	397	6,125	5,234	38,217
Total	34,045	55,005	2,992	38,087	34,416	176,202

Source: Nan Provincial Public Health Office (2000)

TABLE 2.3 Number and Percentage of Foreign Patients Classified by Gender

Years	1996		1997		1998		1999		2000	
	No.	%	No.	%	No.	%	No.	%	No.	%
Male	1,829	43.0	1,997	44.5	1,399	41.9	1,543	42.8	1,868	42.3
Female	2,426	57.0	2,490	55.5	1,942	58.1	2,061	57.2	2,546	57.7
Total	4,255	100.0	4,487	100.0	3,341	100.0	3,604	100.0	4,414	100.0

Source: Nan Provincial Public Health Office (2000)

TABLE 2.4 Number and Percentage of Foreign Patients Classified by Age

Years Age (Yrs.)	1996		1997		1998		1999		2000	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	533	12.5	468	10.4	300	9.0	441	12.2	533	12.1
5-9	372	8.7	298	6.6	190	5.7	199	5.5	245	5.6
10-14	233	5.5	200	4.5	190	5.7	146	4.1	379	8.6
15-24	621	14.6	689	15.4	574	17.2	579	16.1	989	22.4
25-34	1,070	25.2	1,194	26.6	854	25.6	915	25.4	1,298	29.4
35-44	661	15.5	736	16.4	537	16.1	580	16.1	537	12.2
45-54	376	8.8	396	8.8	318	9.5	327	9.1	221	5.0
55-64	244	5.7	286	6.4	170	5.1	227	6.3	96	2.2
Over 65 Yrs.	133	3.1	176	3.9	208	6.2	190	5.3	116	2.6
Unspecified	12	0.3	44	1.0	-	-	-	-	-	-
Total	4,255	100	4,487	100.0	3,341	100.0	3,604	100.0	4,414	100.0

Source: Nan Provincial Public Health Office (2000)

The Lao PDR patients came from various regions in the northern part of the country. More than half of them are from Chiang-hon district (52.41% in average) which is the nearest district to Thailand border. Since year 1998, there are reports that foreign patients who are Laotian at birth but now living in Nan also use the health facilities in the province. These people are assumed as immigrant workers in Nan province (see Table 2.5).

For services provided by health facilities, the health care services record shows the percentage of foreign patient who received the health care services fluctuates over the period of 1996-2000 in all level of health facilities. Most of these foreign patients receive the services from community hospitals (average 64.6%), health centers (average 20.3%) and about 10.1% from Nan General hospital (see Table 2.6).

In Nan General hospital most of the foreign patients were accepted referral cases from health centers and community hospitals, especially from Tungchang hospital which is first frontline hospital from the border. Considering of foreign patients in Nan General hospital, which mainly provides tertiary care service, in-patient services are higher in proportion than outpatient services.

For other community hospitals and health centers, the foreign patients sought care in outpatient department more than in-patient department. The proportions of OPD (outpatient department) cases per IPD (in-patient department) cases in the year 1996-2000 are 3.76, 3.62, 4.13, 3.67, and 4.48 respectively while the average in-patient day is 4.1, 4.2, 5.3, 4.6, and 3.9 days respectively (see Table 2.7).

According to major of services provided, the highest rank of services provided for foreign patients is family planning. For the cause of illness, infectious diseases such as upper respiratory diseases, urinary tract infection, pyrexia of unknown origin (PUO) and fever are in the highs of the top ten ranks. Still, PUO and fever is these patients are increasing every year. Musculoskeletal system disease and disorder of digestive system are also one of the main problems (see Table 2.8).

Focussing on cause of death of foreign patients, infectious disease especially communicable disease such as tuberculosis, malaria, encephalitis and diphtheria are major cause of death for foreign patients. For diphtheria that can be prevents by

TABLE 2.5 Number and Percentage of Foreign Patients Classified by Location

Years	1996		1997		1998		1999		2000		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Ngen	722	18.7	879	19.6	815	24.4	972	27.0	685	23.5	4,073	21.9
Chiang-hon	2,922	66.0	2,847	63.5	1,650	49.4	1,466	40.7	865	29.7	9,750	52.4
Hong-Sa	364	8.5	474	10.6	533	16.0	653	18.1	419	14.4	2,443	13.1
Chaiyaburi	0	0.0	223	5.0	286	8.6	503	14.0	609	20.9	1,621	8.7
Unspecified	247	6.8	64	1.4	28	0.8	7	0.2	317	10.9	663	3.6
Stay in Nan	0	0.0	0	0.0	29	0.9	3	0.1	20	0.7	52	0.3
Total	4,255	100.0	4,487	100.0	3,341	100.0	3,604	100.0	2,915	100.0	18,602	100.0

Source: Nan Provincial Public Health Office (2000)

TABLE 2.6 Number and Percentage of Health Care Services for Foreign Patients
Classified by Health Facilities

Years Health- Facilities	1996		1997		1998		1999		2000	
	No.	%	No.	%	No.	%	No.	%	No.	%
Community Health Center	469	11.0	113	2.5	59	1.8	1	0.03	297	10.2
Health center	735	17.3	1,017	22.7	606	18.1	821	22.8	590	20.2
Community Hospital	2,696	63.4	2,946	65.7	2,343	70.1	2,448	67.9	1,583	54.3
Nan General Hospital	355	8.3	411	9.2	333	10.0	334	9.3	445	15.3
Total	4,255	100.0	4,487	100.0	3,341	100.0	3,604	100.0	2,915	100.0

Source: Nan Provincial Public Health Office (2000)

TABLE 2.7 Number and Percentage of Foreign Patients Classified by Services

Years Service	1996		1997		1998		1999		2000	
	No.	%	No.	%	No.	%	No.	%	No.	%
OPD	3,362	79.0	3,516	78.4	2,690	80.5	2,833	78.6	3,608	81.7
IPD	893	21.0	971	21.6	651	19.5	771	21.4	806	18.3
Total	4,255	100.0	4,487	100.0	3,341	100.0	3,604	100.0	4,414	100.0

Source: Nan Provincial Public Health Office (2000)

TABLE 2.8 Top Ten Health Services Provided to Foreign Patients

Years	1996	1997	1998	1999	2000
Services provides	%	%	%	%	%
Family planning	4.6 (5)	8.3 (2)	6.8 (3)	9.6 (1)	13.4 (1)
Upper respiratory systems diseases	11.4 (1)	11.0 (1)	7.9 (2)	6.0 (2)	8.1 (2)
Low back pain	3.1 (7)	5.7 (6)	6.4 (4)	3.1 (6)	4.8 (3)
Fever + PUO	2.2 (11)	1.8 (11)	1.9 (11)	2.3 (10)	4.3 (4)
Abdominal pain	5.2 (4)	6.4 (4)	7.9 (1)	5.8 (3)	4.1 (5)
Urinary tract infection	3.3 (6)	2.5 (9)	3.5 (6)	2.8 (8)	3.7 (6)
Diseases and disorders of the skin and subcutaneous tissue	2.1 (12)	2.7 (8)	3.3 (7)	2.8 (7)	3.3 (7)
Musculoskeletal system diseases	2.5 (9)	6.0 (5)	2.1 (8)	4.0 (4)	2.4 (8)
Diseases and disorders of the digestive system	2.2 (10)	6.8 (3)	4.5 (5)	3.4 (5)	2.1 (9)
Diseases and disorders of Dental and mouth	2.0 (14)	1.5 (13)	1.8 (12)	2.7 (9)	1.7 (10)
Number of foreign patients (visit)	4,255	4,487	3,341	3,604	4,414

Source: Nan Provincial Public Health Office (2000)

Note: Figures in this parenthesis are the rank order

vaccination, there is no report of illness and death for a long time in Nan province (see Table 2.9).

In addition, many foreign patients also die by non-communicable diseases such as cancer, cardio-respiratory system failure, renal failure and chronic obstructive pulmonary disease (COPD).

Considering the expenditure for health care services, user fee is collected from foreign patients who are treated at these health facilities. The charges paid by foreign patients are at the same rate as of Thai patients. However, the total amount of the user fee collected cannot cover the total medical expense. The amount paid is account for 20 – 32% of the total charge. Relatively, the financial gap between paid user fee and the charge of the services are increasing.

In year 1995 the gap was about 568,266 baht and increase up to over 1 million baht in the next year and especially in year 1997 the financial gap increases up to 2.4 million baht. Since 1995 the total financial gap from services provided to foreign patients is almost 10 million baht and still did not include the expenditure on health promotion, prevention and diseases control project. (see Table 2.10).

TABLE 2.9 Causes of Death of Foreign Patients in Nan Province

Years	1996	1997	1998	1999	2000
Cause of Death	No.	No.	No.	No.	No.
1. COPD	-	-	-	-	2
2. CA Lung	-	-	-	-	1
3. Lung Abscess	-	-	-	-	1
4. Renal Failure	-	-	-	-	1
5. Malaria	4	1	-	-	1
6. Liver Failure	-	-	-	-	1
7. Respiratory Failure	-	-	-	1	-
8. Sepsis	1	5	1	1	-
9. Abortion	-	2	-	1	-
10. Dyspnea	-	-	-	1	-
11. Accident	-	1	-	1	-
12. Encephalitis	-	3	1	-	-
13. Tuberculosis	2	-	1	-	-
14. Diphtheria	2	-	-	-	-
15. Pneumonia	1	4	-	-	-
16. Abdominal Infection	1	-	-	-	-
17. Cirrhosis	1	-	-	-	-
18. Heart Failure	-	2	-	-	-
19. Cancer	-	1	-	-	-
Total	12	19	3	5	7

Source: Nan Provincial Public Health Office (2000)

TABLE 2.10 Financial Gap on Health Care Service for Foreign Patients in Nan Province

Years	Total patient (Visits)	User fee for service (Baht)	Patient pay (Baht)	Percentage in payment (%)	Financial gap (Baht)
1995	1,373	790,207	221,941	28.1	-568,266
1996	4,255	2,204,648	577,213	26.2	-1,627,435
1997	4,487	3,084,925	618,935	20.1	-2,465,990
1998	3,341	1,998,584	634,698	31.8	-1,363,886
1999	3,604	2,400,361	769,821	32.1	-1,630,540
2000	4,414	2,065,921	548,821	26.6	-1,517,100
Total	24,278	13,526,416	3,961,344	29.3	-9,565,072

Source: Nan Provincial Public Health Office (2000)