Report on the Survey of Aging and Health in Asian Countries

—Thailand—

March 2001

Asian Population and Development Association

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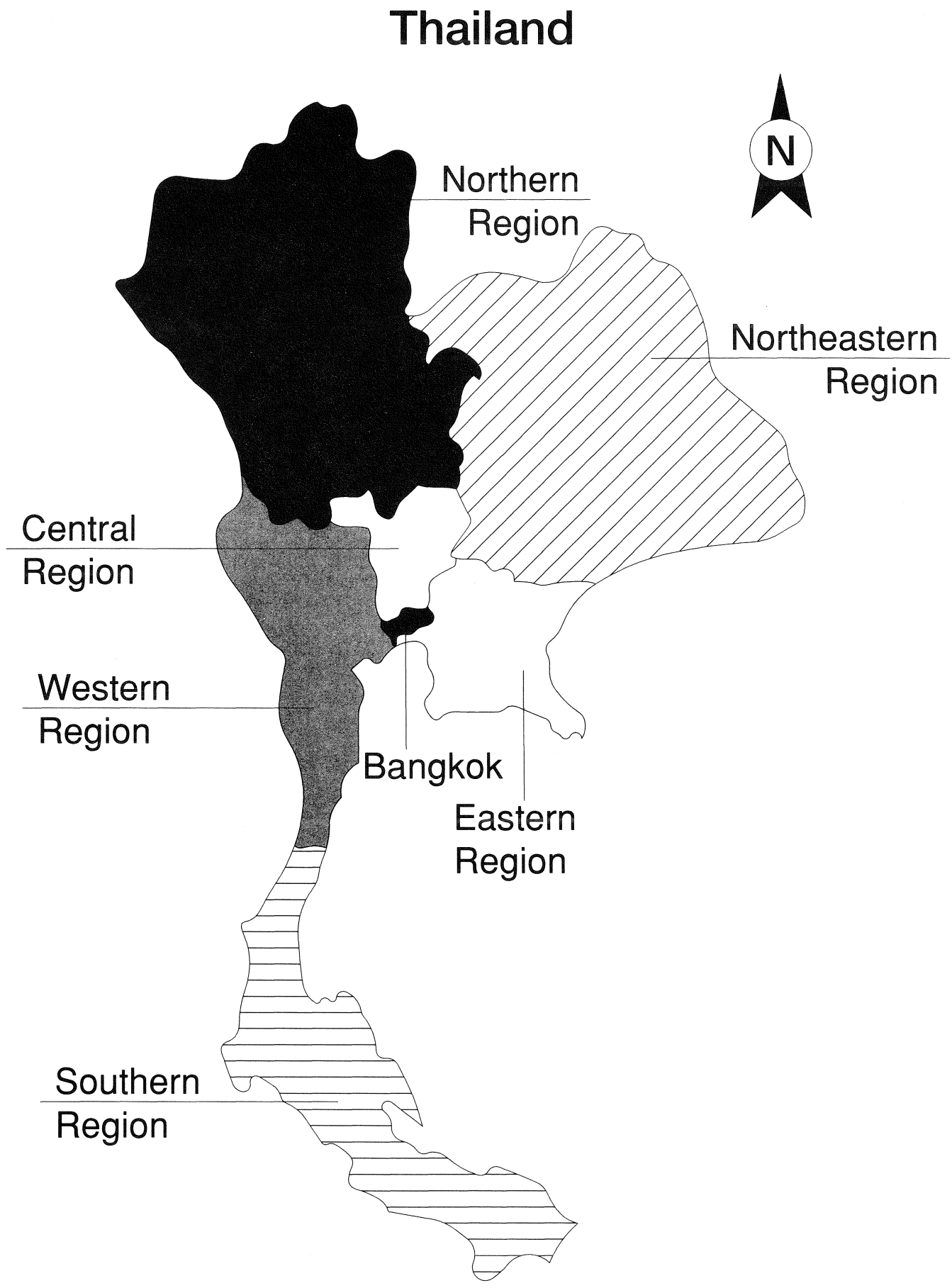
Thailand
N
Northern Region
Northeastern Region
Central Region
Western Region
Bangkok
Eastern Region
Southern Region

National Economic and
Social Development Board
Dr. Jawalakasana
Rachapaetayakom,
Senior Expert in
Planning

Golden Year Nursing
Home

Front from left
Mr. Yasuo Hagiwara
(team leader)
Dr. Prasop Ratanakorn,
former Senator
Dr. Hitomi Karube
(team member)
Back row from
Mr. Shiv Khare AFPPD
Secretary General,
Mr. Masaaki Endo
(team member)

Foreword

This report comprises a compilation of results from a survey entitled "the Survey of Aging and Health in Asian Countries" which was conducted in Thailand in fiscal 2000 by the Asian Population and Development Association (APDA) under the entrusted by the Ministry of Health, Labour and Welfare and the Japan International Cooperation of Welfare Services (JICWELS). The survey and compilation were conducted by the survey committee (Chairperson: Dr. Toshio Kuroda, Professor Emeritus, Nihon University Population Research Institute) which was established in APDA.

Population of Asian countries has shifted drastically towards aging in the recent years. Aging in the Asian region, which is larger in scale and more rapid compared to the Western countries, has exerted enormous influence on the health and social security system of each country. This survey aims to analyze in detail the precent situation and issues related to population, health/health care and social security system (including social insurance) of each country in the context of aging and seeks to contribute to the solution of aging population in the Asian countries and problems that are associated with such phenomenon.

In Thailand, guidance and cooperation for the overall planning of this survey were offered by Dr. Prasop Ratanakorn, Former Senator of Thailand, Mr. Katsuhiro Iwai, First Secretary of Embassy of Japan in Thailand and Mr. Shiv Khare, Executive Director of AFPPD.

In Japan, special guidance and assistance were offered by those concerned at the International Affairs Division of Minister's Secretariat and Counsellor, Ministry of Health, Labour and Welfare and First South-East Asia Division, Asia and Oceania Affairs Bureau. Ministry of Foreign Affairs. I would like to take this opportunity to express my sincere gratitude. I shall be happy if this report proves useful to the programs for coping with the aging issue that will be worked out by the Asian countries, including Thailand and contributes to effective international cooperation by the Japanese government.

In conclusion, I would like to add that this report has been prepared under the responsibility of APDA based on interviews with ministry officers, experts and private organization staffs, and that it does not reflect the views and policies of the Ministry of Health, Labour and Welfare nor the Japanese government in any way.

March 2001

Dr. Taro Nakayama
Chairman
The Asian Population and Development Association

Contents

Overview of Thailand

1. Introduction

Thailand was hit by financial crisis in July 1997. It was the result of bubble economy caused by excessive investment by foreign capital towards financial institutions and real estate up to that time which resulted in increasing non-performing loans, incomplete financial functions, lowering confidence of foreign investors and drain of foreign capital. Thai economy has been on a path of recovery since then since the intervention of IMF.

Bangkok, the capital city of Thailand also known as "Krung Thep (City of Angels)," is one of the largest metropolises in Asia with population of 6 million. However, traffic congestion in Bangkok is very serious and requires enormous amount of time to move around in the city even after the recent completion of Sky Train.

Notwithstanding the increase in computer-related export in the recent years, Thailand, along with Vietnam, Myanmar and the U.S., is one of the word's largest rice exporting countries. Thailand also distinguishes itself from other ASEAN countries in that she has an established agro-industry in addition to export of agricultural processed goods such as canned farm produce and broilers that account for a large percentage in trade balance.

It is worthy to note that Thailand has maintained an average economic growth rate of 7% since the launch of national development plan in 1961. In addition to being an agricultural country, Thailand appeals herself to overseas tourists as a country founded on tourism. Thailand is also the largest exporter of shrimps and broilers to Japan.

2. Land and People

Thailand is a kingdom having an area 1.4 times greater than Japan and a population of

including abolition of multiple exchange rates and liberalization of rice export based on rice premium policy. However, such state-led economic management became under fire for limiting the activities of Western and Chinese-descent capitalists.

In 1958, Prime Minister Sarit Thanarat drove Prime Minister Pipul out of power through a coup d'etat and began building the foundation for present industrialization of Thailand in 1959. The series of economic reforms launched by Prime Minister Sarit was along the lines of recommendations made by the World Bank Study Mission to Thailand and included active introduction of foreign capital through creation of the Board of Investment (BOI) in 1959 and expansion of infrastructure sector.

Thailand took the first step towards industrialization with the launch of the First National 6-Year Plan for Economic and Social Development (1961-66) in 1961. As for the actual results during this period, economic growth rate reached 8.1% (2.6% higher than the target growth rate of 5.5%) while agriculture grew at 6.4% (3.1% higher than the target growth rate of 3.3%) and manufacturing saw 11.2% growth (1.9% higher than the target growth rate of 9.3%). A close look at these results suggests that the growth was attributable to increase of rice production in agriculture and increase of textile products in manufacturing. In particular, the so-called import substitution policy was carried out to raise the import tariff for consumer goods such as textile products while offering preferential tax treatment to domestic industries through the New Industry Encouragement Law.

Import substitution policy led by private sector was also followed during the Second National 5-Year Plan for Economic and Social Development (1967-71) that began in 1967. Economic growth during this period remained stagnant on the whole partly due to deteriorating balance of international payments. The results were 7.5% growth (1% lower than the target growth rate of 8.5%) for GDP, 4.1% growth (0.2% lower than the target growth rate of 4.3%) for agriculture and 9.2% growth (1.7% lower than the target growth rate of 10.9%) for manufacturing.

The First and Second National Development Plans are characterized by the fact that they enabled the import of raw materials and machinery needed for import substitution industry. In other words, it was the acquisition of foreign currencies realized through export expansion of primary goods such as farm produce that realized the development of import substitution industry.

The Third National 5-Year Plan for Economic and Social Development (1972-76) that started in 1972 brought about a turning point to the economic policy of Thailand. The Revolutionary Corps Ordinance No. 227 (Export Industry Promotion) was announced the same year to initiate the transition from the import substitution industry up to that time to the export substitution industry. Although an agrarian reform was announced in 1975, growth of agriculture did not reach the target line. GDP during the same period saw a growth of 6.2% (0.8% lower than the target growth rate of 7.0%) while that of agriculture remained at 3.9% (1.2% lower than the target growth rate of 5.1%). Meanwhile, manufacturing achieved

can also be interpreted as the target for taking a hard look at the rapid growth that had taken place in the Thai economy. Although the GDP growth rate dropped to 5.5% in the final year of the plan in 1996, an annual average growth rate of 8.0%, slightly lower than the target of 8.2%, was attained.

The Eighth 5-Year Plan for Economic and Social Development (1997-2001) was started with the goal of human-centered development. Achievement of the initial target economic growth rate of 8.0% became impossible as a result of the financial crisis that occurred in July 1997, a 5%-mark growth was seen in 1999.

The economic growth rate of Thailand was highest among the neighboring ASEAN countries, not to mention the developed countries, maintaining the 7% mark in annual average from the '60s to the mid-'90s. One can conclude that industrialization of Thailand that began in the '60s made a transition from import substitution industry to export substitution industry during the '80s and achieved a steady development on the whole. Thailand's manufacturing industry grew rapidly and the country always ranked high among the ASEAN countries in this area. However, a closer look at Thailand's manufacturing industry reveals that the industry is predominantly an agro-industry based on processing of agricultural and fishery products.

4. Educational System

Thailand has a 6-3-3-4 educational system that offers 6-year primary education (primary school) from ages 6 through 11, 3-year lower secondary education (junior high school), 3-year upper secondary education (senior high school) and 4-year higher education (university).

Although Thailand's compulsory education had consisted of 6 years of primary education, it will be extended to 12 years by the year 2002 under the new constitution promulgated in 1997 and the students will be able to receive education without paying tuition. Education administration is under the jurisdiction of the Ministry of Education and the Ministry of University Affairs. The Ministry of Education controls primary education, secondary education and vocational education while the Ministry of University Affairs manages national and private universities.

As for enrollment rate, the rate for primary education dropped from 99% in 1980 to 87% in 1995. Many students also drop out before completing primary education for reasons such as having to help their parents and distance from school. Meanwhile, enrollment rate at secondary education level (junior and senior high schools) dramatically increased from 29% in 1980 to 55% in 1995. Furthermore, enrollment rate in universities jumped from 15% in 1980 to 29% in 1995.

Universities under the jurisdiction of the Ministry of University consisted of 24 national universities and 37 private universities. Meanwhile, there are 36 educational training

The greatest virtue in Thai Buddhism for parents is to turn their children into priests. However, only boys can become priests and not girls. (There are nuns but are not regarded as formal priests.) Therefore, sons' decision to become a priest is seen as the greatest filial piety. Since daughters are unable to offer the greatest filial piety, they are most willing to perform the second greatest filial piety which is to give money to their parents. The combination of this culture with poverty leads to daughters selling themselves into slavery. Thus the culture based on Buddhism is affecting the welfare culture of Thailand in both positive and negative ways.

The people, the last component, live in extended families. In rural areas, these extended families include not only "grandparents, parents and children" but also collateral relatives. While they do not necessarily live under the same roof, relatives that dwell in the same neighborhood are forming a network of mutual assistance.

As mentioned in the foregoing, the welfare culture in Thailand is formed by the relationship between the benefactors headed by the King and the wards that follow them, code of life based on Buddhism and the extended family system centering on the family including relatives.

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1 Bangkok Vicinity is comprised of 5 districts; Nakhon Pathom, Nonthaburi, Pathum Thani, Samut Prakan and Samut Sakhon.

Chapter 1

A Forerunner of Demographic Transition in ASEAN — Thailand

Introduction

Thailand is demonstrating a pattern of development that is particularly noteworthy among ASEAN countries and achieved a staggering economic growth rate exceeding 10% a year in the later period of the 1980s. However, the Thai economy underwent a drastic change and faced a major crisis in July 1997 when the country's currency, Baht, crashed. In contrast to the Japanese economy, which has not been able to grow out of her stagnation since the economic bubble collapsed, Thailand, the country that touched off the convulsions of the Asian economy, has been quick in pursuing the path of miraculous recovery and development by reversing the predictions made by experts around the world.

Numerous factors that exist behind this phenomenon include Asian characteristics of Thailand particularly that of her culture, overconcentration of economic development in one mega-city of Bangkok, social roles played by rural economy, high literacy rate, high labor participation rate of women and immature reaction to today's western currency/financial system. Worthy of particular note, however, is the responsive action in demographic transition characterized by Thai culture that occurred at exceptionally high speed in Thailand. The cause of miraculous comeback of Thailand will be the theme of theoretical and policy deliberations in the future. It will likely become an opportunity for offering the key to development not only among ASEAN countries but in Asia and in the entire non-western cultural area.

1. Outlook of Demographic Profile

Let us compare the key ASEAN countries and Thailand by using several indices representing the characteristics of population change (see Table 1). Singapore will not be

a woman in her lifetime, reflected a high-fertility trend by exceeding 6 in 1965-70 but turned to sharp declining trend after 1970-75. The figure dropped from more than 6 in the latter half of the 1960s to less than 5 in the first half of the 1970s and to less than 3, 10 years later in the first half of the 1980s. After entering the 1990s, it fell further to less than 2, i.e. below the replacement level. The number of children borne by women in their lifetime declined by 1 every 10 years. This is an extremely rare to show extremely rapid fertility control case.

3. Aging of Thai Population

As mentioned earlier, population change in Thailand—particularly the quick speed of fertility decline—is leading to lowering the percentage of child population (aged 0 to 14). While it brings about an economic effect of reducing the dependency ratio from the viewpoint of population's age structure, aging of population is manifested after a certain amount of time lag. For instance, fertility level in Thailand is declining at a much faster speed compared to other ASEAN countries, but the country's present aging level (percentage of population aged 65 years and above) is only 5% which is more or less on a par with other ASEAN countries. The important point, however, is that this aging trend will start to accelerate soon.

For instance, the percentage of population aged 65 years and above, which was 5.0% in 1995, is predicted to double to 10.1% by 2020, double again to 20.0% by 2040, and reach 23.5% in 2050. This means that Thailand will change into an aging society as her elderly population increases by nearly fivefold in 50 years from the present 5% level. (Data on aging level obtained from United Nations: World Population Prospects: 1998 Revision)

Policymakers will need to pay full attention to the fact that the benefits in demographic structure brought about through declining fertility rate will eventually change into rapid increase in dependency ratio required by elderly population.

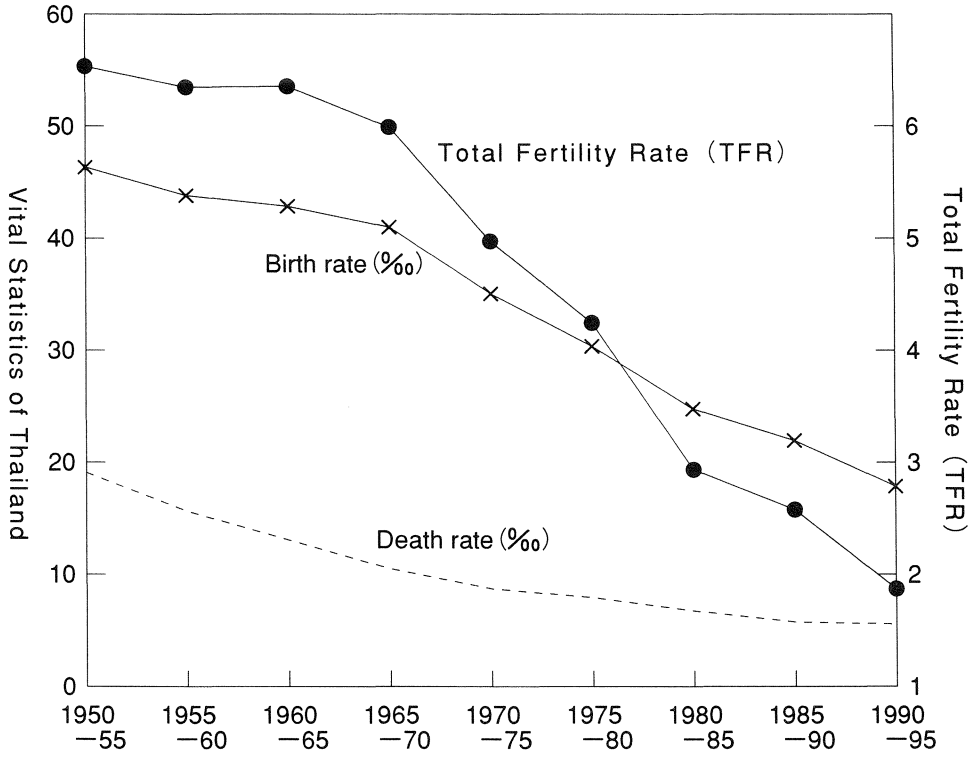

Figure 1 Demographic Transition in Thailand (According to Table 2)

Chapter 2

Health Care in Thailand

This chapter will elaborate on the points concerning health care in Thailand in view of the country's general summary and situation related to population described in the previous chapter based on various materials read extensively in both Thailand and Japan and on information obtained through visits to local facilities.

1. Overview of Health Care System

(1) Overview of medical care system

Health care in Thailand is placed under the jurisdiction of the Ministry of Health[1]. The Ministry's departments are shown in Table 1. In addition, medical care is offered through institutions such as university hospitals, specialist hospitals, provincial hospitals, county hospitals and health centers.[1) 2) 3)]

The difference between Japan and Thailand can be seen in health centers. Health centers in Thailand are staffed with nurses and midwives and offer primary care including simple ambulant treatment.[2) 4)]

(2) Number of medical facilities

In addition to approximately 900 public hospitals offering the aforementioned health care, nearly 300 hospitals and 11,000 clinics exist as private medical institutions.[5)] According to 1998 statistics, there are 1,293 hospitals on the whole.[3)] On the other hand, there are a total of 9,333 hospital facilities in Japan according to 1998 statistics.[3) 5)]

The number of beds in Thailand is as shown in Table 2.[1)] Meanwhile, a national survey conducted in 1998 shows that the number of beds in Japan is 1,892,115.[5)]

2. Health Measures

(1) Trends of health measures in Japan

The basic stance for health measures in Japan over the recent years consists of two points[8]; health risk management and health promotion.[8]

The former had hardly been emphasized in the past but was recognized as an important task after the occurrence of the Great Hanshin-Awaji Earthquake and outbreak of emerging/re-emerging infectious diseases.

The latter has a history of the need to seek social improvement being recognized at the backdrop of advancement of declining birthrate and aging population as well as diversification of people's health needs.[8]

While main target area is human health, diseases and areas that are covered extend over a wide range and include health promotion, life-style related diseases, maternal and child health, health care of the aged, mental health, dental health, infectious diseases (including AIDS, tuberculosis), intractable diseases, atom-bomb survivors, disabled persons and organ transplant.

(2) Trends of health measures in Thailand

While family planning, maternal and child health measures, nutritional measures and measures against infectious diseases are being developed under the guidance of Thailand's Ministry of Health, the trend differs from that mentioned above in Japan with emphasis currently being placed on disease control.[9] Local agencies in charge of health measures include provincial health offices in each province as well as county health offices and health centers that are set up on a semi-country level to offer simple ambulant care and disease prevention measures.[9]

In rural areas, health volunteers are being trained for dissemination of the aforementioned measures and health education for local residents.[9]

(3) Health promotion measures

As mentioned earlier, awareness of the people towards health has increased in Thailand with emphasis being placed on primary health care at the backdrop of the reality in which the country is moving in the direction of aging society.[3] [10]

Primary health care is a concept that attempts to grasp medicine in a comprehensive manner from the aspect of preventive medicine. In other words, it mainly consists of health care, health education, food, maternal and child health, dental health, mental health and health care for disabled persons. As mentioned earlier, health promotion and life-style related diseases are also considered as important tasks in Japan.[8][11]

In Thailand, a national survey on health was carried out in 1974 and has been conducted

2) Alcohol

Alcohol drinking has been loved by the people of both East and West, and alcoholic drinks infiltrated into humanity since ancient times as the cup that cheers.[12] However, health impairments originating from alcohol drinking are wide-ranging and include alcoholic psychosis and alcohol dependence syndrome as well as liver disease, cerebral stroke, hypertension and diabetes.[8) 12)] Moreover, somatic symptoms are accompanied by many social problems such as work related accidents, lowering productivity, traffic accidents, crime and disfunctional families.[8) 12)]

According to "Alcohol and Hepar Study Group" of the Ministry of Education's Comprehensive Technological Studies,[13)] "habitual drinker" is defined as a person who has been drinking a sake equivalent of 540cc or more every day for a period exceeding 5 years.[12) 13)] Moreover, "hard drinker" refers to a person who has been drinking a sake equivalent of 900cc or more every day for a period exceeding 10 years.[12) 13)] Similarly, the habit of drinking 900cc or more every day for a period longer than 20 years is included in one of the risk factors of liver cancer.[12) 13)] Needless to say, impairments of physical and mental health will become more serious for people with greater volume of alcohol intake.[8) 12) 13)]

For reasons stated above, Japan is encouraging moderate and proper drinking to maintain physical and mental health in a report compiled in February 2000 named "Health and Japan 21," suggesting the target alcohol intake of about 20g per day in pure alcohol terms (equivalent of one middle-sized beer bottle or 180cc of sake). The volume was determined based on the metabolic capacity of an average Japanese adult male.[8) 12) 13)]

Habitual alcohol drinkers by age group in Thailand are shown in Table 6.[10)] In addition, the results of a study on reasons for drinking conducted on those aged 14 years and above are shown in Table 7.[10)]

Meanwhile, drinking volume among adults has been increasing every year in Japan.[8)] According to a 1997 National Tax Administration Agency survey, 65,960,000 persons out of 98,794,000 adult population are alcohol drinkers.[8)] In the same year, alcohol consumption in pure alcohol terms was 869,889kl[8)] and alcohol consumption per adult amounted to 8.81 liters. Moreover, the number of heavy drinkers (heavy drinker refers to those drinking more than 150ml every day in pure alcohol equivalent, i.e. 990cc of sake or 6 large beer bottles or 6 glasses of double whiskey[8)]) is estimated at some 2.4 million in 1997.[8)] Alcoholism and alcoholic psychosis are also on the increase combined with such increase in alcohol consumption.[8)]

3) Drugs etc.

Thailand is an illegal distribution channel of drugs produced in the so-called Golden Triangle (encompassing Thailand, Laos and Myanmar) to the international drug market[8)] in addition to being the traditional production site of marijuana, opium and heroin.[3)] In the recent years, however, production volume has been declining as a result of measures such as clampdown and conversion to alternative crops.[3)] Meanwhile, stimulant drugs are becoming

direct cause of death are being developed.[16] In other words, support measures (in the form of disease and injury measures) for people suffering from disease and injury but are not experiencing any difficulty in daily life as long as there is enough support have become an important task under the present situation.[16] Japan has entered an age in which it is no longer proper to regard sick and injured people as "invalid."

① Health condition

The first topic is the condition of people with complaints. People with complaints are those having subjective symptoms of disease and injury and by definition exclude people that are admitted at medical facilities and health care facilities for the elderly.[16] The rate of people with complaints, which is shown in their rate against population of 1,000, is 304.8 in Japan.[16] By age group, percentage becomes higher as age increases and reaches almost 50% among those aged 65 years and above (Figures 2 and 3).[16] Common subjective symptoms include "back pain," "stiff neck" and "pain of limb joints."[16]

The second topic concerns the condition of ambulant patients. Ambulant patients are those attending medical facilities, health care facilities for the elderly and parlors (massage, acupuncture, moxibustion and judo chiropractic) and their rate against population of 1,000 is referred to as ambulant patient rate. Japan's ambulant patient rate is 274.5.[16] By age and sex, the rate is higher among males than females for ages 14 years and below, and is higher among females than males for ages 15 years and above. The rate becomes higher for both male and female population with increase in age.[16] More than 60% of those aged 65 years and above are ambulant patients (Figures 4 and 5).[16] Diseases and injuries that are common among ambulant patients include hypertension, back pain, caries and stiff neck.[16]

The third topic touches upon the situation of people whose daily lives are affected. This definition refers to those aged 6 years and above and whose health problems are affecting their daily lives with the exception of those admitted to medical facilities and health care facilities for the elderly as well as those that have been bedridden for at least one month.[16] The rate of such people for every 1,000 population is 85.7 for the entire country, and common aspects of life that are affected include "work, household duties and schoolwork," "outing," and "exercise and sports."[16]

Health condition of people in Japan is compiled and listed based on the foregoing for people aged 6 years and above with the exception of those admitted to medical facilities and health care facilities for the elderly as well as those that have been bedridden for a period of one month or more.

"Have no subjective symptoms, influence on daily life and hospital visits": 57.6%

"Have at least one of subjective symptoms, influence on daily life or hospital visits": 36.1%

"Have all of subjective symptoms, influence on daily life or hospital visits": 6.3%

million for asthma.[16]

③ Mortality

Number of deaths was about 940,000 in 1998. Crude mortality rate (the rate obtained by dividing the population by the number of deaths) was 7.5. It exceeded the previous year's figure by 0.2 point,[17] presumably owing to the influence of aging of population that has advanced in the recent years.[17] Ten highest causes of deaths in the same year, both in terms of number of deaths by cause and rate of death (in every 100,000 population), in order of incidence, were: 1) malignant neoplasm; 2) cardiovascular disease; 3) cerebrovascular disease; 4) pneumonia; 5) contingency; 6) suicide; 7) old age; 8) renal failure; 9) liver disease; and 10) diabetes.[17]

Cause of death statistics is based on death certificate, the classification of which is performed according to the coding rule provided under WHO's International Classification of Diseases and Related Health Problems, Tenth Revision; ICD-10).[17] Moreover, the magnitude of impact each cause of death has on life expectancy can be estimated by studying the "increase in life expectancy when certain cause of death is eliminated."[18] According to the statistics taken in Japan in 1998, elimination of malignant neoplasm contributed most significantly for 0 year old male population (increasing life expectancy by 4.05 years), followed by cardiovascular disease (increasing life expectancy by 1.54 years) and cerebrovascular disease (increasing life expectancy by 1.34 years).[18] The order was the same for 0 year old female population with malignant neoplasm being the greatest contributor (increasing life expectancy by 2.96 years), followed by cardiovascular disease (increasing life expectancy by 1.67 years) and cerebrovascular disease (increasing life expectancy by 1.65 years).[18]

The information provided above illustrates that cause of death structure in Japan has shifted considerably from infectious diseases to life-style related diseases.[16), 17), 18)]

④ Disabled persons

Since welfare measures for disabled persons will be explained in detail in the subsequent chapter, this chapter will briefly discuss the reality and trends of such measures.

According to the fact-finding survey of disabled persons carried out by the Ministry of Health and Welfare in 1996, the number of disabled persons living at home in Japan is estimated at 2,933,000.[21] The figure corresponds to an increase of about 8% compared to the previous survey conducted in 1991.[21] The number of persons admitted to institutions is estimated at 154,000.[21]

By age group, the percentage is highest among people aged 70 years and above and accounts for 40.2% of all such persons.[21] Compared to the results of the previous study, the percentage of disabled persons aged 60 years and above increased (from 62.7% to 67.0%) to suggest an aging trend.[21] A trend of increasing severity is also suggested with nearly 60% of such disability being caused by disease (in the order of cerebrovascular disease,

The number of inpatients are shown in Table 15. The percentage against population of 1,000 is highest for both men and women in the northern region.[10)]

③ Mortality

Number of deaths and mortality rate (against population of 100,000) for ten most common causes of death in Thailand are shown in Table 16. In contrast to the aforementioned trend observed in Japan, diseases of respiratory system and infectious diseases are ranked among the top five causes of death.[19)] Diseases involving the immune system ranked in the sixth place are believed to be referring to AIDS.[19)]

Then the number of patients suffering from major diseases and injuries and the number of deaths caused by such diseases and injuries are shown in Table 17 (1-4).[20)] The names of most common diseases and injuries in Thailand from No. 1 to No. 31 are listed below for contrast study with those in Japan, followed by their rank in terms of number of patients and number of deaths.

1. Cholera
2. Acute diarrhea
3. Food poisoning
4. Dysentery
5. Typhus
6. Hepatitis
7. Hemorrhagic conjunctivitis
8. Influenza
9. Measles
10. Chicken pox
11. Fever of unknown origin
12. Osteomyelitis
13. Polio
14. Rubeola
15. Diphtheria
16. Tussiculation
17. Tetanus
18. Dengue fever
19. Encephalitis
20. Malaria
21. Pneumonia
22. Tuberculosis
23. Leprosy
24. Frambesia (an infectious disease of tropical regions)
25. Venereal diseases
26. Rabies
27. Syphilis
28. Trombiculiasis
29. Occupational diseases (mostly insecticide poisoning)
30. Mumps
31. Amebic dysentery

The ranking in terms of number of patients is as follows.[20)]

1. Acute diarrhea
2. Hemorrhagic conjunctivitis
3. Fever of unknown origin
4. Pneumonia
5. Food poisoning
6. Dysentery
7. Influenza
8. Mumps
9. Dengue fever
10. Venereal diseases

The ranking in terms of number of deaths is as follows.[20)]

1. Pneumonia
2. Acute diarrhea

presented by cause and sex in Table 21. As can be seen in the table, disability of the limbs ranks first, mental disability ranks second and hearing disability ranks third, all exceeding 10% in terns of their percentage in total number of disabled persons.[10] In other words, the situation is completely different from the reality and trend of disabled persons in Japan mentioned earlier, and is believed to be deeply connected with numerous infectious diseases mentioned in the mortality section above. Furthermore, involvement of maternal health and level of environmental health as well as level of medical care are also likely, as estimated in connection with sanitation index such as infant mortality rate.

4. Health Measures for the Elderly

Changes in future aging trend by region according to U.N. 1998 statistics suggest that aging of population will advance rapidly in the 21st Century not only in the developed regions that have already been experiencing this process considerably but also in the developing regions.[22] By 2050, it is estimated that senior population will exceed 30% in Japan and reach 25% in the developed regions and 15% in the developing regions.[22]

This section will therefore mainly discuss the health condition, treatment-receiving status, hospitalization status and mortality status of the elderly persons. Please refer to subsequent sections for the specifics that will be developed with regard to health, welfare and medical service.

(1) Situation in Japan

According to "Attitude Survey on the Health of Elderly People" (conducted by the Management and Coordination Agency on people aged 60 years and above in 1997), 72.0% responded that they were "doing something to maintain and improve health."[23] In addition, people that have greater concern over life-style related diseases had higher rates of making such effort.[23] As for the content of efforts that were being made, taking nutritionally-balanced meals was most common (58.3%), followed by taking sufficient rest and sleep (54.6%) and taking walks and playing sports (46.9%), indicating that matters related to top three elements of health, i.e. diet, rest and exercise ranked high on the list.[23]

With regard to having medical checkup, the National Livelihood Survey carried out in 1998 by the Ministry of Health and Welfare indicates that nearly 60% of people aged 65 years and above had experienced medical checkups and complete physical examinations within the past year.[23] The survey also found that complaint rate (number of persons in every 1,000 population having subjective symptom of disease and injury) for people aged 65 years and above was 530.3, indicating that more than half of them have some kind of subjective symptom or another.[23] The figure was higher compared to that in the previous survey (487.8).[23]

Secondly, the rate of people whose daily lives are affected was 203.3 for every senior population of 1,000 and again exceeded the figure from the previous survey (194.5).[23] By

trend of people having higher academic level requiring more expenses has been observed.[24)]

Lastly, results from a survey on existence of difficulty in daily life among people that require hospitalization are shown in Table 29. Elderly persons experiencing difficulty in daily life had similar trends as those referred to in Table 26.[24)] The information put forth above suggested that factors such as gender, academic level and economic condition are deeply involved in health condition, treatment-receiving rate and necessity of nursing care among elderly persons in Thailand, and the difference with the situation of elderly persons in Japan was implied.

5. Present Condition of HIV/AIDS in Thailand

It was in 1984 that an AIDS case was confirmed for the first time in Thailand and the patient was homosexual. The patient was living for a long period in Europe with his partner but had returned to Thailand after the death of this partner. The man did not survive much longer. The second case was confirmed in 1985. He was a male prostitute working at a gay bar in Bangkok and had taken many customers before becoming aware of the infection. HIV/AIDS spread rapidly in Thailand partly due to sharing of syringes for drug injection. The situation was further exacerbated from around 1989 by relatively relaxed sexual norm that existed in the country. According to a national survey, 15% of women engaged in prostitution were HIV positive in 1991. It is estimated that 600,000 men were infected by AIDS between 1989 and 1995 through these women.

Actual number of HIV carriers and AIDS patients in Thailand is not known at present. Some claim that the number of HIV carriers has reached 1 million. However, the number of latent carriers is still in the dark since there are carriers that have not reported to the Ministry of Public Health and those who are not aware of the infection owing to long latency period of the virus before the onset of AIDS. In addition, wealthy patients that develop AIDS are said to receive treatment behind closed doors or go to Western countries for treatment without reporting. For this reason, the only statistics available are merely estimated figures. According to a report from UNAIDS (an international body for counteracting AIDS jointly founded by international organizations including UNICEF and UNDP), number of HIV carriers (including those that have developed AIDS) in 1997 was estimated as 780,000 of which 290,000 were women and 140,000 were children of ages 15 years and lower. Number of AIDS patients and deaths since the disease was first identified are 260,000 and 230,000, respectively. Meanwhile, 60,000 people died of AIDS in one year in 1997 and 44,000 AIDS orphans exist as of 1997.

Table 34 shows these estimated figures in greater detail. These estimates also assume that no infections have occurred from 1996 onward. However, medium estimation will be obtained in the explanation below assuming that infections did occur since 1996 because total elimination of infection is quite unlikely. According to this estimate, there are 1,400,000 HIV carriers and 400,000 AIDS patients in 2000. These figures can be regarded as quite

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Table 3 Percentage of Population 11 Years of Age and Over by Cigarette Smoking Habit, Sex, Region and Area

(Number in Thousands)

Cigarette Smoking Habit and Sex	Whole Kingdom			Bangkok Metropolis	Central (Excl. BKK.)	North	Northeast	South
	Total	M.A.	Non. M.A.					
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	(48,009.3)	**(10,137.8)**	**(37,871.5)**	**(5,998.2)**	**(10,992.8)**	**(9,134.7)**	**(15,39.0)**	**(6,044.6)**
Smoke at Present	26.2	19.0	28.1	17.6	24.8	28.9	27.9	28.3
Regularly	23.5	17.0	25.2	16.0	22.4	25.9	25.1	24.8
Occasionally	2.7	2.0	2.9	1.6	2.4	3.0	2.8	3.5
Ever Smoked	4.4	4.4	4.4	4.2	3.8	7.3	3.6	3.3
Regularly	3.4	3.6	3.3	3.6	2.8	5.8	2.6	2.4
Occasionally	1.0	0.8	1.1	0.6	1.0	1.5	1.0	0.9
Never Smoked	69.4	76.6	67.5	78.2	71.4	63.8	68.5	68.4
Male	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	(23,890.3)	**(4,918.5)**	**(18,971.8)**	**(2,871.1)**	**(5,413.2)**	**(4,615.2)**	**(7,969.0)**	**(3,021.8)**
Smoke at Present	49.3	36.8	52.6	33.9	47.7	49.2	54.2	54.1
Regularly	44.6	33.4	47.5	31.3	43.3	44.6	49.0	47.7
Occasionally	4.7	3.4	5.1	2.6	4.4	4.6	5.2	6.4
Ever Smoked	7.9	8.4	7.8	8.0	7.3	11.2	7.1	6.3
Regularly	6.1	7.1	5.9	7.2	5.4	9.0	5.2	4.7
Occasionally	1.8	1.3	1.9	0.8	1.9	2.2	1.9	1.6
Never Smoked	42.8	54.8	39.6	58.1	45.0	39.6	38.7	39.6
Female	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	(24,118.9)	**(5,219.2)**	**(18,899.7)**	**(3,127.1)**	**(5,579.5)**	**(4,519.6)**	**(7,869.9)**	**(3,022.8)**
Smoke at Present	3.2	2.3	3.5	2.5	2.6	8.2	1.3	2.4
Regularly	2.5	1.7	2.8	1.9	2.1	6.8	0.9	1.8
Occasionally	0.7	0.6	0.7	0.6	0.5	1.4	0.4	0.6
Ever Smoked	0.9	0.6	1.0	0.7	0.5	3.4	0.2	0.4
Regularly	0.6	0.3	0.7	0.4	0.3	2.6	0.1	0.2
Occasionally	0.3	0.3	0.3	0.3	0.2	0.8	0.1	0.2
Never Smoked	95.9	97.1	95.5	96.8	96.9	88.4	98.5	97.2

(Reference 10)

Table 6 Percentage of Population 14 Years of Age and Over Reported Currently Drinking Alcoholic by Age Group, Sex and Area

(Number in Thousands)

Age Group (Years)	Total			Municipal Area			Non-Municipal Area		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(13,747.9)	(11,972.6)	(1,775.3)	(2,265.9)	(2,033.9)	(232.0)	(11,482.0)	(9,938.7)	(1,543.3)
14-19	4.7	5.1	1.6	3.9	4.1	2.2	4.9	5.3	1.5
20-24	13.1	13.7	9.0	12.3	12.1	13.8	d13.2	14.0	8.3
25-29	15.0	15.7	10.5	18.2	18.3	17.7	14.4	15.2	9.5
30-34	14.3	14.4	13.6	16.6	16.8	14.7	13.8	13.9	13.3
35.39	13.6	13.2	15.7	13.8	14.1	11.5	13.5	13.1	16.4
40-49	20.1	19.3	26.0	20.1	19.4	26.1	20.1	19.2	26.0
50-59	11.9	11.6	14.1	9.5	9.7	8.0	12.4	d12.0	15.0
60 and Over	7.3	7.0	9.5	5.6	5.5	6.0	7.7	7.3	10.0

(Reference 10)

Table 7 Percentage of Population 14 Years of Age and Over Reported Currently Drinking Alcoholic by Cause of Falling into the Alcoholic Drinking Habit and Sex

(Number in Thousands)

Cause of Falling into the Alcoholic Drinking Habit	Total	Male	Female
Total	100.0	100.0	100.0
	(13,747.9)	(11,972.6)	(1,775.3)
Want to try	15.6	16.9	7.1
Believe that it is the way of socializing himself	39.8	38.0	52.4
Believe that it is better than having nothing to do	0.5	0.5	0.5
Associate with alcoholic drinkers	36.7	39.1	20.6
To release tension and anxiety	1.1	0.9	2.6
Creating personality	0.4	0.4	0.1
Symbol of adult	0.3	0.3	0.1
Imitate outstanding persons or popular stars	0.2	0.2	0.2
Have a good appetite	2.3	1.9	5.0
Substitute or mix in medicine	1.7	0.5	9.5
Get rid of disappointment	0.1	0.1	0.2
Others[1)]	0.3	0.2	1.0
Unknown	1.0	1.0	0.8

Note: 1) Special occasion, having morning sick, etc. (Reference 10)

Table 10 Percentage of Health Care Utilization in Thailand, 1970, 1979, 1985, 1991 and 1996

Source of Health Care	1970*	1979*	1985**	1991***	1996***
Take no medicine	2.7	4.2	6.3	15.9	7.8
Traditional practitioners	7.7	6.2	2.4	2.6	2.3
Self-Treatment and drug-Stores	51.4	42.4	24.4	38.3	31.6
Government health center	4.4	16.8	13.3	15.7	17.1
Government hospitals	11.1	10.0	32.8	12.9	21.2
Private hospital	22.7	20.4	20.8	12.4	18.2
Other lay-referral	-	-	-	1.7	1.0
Don't know	-	-	-	0.4	0.8
Total percent	100.0	100.0	100.0	100.0	100.0

Source: * Ministry of Public Health, 1978 and 1982 Utilization of Health Manpower & Expenses Incurred in Medical Treatment 1970.

** Ministry of Public Health and Institute for Population and Social Research, Mahidol University, 1987, Public Health Calendar 1987.

*** National Statistical Office, 1993 and 1996. Report of the Health and Welfare Survey 1993 and 1996. (Reference 4)

Table 11 Percentage of Health Care Utilization in Thailand, Classified by Urban and Rural Areas, AD., 1991 and 1996

Source of Health Care	1991		1996	
	Urban	Rural	Urban	Rural
Take no medicine	17.7	15.6	7.5	7.8
Traditional practitioners	2.0	2.8	1.2	2.5
Self-Treatment and drug-Stores	37.0	38.5	31.2	31.7
Government health center	2.8	18.1	2.4	19.8
Government hospitals	13.2	12.8	19.90	21.4
Private hospital	24.7	10.2	33.9	15.3
Other lay-referral	2.2	1.6	1.5	0.9
Don't know	0.4	0.4	2.4	0.6
Total percent	100.0	100.0	100.0	100.0
Number	5,880	16,860	5,904	17,523

Source: National Statistical Office, 1993 and 1996. Report of the Health and Welfare Survey 1993 and 1996. (Reference 4)

Table 13 Percentage of Population Reported Admission to Hospital Last Year by Group of Diseases,[1] Region and Area

Group of Diseases	Whole Kingdom			BKK.	Central (Excel. BKK.)	North	Northeast	South
	Total	M.A.	Non-M.A.					
Group 1 Diseases of the respiratory system	14.4	11.2	15.0	8.8	17.2	14.5	13.4	15.5
Group 2 Diseases of the digestive system	21.0	16.0	22.0	11.5	22.8	21.4	22.0	20.7
Group 3 Diseases of urinary system	7.7	7.6	7.7	6.5	9.1	8.4	7.4	5.8
Group 4 Cardiovascular diseases	9.4	12.5	8.7	13.9	11.9	11.4	5.3	9.0
Group 5 Infectious diseases	6.7	3.5	7.4	2.5	3.5	8.1	6.8	12.7
Group 6 Diseases of skin	.5	0.8	0.4	0.3	0.9	0.3	0.5	0.1
Group 7 Allergic condition	1.4	2.1	1.2	2.2	0.7	2.2	1.4	0.4
Group 8 Diseases of oral cavity, ear, throat, nose, eye	2.1	2.4	2.1	1.9	2.3	2.2	2.0	2.4
Group 9 Diseases of female genital organ	2.7	1.2	3.0	0.7	2.7	2.6	3.8	1.8
Group 10 Condition related to delivery	20.3	25.8	19.2	33.0	17.7	17.2	20.7	20.5
Group 11 Diseases of endocrine system, metabolic diseases and nutritional status	3.9	6.2	3.5	5.8	5.6	3.9	2.8	2.6
Group 12 Diseases of the musculoskeletal system and connective tissue	6.7	9.2	6.2	10.3	6.2	7.4	7.3	3.0
Group 13 Diseases of the nervous system and mental disorder	2.0	1.9	2.1	1.4	2.1	2.6	1.9	1.8
Group 14 Ill-defined conditions [2]	8.7	7.8	8.9	8.4	7.2	9.4	8.1	12.1
Group 15 Others [3]	9.3	11.0	8.9	11.5	9.8	11.1	6.9	9.9
Unknown	0.2	0.3	0.2	-	0.3	0.5	0.1	-

Note: Percentage of population reported ill or not feeling well during 2 weeks prior to the survey by group of diseases calculated from total illed population in the same region and area

1) More than one ways was possible
2) Include ambiguous reports due to the local dialect
3) Scald, misuse of drug, hit by a car, etc.

(Reference 10)

Table 16 Number and Dealth Rates Per 100,000 Population of First 10 leading Cause Groups of Death (According to ICD Mortality Tabulation List 1, tenth Revision) 1997

Cause Group	Order	Total		Male		Female	
		Number	Rate	Number	Rate	Number	Rate
Diseases of the circulatory system	1	59,601	98.6	36,796	122.1	22,805	75.2
External cause of morbidity and mortality Other accidents, including late effect	2	37,662	62.3	30,213	100.3	7,449	24.6
Neplasms	3	26,478	43.8	15,946	52.9	10,532	34.7
Diseases of the respiratory system	4	20,415	33.8	13,964	46.3	6,451	21.3
Certain infections and patasitic diseases	5	16,894	27.9	11,186	37.1	5,708	18.8
Diseases of the bloof and blood-forming organs and certain disorders involving the immune mechanism	6	8,806	14.6	6,615	21.9	2,191	7.2
Diseases of the digestive system	7	8,647	14.3	6,132	20.4	2,515	8.3
Diseases of the nervours system	8	8,400	13.9	5,584	18.5	2,816	9.3
Diseases of the genitourinary system	9	5,242	8.7	2,810	9.3	2,432	8.0
Endocrine, nutritional and metabolic diseases	10	4,941	8.2	1,998	6.6	2,9843	9.7

Source: Health Information Division, Bureau of Health Policy and Plan. (Reference 19)

Table 18 Number and Percentage of Population Reported Diseased by Sex, Region and Area

(Number in Thousands)

Region and Area	Population Reported Disabled			Percentage Population Reported Disabled		
	Total	Male	Female	Total	Male	Female
Whole Kingdom	1,024.1	596.6	427.5	1.7	1.0	0.7
Municipal Area	119.6	67.4	52.2	1.0	0.6	0.4
Non-Municipal Area	904.5	529.2	375.3	1.9	1.1	0.8
Bangkok Metropolis	48.3	26.1	22.2	0.7	0.4	0.3
Central (Excluding BKK.)	205.7	128.7	77.0	1.5	1.0	0.6
Municipal Area	23.6	13.3	10.3	1.2	0.7	0.5
Non-Municipal Area	182.1	115.4	66.7	1.6	1.0	0.7
North	232.1	146.4	85.7	2.1	1.3	0.8
Municipal Area	15.9	8.4	7.5	1.9	1.0	0.9
Non-Municipal Area	216.2	138.0	78.2	2.1	1.3	0.8
Northeast	386.7	210.9	275.8	1.9	1.0	0.9
Municipal Area	18.3	12.1	6.2	1.4	0.9	0.5
Non-Municipal Area	368.4	198.8	169.6	1.9	1.0	0.9
South	151.3	84.5	66.8	1.9	1.1	0.8
Municipal Area	13.5	7.5	6.0	1.3	0.7	0.6
Non-Municipal Area	137.8	77.0	60.8	2.0	1.1	0.9

Note: Percentage calculated from total population in the same region and area. (Reference 10)

Table 19 Percentage of Population Reported Disabled by Age Group, Sex and Area

(Number in Thousands)

Age Group (Years)	Total			Municipal Area			Non-Municipal Area		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(1,024.1)	(596.6)	(427.5)	(119.6)	(67.4)	(52.2)	(904.5)	(529.2)	(375.3)
0 - 6	3.0	2.4	3.8	3.4	2.3	4.8	2.9	2.	3.6
7 - 10	2.6	2.9	2.2	0.7	0.7	0.7	2.9	3.2	2.4
11 - 14	4.0	3.8	4.2	2.3	2.8	1.8	4.2	3.9	4.5
15 - 19	8.6	8.9	8.1	5.3	6.9	3.1	9.0	9.2	8.8
20 - 24	12.5	15.9	7.7	10.5	14.1	5.9	12.7	16.1	7.9
25 - 29	8.0	7.8	8.2	11.4	10.8	12.2	7.5	7.4	7.6
30 - 34	7.6	7.1	8.4	7.0	7.9	5.8	7.7	7.0	8.8
35 - 39	4.8	6.1	3.0	6.1	8.9	2.5	4.6	5.7	3.1
40 - 49	11.7	12.4	10.6	19.9	23.1	15.8	10.6	11.1	9.9
50 - 59	11.9	12.5	11.0	8.1	5.9	10.9	12.4	13.4	11.0
60 and Over	25.4	20.1	32.8	25.4	16.6	36.6	25.4	20.6	32.3

(Reference 10)

Table 22 Percentage of Persons Affecting Daily Life

(multiple choice, against 1,000 population)

Sex/age class		Percentage of persons affecting daily life				
		Movement in daily life	Outing	Job/family business/ schoolwork	Workout/ sports etc.	Others
Total	85.7	26.0	27.0	41.4	27.0	10.8
Sex						
Male	77.7	22.3	20.3	36.3	27.1	10.2
Female	93.2	29.5	3.3	46.2	26.9	11.4
Age class						
6-14 years	30.8	8.2	3.7	8.7	19.2	3.8
15-24	37.1	9.7	5.9	16.2	15.1	5.2
25-34	45.5	12.5	10.3	26.4	15.5	6.3
35-44	57.3	13.6	11.7	32.6	20.5	7.4
35-44	75.2	17.3	14.9	41.5	24.3	10.7
45-54	108.2	28.8	29.8	55.1	32.4	14.6
55-64	171.7	54.2	67.5	93.1	48.4	19.0
65-74	250.4	101.5	127.1	101.6	60.9	27.3
75-84	269.1	145.8	154.8	87.2	64.6	34.0
85 and above						
(re-listed)						
65 and above	203.3	76.0	92.6	88.9	53.5	22.7
70 and above	230.5	92.0	112.0	96.7	58.5	25.9

Source: "Basic Survey of National Life," Statistics and Information Department, Minister's Secretariat, Ministry of Health and Welfare; (1998) (Reference 23)

Table 23 Diseases with High Treatment and Mortality Rates Among Elderly Inpatients/Outpatients of Ages 65 Years and Older

	Inpatients (treatment rate)	Outpatients (treatment rate)	Mortality Rate
1	Cerebrovascular diseases	Hypertensive diseases	Malignant neoplasm (cancer)
2	Malignant neoplasm (cancer)	Vertebral disorders	Cardiovascular diseases
3	Cardiovascular diseases (excluding hypertensive diseases)	Cerebrovascular diseases	Cerebrovascular diseases
4	Bone fracture	Cardiovascular diseases (excluding hypertensive diseases)	Pneumonia
5	Schizophrenia etc.	Arthropathia	Senility
6	Diabetes	Cataract	Kidney failure
7	Hypertensive diseases	Diabetes	Chronic obstructive lung diseases

Source: Treatment rate of inpatients and outpatients based on "Patient Survey," Source: Statistics and Information Department, Minister's Secretariat, Ministry of Health and Welfare; (1996)
Mortality rate from "Vital Statistics," Statistics and Information Department, Minister's Secretariat, Ministry of Health and Welfare; (1998) (Reference 23)

Table 26 Percentage Distribution of Elderly by Level of Illness, Average Number of Illness, and Number of Sick Days Required to Rest at Home/Unable to Do Daily Chore within One Year, Classified by Their Ability/Disability to Care of Self

Characteristics of Elderly Who Could and Could Not Care for Self	Percentage with Illness within One Year	Average Number of Illness within One Year	Average Number of Sick Days within One Year
Able to Care for Self	91.7	1.932	20.232
Unable to Care for Self	8.3	2.478	58.826
Able to Care for Self			
- eat	26.3	1.928	20.019
- dress	26.2	1.916	18.119
- bathe/use toilet facility	25.2	1.910	17.061
- walk	22.3	1.813	15.484
Unable to Care for Self			
- eat	10.8	1.785	123.929
- dress	11.6	2.106	157.011
- bathe/use toilet facility	23.0	2.071	103.181
- walk	54.5	2.417	61.129
Elderly who Depend on Caretaker/Others			
- Cane/Walker	46.2	2.859	53.955
- Children/Others	3.3	3.500	46.833
- Wheelchair	50.5	1.882	149.039

(Reference 24)

Table 28 Average Number of Days and the Cost of Last Hospitalization Prior to the Survey, Classified by Age Group, Education, and Household Income

Average Cost of Last Hospitalization Prior to the Survey = 10,897.04 Baht

Age/Educational Level	Average No. of Days of Last Hospital Stay before Survey	Average Cost of Last Hospitalization Prior to the Survey			Total
		High Income	Medium Income	Low Income	
Age					
- <60 years	8.539	5,074.861	2,971.944	1,765.579	5,252.339
- >60 years	9.439	8,278.161	2,208.160	1,671.265	6,402.889
(60 - 69)	(9.008)	(6,579.663)	(2,847.297)	(2,434.068)	(6,177.971)
(70 - 79)	(10.431)	(9,146.129)	(1,842.659)	(1,174.330)	(6,531.501)
(80+)	(8.747)	(12,207.407)	(188.750)	(277.667)	(7,158.982)
Education					
- High (above 4th Gr.)	11.176	10,020.928	6,300.000	3,755.000	10,572.153
- Mid (4th Gr.)	9.549	7,307.635	2,852.449	2,011.118	6,006.761
- Low (Below 4th Gr.)	8.212	4,507.315	1,691.634	1,340.556	4,932.896

Note: Average cost of last hospitalization within one year prior to the survey = 10,897.04 Baht or around 272 US$ (1US$ = 40 Baht). (Reference 24)

Table 29 Percentage Distribution of Elderly by Average Number of Illnesses, and Number of Hospital Days within One - Year, Classified by Their Ability/Disability to Care for Self

Characteristics of Elderly Who Could and Could Not Care for Self	Percentage with Illness that Required Hospitalization within One Year	Average Number of Time being Hospitalized	Average Number of Hospital Days
Able to Care for Self	88.9	1.396	10.744
Unable to Care for Self	11.1	1.551	17.425
Able to Care for Self			
- eat	26.8	1.389	10.611
- dress	26.5	1.387	10.566
- bathe/use toilet facility	25.2	1.359	10.059
- walk	21.6	1.346	9.175
Unable to Care for Self			
- eat	10.8	1.521	23.163
- dress	13.1	1.534	21.695
- bathe/use toilet facility	23.6	1.705	21.152
- walk	52.5	1.558	17.957
Elderly who Depend on Caretaker/Others			
- Cane/Walker	43.8	1.906	19.865
- Children/Others	4.1	1.200	38.400
- Wheelchair	52.1	1.635	23.016

(Reference 24)

Table 32 Situation of Health Environment and Quality Control Environment

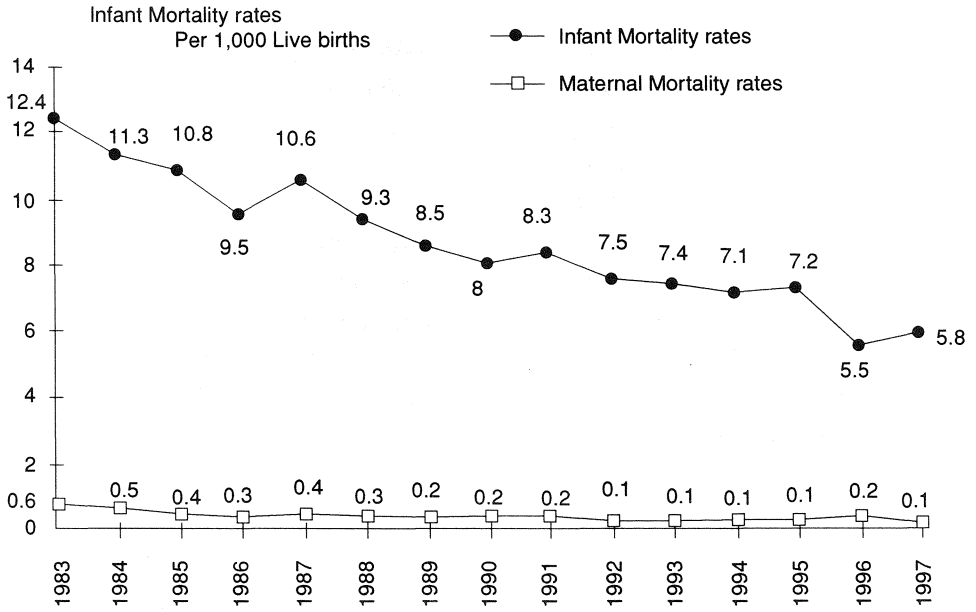
Sanitary Environment		
Households have good latrines (%)	100	98.11
Quality control environment		
Surveillance for quality of water in the main river Chaophraya	1	1
To monitor the construction of waste wafer treatment system in the central hospital the general hospital/the community hospital	805	551
To monitor the construction of incinerator to burn the infectious waste in the central hospital/the general hospital/the community hospital	805	697
Provision of sfe water		
Coverage of Households that provide sufficient safe drinking water	95	
Coverage of water system 70% of villages of the country	41,152	30,463
	70%	51.82%

Source: Department of Health, Ministry of public Health. (Reference 25)

Table 33 Number and Rate of Infant Deaths Per 1,000 Livebirth by Sex and Cause of Deaths (According to ICD Mortality Tabulation List 3, the Tenth Revision), 1997

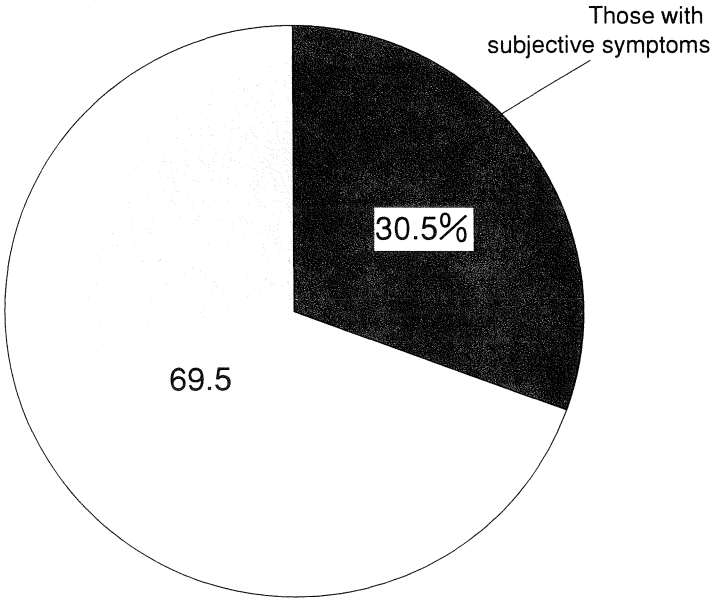
	Cause of deaths	Total		Male		Female	
		Number	Rate	Number	Rate	Number	Rate
001	Certain infectious and parasitic diseases	508	0.6	289	0.6	219	0.5
002	Diarrhoea and gastroenteritis of presumed infectious origin	71	0.1	39	0.1	32	0.1
003	Other inestinal infectious diseases	2	0.0	1	0.0	1	0.0
004	Tuberculosis	2	0.0	1	0.0	1	0.0
005	Tetanus	2	0.0	2	0.0	0	0.0
006	diphtheria	0	0.0	0	0.0	0	0.0
007	Whooping cough	0	0.0	0	0.0	0	0.0
008	Meningococcal infection	0	0.0	0	0.0	0	0.0
009	Septicaemia	310	0.3	177	0.4	133	0.3
010	Acute poliomyelitis	2	0.0	0	0.0	2	0.0
011	Measles	1	0.0	0	0.0	1	0.0
012	Human immunodeficiency virus (HIV) disease	25	0.0	15	0.0	10	0.0
013	Other viral diseases	12	0.0	6	0.0	6	0.0
014	Malaria	3	0.0	2	0.0	1	0.0

(Reference 17)



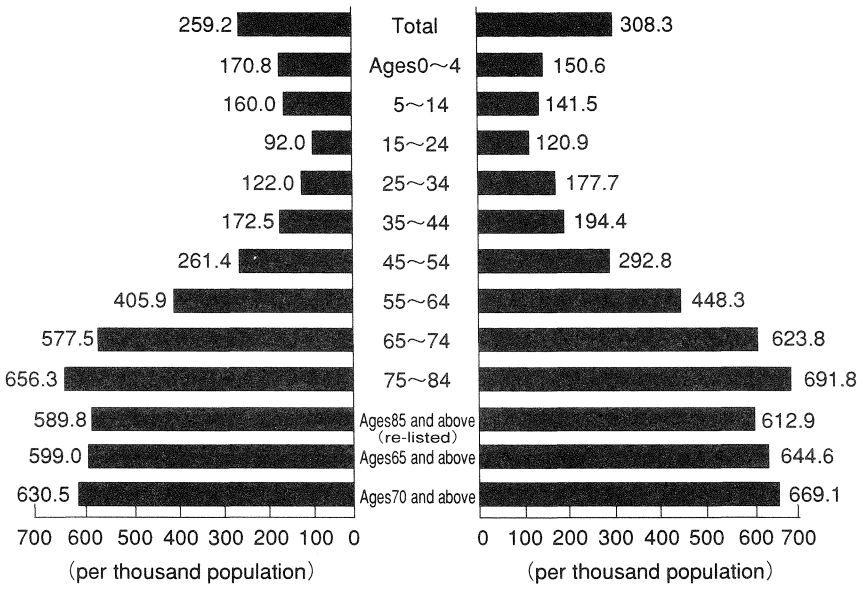
Source: 1. Ministry of Pubric Health, 1983-1995
2. Registration Administration Bureau, Ministry of Interior, 1996-1997

FIGURE 1 MATERNAL AND INFANT MORTALITY RATES PER 1,000 LIVEBIRTHS THAILAND, 1983-1997



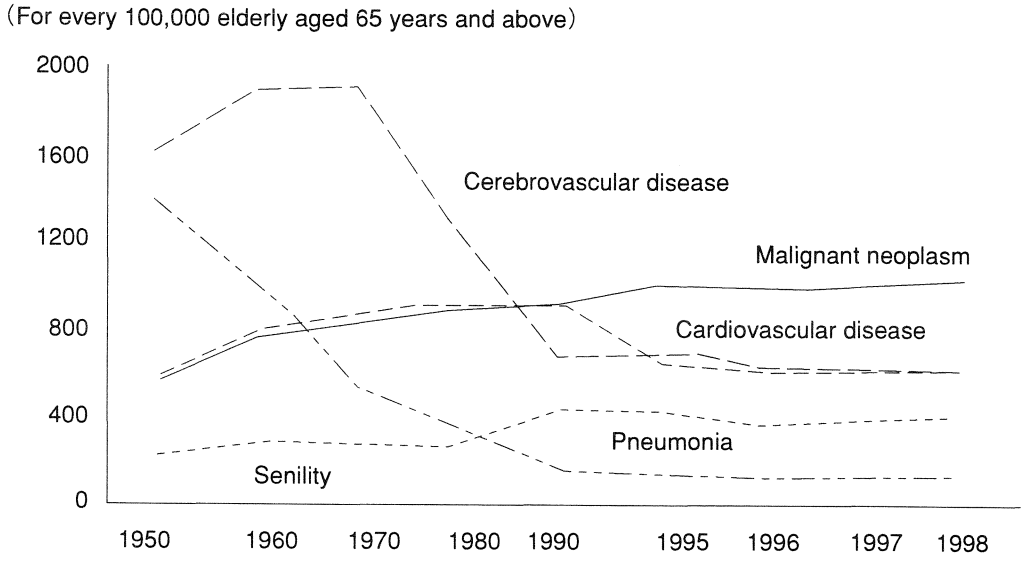
Source : Ministry of Health and Welfare "Basic Survey of National Life"

Figure 2 Condition of Those with Subjective Symptoms 1998



Note : Total includes those with unknown age
Source : Ministry of Health and Welfare "Basic Survey of National Life"

Figure 5 Percentage of Outpatients by Sex and Age Group 1998



Source : "Vital Statistics," Statistics and Information Department, Minister's Secretariat, Ministry of Health and Welfare

Figure 6 Changes in Mortality Rate of Elderly Aged 65 Years and Above by Main Causes of Death

Chapter 3

Elderly Persons of Thailand and Measures for Social Security of Elderly Persons

1. Actual Condition of Elderly Persons

Welfare for the elderly is also a major concern in Thailand and various researches has been and are conducted for this reason. Actual condition of elderly persons in Thailand will be explained below by referring to one of such studies conducted by College of Population Studies of Chulalongkorn University entitled "Household Structure and Care for the Elderly in Thailand." (Published in ESCAP "The Family and Older Persons in China, Indonesia and Thailand, ESCAP Asian Population Studies Series No. 152, 1998.)

This study was conducted by comparing the elderly in urban areas with the elderly in rural areas. Samples were obtained through interview surveys of 200 households for both urban and rural areas that were extracted in Bangkok and Ayutthaya Province, respectively. (In cases where a household had two or more elderly persons, each of them was regarded as survey subject.) Field survey was conducted from October to November of 1997. Interviews were carried out on householders (who may or may not be an elderly person) and on elderly persons living in the same household.

Table 1 shows the family structure of households with elderly persons by householder's age. According to this table, nuclear families account for the majority when householders are younger than age 60. Meanwhile, the percentage of extended families increases and that of nuclear families decreases when householders are 60 years of age or older. These results clearly show that householders will be living in extended families after they reach age 60 by living with their married children. It is interesting to note that this trend rapidly becomes obvious for householders aged 60 years and above, and becomes stronger with increase in their age.

Table 2 shows the family structure for each age group of householders by sex and place

In rural-urban comparison, higher percentage of children earn their wages in rural areas than in cities. When those living with their children are compared with those that are not, children are naturally wage earners in the former case while, interestingly enough, fairly large percentage of relatives play that role in the case of the latter. Thai families are characterized by the role played by relatives in looking after people without children. Children and relatives also support those not living with their spouse (due to death or separation).

The facts revealed in the foregoing can be summarized by saying that the likelihood of householders becoming a member of an extended family by living with their married children and others increases after they reach age 60. Needless to say, more elderly persons will be living with their children, grandchildren and other relatives (which include young relatives other than their children.) Extended families including relatives are supporting the elderly in Thailand.

As for persons responsible for earning a living, the percentage of children being the main wage earner is highest for both male and female elderly persons. It is also worthy of note that a high percentage of those not living with their children are being supported by their relatives. The existence of kin support for those who do not have children to look after them is one of the characteristics of the Thai family system.

Thus, extended families including relatives are supporting the elderly in Thailand and this trend is slightly stronger in urban areas.

2. Social Security Measures for the Elderly

(1) Development of social security measures

Social security in Thailand is implemented through social welfare programs and social security programs that are comprised of the following.

① Public assistance as poverty measure (destitute people, poor elderly persons, poor children)
② Insurance for public servants
③ Compulsory health insurance for corporate workers
④ Voluntary health insurance

Some of these programs will be discussed in the following. The system is listed according to order of occurrence in Table 1.

There was a movement to establish the public social security program as early as 1954, although its enforcement was postponed owing to weakness of financial base for supporting such program. However, a program for offering free medical care to the poor was launched in 1975 and enabled them to receive medical check-ups at national hospitals in urban areas and pick up medicine at village health centers in rural areas. In addition, 10 or so health

economic fluctuations that have taken place in the last several years.

③ Compulsory health insurance
Insurance based on the Social Insurance Law.

④ Private voluntary health insurance
This insurance shifted towards life insurance after the first health insurance company was established 1978. Today, life insurance has become the main part of the policy with health insurance being added as options.

⑤ Health card
Originally based on maternal and child health card issued for primary health care and resembles the maternity passbook in Japan. The card is used for vaccination and disease treatment. It has the following objectives.

a. Promote maternal and child health, family planning and disease prevention.
b. Reverse the roles of people and health center staff so that communities will take the initiative in the field of health with health center staff offering support from the side.
c. Expand the accounting potential of communities while seeking improvement of quality and efficiency of health center staff.
d. Reduce house calls by provincial hospital staff to divert their time and money in more useful matters.

The status of coverage by the various types of insurance mentioned above is shown in Table 2.

As can be seen in this table, 56.8% of the population is covered by some kind of insurance or another. However, social insurance coverage is limited to full-time employees of companies with at least 10 employees and does not include self-employed individuals belonging to the informal sector and farmers. The future task of the insurance system in Thailand would be to expand its coverage to include these non-insured persons.

(4) Social Welfare Measures

The basic approach of Public Administration Department the Ministry of Labour and Social Welfare towards welfare for the elderly is to enable socially handicapped elderly persons to lead a full life while protecting socially disadvantaged elderly persons in an effort to prevent them from becoming homeless or being abandoned by their families.

Social welfare for the elderly can be divided into admitted protection and in-home protection. The Public Administration Department is operating 17 old-age homes that offer the following services throughout the country.

- Improvement of essential requirements of life
- Recreation and religious activities
- Social work
- Treatment of diseases
- Psychotherapy

the poorest region in Thailand and that many farmers have migrated to Bangkok and other large cities in search of jobs by leaving their children and the elderly in their villages requiring large amount of financial support.

② Call for donation from private sector
Public Administration Department is asking private organizations for donation to offer financial support to the elderly in regions where senior support centers have not been built. A total of 1,283,800 bahts was donated in 1999.

③ Activities at temples
Shelters for protecting abandoned elderly persons are being built inside temple premises with the cooperation of temples since 1994. Shelters have been built at 362 locations as of 1999.

Furthermore, welfare activities (e.g. health promotion activities) for the elderly persons in the community have been implemented since 1999 by building senior centers in temples. As of 1999, 200 of such centers have been built throughout the country. A total amount of 43 million bahts are provided every year to cover their operation expenses in addition to 140,000 bahts that are offered every year to each facility to purchase equipment for health promotion activities. Both of these contributions are financed by the Miyazawa Fund.

(5) Conclusion

Life of elderly persons in Thailand can be characterized by the fact that their lives are supported by extended families including collateral families. Elderly persons older than 60 often live with their children and other relatives, and are supported financially by their children as well.

However, signs of change—as exemplified by cases of high income earners moving in to private old-age homes and poor class being admitted in national old age homes—are being observed in parts of such family support system.

While it is necessary to provide economic security for supporting livelihood in place of family members is needed to compensate for reduction in family support for the elderly, Thailand is not fully equipped with such system at this point. Medical assistance is intended for destitute population and universal coverage by public health insurance has yet to be seen. For this reason, there is a need to seek substantiation of insurance system in the future and create a mechanism for the society to support the elderly citizens.

The Thai Government is seeking to improve the country's local medical service with the aim of maintaining the health of the elderly, placing more emphasis on substantiating local service than on offering protection through facility admittance. Considering the fact that living in the community one was born and bred and completing one's life there is the greatest happiness for an elderly person, it would be desirable to further expand the protection rooted in the community in both economic and medical realms in the future.

Table 4 Comparison of main income earners by their attributes

Main income earner	Sex		Place of residence		Living with children		Living with spouse	
	Male	Female	Urban	Rural	Yes	No	Yes	No
Self	27.3	12.6	20	16.3	16.1	23.3	27	12.2
Child	49.4	56.7	48.8	59.1	62.3	32.8	44.2	60.4
Spouse	5.2	4.7	4.9	4.9	5.5	3.4	12.3	--
Relative	3.2	11.4	10.7	5.9	2.4	23.3	0.6	13.5
Savings	4.5	6.7	6.8	4.9	4.8	8.6	4.9	6.5
Pension	9.1	4.3	5.4	6.9	6.5	5.2	9.2	4.1
Others	--	2.4	1.5	1.5	1.7	0.9	--	2.4
No response	1.3	1.2	2	0.5	0.7	2.6	1.8	0.8
Total	1.3	1.2	2	0.5	0.7	2.6	1.8	0.8
Real number	154	254	205	203	292	116	163	245

Table 5 Historical trends of social health and social welfare programs

Year	Incident	Public assistance	Public servant security	Compulsory health insurance	Voluntary health insurance
1929	Commencement of private insurance business				O
1954	The First Social Insurance Law (not enforced)			O	
1974	Worker Compensation Fund			O	
1975	Provision of free medical care for the poor	O			
1978	Establishment of private health insurance companies				O
1978	Public official medical allowance system		O		
1981	Insurance card for low income persons (first)	O			
1983	Maternal and Child Health Fund				O
1984	District-based health card project				O
1990	Social Insurance Law: 20 or more employees			O	
1991	Health card project through insurance				O
1992	Free medical program for the elderly	O			
1993	Revised Social Insurance Law			O	
1993	Insurance for traffic accident victims			O	

Source: Anuwat Supachutikul "Situation Analysis on Health Insurance & Future Development" National Health Foundation, 1996, p.18

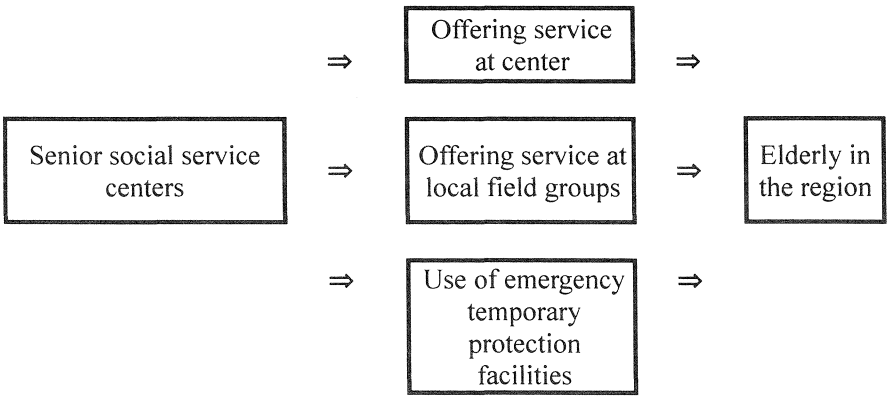


Figure 1 Services offered at senior social service centers

Chapter 4

Survey Members and Itinerary

1. Survey Members

Committee in Japan

Toshio Kuroda	Director Emeritus, Nihon University Population Research Institute
Hidesuke Shimizu	Professor and Chairman, Dept. of Public Health and Environmental Medicine, Jikei University School of Medicine
Yasuo Hagiwara	Professor, Social Work Research Institute, Japan College of Social Work (Leader of the field survey team)
Hitomi Karube	Professor, University of Human Arts and Sciences, (member of the field survey team)
Tsuguo Hirose	Executive Director and Secretary General, Asian Population and Development Association (APDA)
Masaaki Endo	Project Manager, APDA (member of the field survey team)
Osamu Kusumoto	Senior Researcher, APDA
Chiharu Hoshiai	Manager of International Affairs, APDA
Yuko Kato	Manager of External Relations, APDA

2. Cooperators (Survey in Thailand; August 27 - September 2, 2000)

Embassy of Japan in Thailand

Katsuhiro Iwai	First Secretary
Dr. Prasop Ratanakorn	Former Senator, Thailand

Dramaraksaniwesana Project (HIV/AIDS Hospice)

Mr. Chalermpol Polmuk	Manager

College of Population Studies, Chulalongkorn University

Dr. Vipan Prachuabmoh	Director
Dr. Napaporn Chayovan	Deputy Director

Institute for Population and Social Research, Mahidol University

Ms. Wathinee Boonchalaksi	Associate Professor
Dr. Masaki Matsumura	Foreign Expert

Sep. 1 (Fri)	• Visited College of Population Studies, Chulalongkorn University. Was explained about Study of Lower Fertility and Aging in Thailand from Dr. Vipan Prachuabmoh, Director. • Visited Institute for Population and Social Research, Mahidol University. Was explained about Asing from Ms. Wathinee Boonchalaksi, Associate Professor.
Sep. 2 (Sat)	• Departed from Bangkok at 08:45 and arrived in Narita 16:35 by JAL 708.