



MORTALITY TRENDS AND LEVELS TO VERIFY THE AIDS EPIDEMIC IN THAILAND:

***ANALYSIS FROM DEATH
REGISTRATION STATISTICS, 1984-1997***

Wassana Im-em

***Institute for Population and Social Research
Mahidol University***

***Supported by the Ford Foundation (Thailand)
July 1999***

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Foreword

For a number of very practical purposes there is a need to know the extent of mortality resulting from AIDS and the geographical distribution of that mortality among local areas. Such knowledge contributes to understanding the development of the disease and is vital to planning for the consequences of the epidemic.

There are data collection systems that have been developed expressly for tracking the progress of the epidemic. These systems gather information on prevalence of HIV and AIDS and estimates of AIDS related mortality are typically available. However, there is widespread agreement that AIDS deaths are under-reported. This has led to reliance on models for estimating the number of AIDS deaths. These models rely on assumptions that, especially for disaggregated areas, may not be very accurate.

The Institute for Population and Social Research, Mahidol University is pleased to offer this study as another source for those who are interested in studying the AIDS Epidemic in Thailand. The importance of this study is the use of mortality data from the vital registration system that has almost universal coverage and that is geographically extensive to verify the AIDS epidemic at the national, regional and provincial levels. It is hoped that the report on "*Mortality Trends and Levels to Verify the AIDS Epidemic in Thailand: Analysis From Death Registration, 1984-1997*" will stimulate feedbacks and comments from the readers.

Bancha Yoddumnern-Attig

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Wassana Im-em

ABSTRACT

The objective of this study is to explore if vital registration statistics on mortality can be used to verify the AIDS epidemic in Thailand at the national, regional, and provincial levels. The mortality trends and levels of the Thai population starting from the year that the first AIDS cases were reported in 1984 were explored up to 1997. The period of 1984-1991 was the baseline representing the period before the onset of AIDS deaths and the period of 1992-1997 represents the period after AIDS deaths have increased substantially in Thailand. The death registration data was taken from the records of the Ministry of Public Health. The 1995 Population Projections by the National Economic and Social Development Board based on the 1990 Census were used as the base population. The AIDS statistics covering the study period were taken from the reported cases of people with HIV/AIDS recorded in Forms 506/1 and 507/1, HIV serosurveillance in pregnant women, and the HIV serosurveillance in military conscripts.

While the death rates had increased substantially among men aged 25-29 in the past three years, the death rates of women in the same age group show little change over time. At the regional level the highest death rate was in the North region where the male death rate sharply increased in the past three years, followed by the Northeast region.

Twelve provinces had the death rates of young men aged 25-29 years old greater than 8 per 1000 in 1996. These were Chiang Rai, Phayao, Chiang Mai, Lamphun, Lampang, Phetchaburi, Phare, Rayong, Chanthaburi, Prachuap Khiri Khan, Roi Et, and Nan. Phayao and Chiang Rai were the only two provinces with a death rate of women in the same age group greater than 8 per 1000 in the same year. The death rate had increased most among men and women aged 25-29 in Chiang Rai.

The registered death rates and the selected AIDS statistics are highly correlated beginning in 1990. The correlations between these two variables were stronger in men than those in women. The death rate of men aged 25-29 appears to be the strongest indicator to suggest the presence of AIDS deaths.

It was assumed that if the trend of deaths from the period 1984-1991 continued, the difference between the observed deaths (deaths with AIDS) and the actual deaths (deaths without AIDS extrapolating the trend of deaths from 1984-1991) would indicate the excess deaths attributable to AIDS. About 200,000 AIDS deaths throughout the country were estimated over the period 1992-1996. The provinces with the highest number of AIDS deaths were Chiang Mai, Chiang Rai, Nan, Nakhon Sawan, and Phayao. However, the extent that this estimation of AIDS deaths at the provincial level is correct depends on how reliable is the vital registration of these provinces.

It is concluded that the death registration statistics can be used as a simple indicator to monitor the AIDS epidemic at the national and regional levels. Nevertheless, the vital registration on death statistics needs to be strengthened to make it a reliable source of data to monitor the AIDS epidemic in Thailand. The completeness of death registration statistics needs to be further explored.

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1. BACKGROUND INFORMATION

People found to be with HIV/AIDS in the early years of the epidemic in Thailand, from 1984 to 1988, were largely men and women in the high-risk behavior groups including sex workers and injecting drug users (IDU). Few from the general population were found to be infected with HIV/AIDS at that time. Of over 172,000 laborers going to work in Saudi Arabia in 1986-1988, only 19 persons tested positive with HIV giving a prevalence at 0.01 percent. The first alarm for the spread of AIDS in Thailand began in 1988 when positive HIV blood tests among more than 1,000 IDU in Bangkok Drug Treatment Clinics rose to 40 percent in that year. The HIV prevalence among female sex workers in Chiang Rai and Chiang Mai were above 40 percent compared to the national level at 3 percent in 1989. While national HIV prevalence among pregnant women attending ANC clinics in 1992 to 1997 were between 1-2 percent, the HIV prevalence among pregnant women in Phayao, Rayong, Chiang Rai, and Chiang Mai which are all in the Upper-North region was much higher ranging from 4-10 percent over the same period. The high prevalence of HIV infection among pregnant women suggested that the AIDS epidemic in the last five years has spread to the low risk populations in Thailand (Weniger et al., 1991; U.S. Bureau of the Census, 1995, 1997; AIDS Epidemiology Working Group, 1998).

The effect of the AIDS epidemic in Thailand is now clear to many parts of the country, particularly in the Upper-North region covering five provinces with the highest AIDS prevalence. The cumulative number of people with AIDS throughout the country reported by the Ministry of Public Health from 1984 up to October 1998 was 99,555 cases, with 27,279 AIDS deaths and a male to female ratio of 4 to 1. The cumulative number of people with symptomatic HIV over the same period was 40,552 cases with 4,135 deaths¹. About 29 percent of reported people with HIV/AIDS (PHAs) were those in age group 25-29 years old followed by age group 30-34 (23 percent), age group 35-39 (14 percent), age group 20-24 (12 percent), and age group 0-4 (5 percent). By October 1998, Phayao, Rayong, Chiang Rai, Lampang, Samut Songkram, Trad, Nan, Chanthaburi, Ranong, and Phuket were the ten leading provinces with the highest cumulative rates of reported PHAs per 100,000 population at the rates of 109.0, 79.5, 72.9, 52.6, 45.3, 45.0, 42.8, 38.0, 35.6, and 34.3 respectively. However, Chiang Mai ranks first as the province with the highest cumulative number of reported PHAs (13,518 cases) followed by

¹ The Ministry of Public Health reports the number of people with AIDS in two categories: people with full blown AIDS and symptomatic HIV positive cases. People found to be with HIV but lacking symptoms have not been reported since September 1991. People with HIV/AIDS (PHAs) used in this report refers to a combination of both categories; people with full blown AIDS and symptomatic HIV cases.

Bangkok (12,671 cases), Chiang Rai (12,152 cases), Phayao (6,867 cases), and Lamphang (6,635 cases) (AIDS Epidemiology Working Group, 1998).

1.1 Data sources to monitor the AIDS epidemic in Thailand

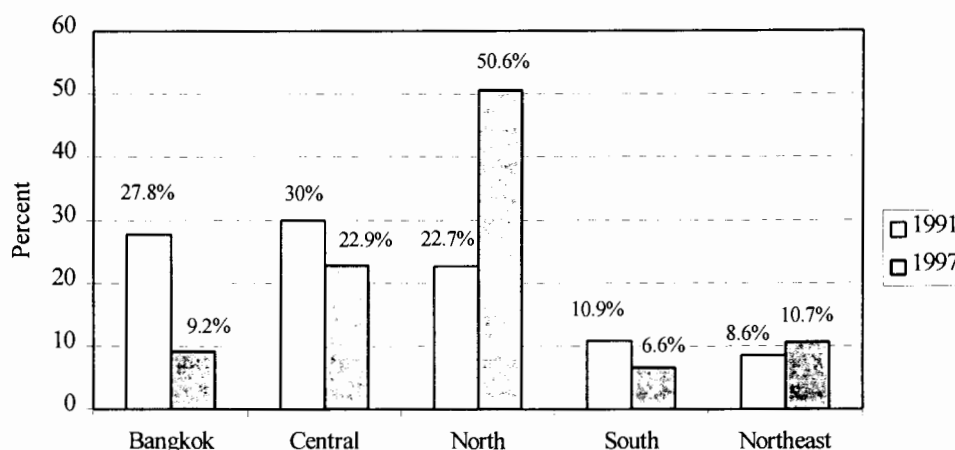
Several kinds of data sources are available to monitor the AIDS epidemic in Thailand. All have strengths and weaknesses as described below.

1.1.1 Reported cases of PHAs

After the first AIDS case was reported in September 1984, the Ministry of Public Health established a system to report the number of PHAs. Government and selected private health institutions in every province throughout the country are requested to record information about the persons found to be with HIV/AIDS in Forms 506/1 and 507/1. The number of people tested positive for HIV but lacking symptoms were recorded in the early years of the AIDS epidemic (mid-1992) when the reports of HIV positive cases were abolished. According to the statistics provided at the First Thai National AIDS Conference in 1991, there were 27,375 cumulative cases of PHAs over the period 1984 to February 1991. Most reported cases (98.7percent) were those having HIV positive without any symptoms. The highest number of PHAs found at that time was in the Central Region (8,237 cases, 30 percent), followed by Bangkok (7,601 cases, 27.8 percent), North (6,215 cases, 22.7 percent), South (2,977 cases, 10.9 percent), and Northeast (2,345 cases, 8.6 percent) (Tanprasertsuk and Pinyothammakorn, 1991). The share of PHAs by region in the early years was very different from that reported for AIDS deaths by region in more recent years. In 1997, 50.6 percent (19,358 cases) of cumulative AIDS deaths were reported in the North followed by the Central Region (22.9 percent, 12,282 cases), Northeast (10.7 percent, 4,096 cases), Bangkok (9.2 percent, 3,504 cases), and South (6.6 percent, 2,536 cases).

Figure 1 below shows that in 1991 Bangkok and the Central region had the largest number of people tested positive for HIV. However, only six years later, half of national AIDS deaths were reported in the North. It can be assumed that a large number of people found to be with HIV in 1991 were from the North and many of them were found to be positive with HIV while they were away from home working in Bangkok and Central region. Thus, the number of AIDS deaths in the North region was high in the subsequent years after these people with HIV later returned to their home provinces in the North with AIDS. Another explanation may be that initially there was more testing available in Bangkok and the Central region in the early years. Lastly, the spread of HIV in the North Region may be faster than the rest of the country, as many sex workers were known to be from this part of the country. Sex workers can serve as a reservoir to quickly spread the HIV infection to their male clients.

Figure 1
Percent of HIV positive cases (1991) and AIDS deaths (1997) by region



In the governments attempt to control the spread of HIV infection in the early years, a large number of sex workers and those found to be positive for HIV were sent back to their home provinces (Brinkman 1992:9). However, such policy had in turn increased the likelihood that the returnees with HIV/AIDS would spread the infection in their home province instead. Some HIV infected sex workers may have become the source of HIV transmission to their male clients if they re-entered sex work. Others may have given up prostitution and started to have a family which in turn increases the rate of HIV infection among housewives and pregnant women in the Upper-North region. The province that persons found to be with HIV/AIDS and the province that they returned to live with the illnesses may not be the same but this information cannot be detected in the reported AIDS statistics recorded in Forms 506/1 and 507/1. Other weaknesses of this data source are as follows:

- The reported number of PHAs is believed to be much lower than the actual figures for several reasons. Firstly, PHAs not seeking care and treatment at the health institutions designated to submit Forms 506/1 and 507/1 to the Ministry of Public Health are excluded from this source of AIDS statistics. Secondly, even if a large number of PHAs turn up at the designated health institutions, it is not known how many of them would be actually recorded in the Forms. Information obtained from several local health personnel suggested that they did not report all PHAs detected from fear that their health institutions would be blamed for not being able to control the AIDS situation. In other words, some health personnel believed that a high report of PHAs cases would reflect their poor performance in HIV/AIDS prevention and control; thus, they would report only some HIV/AIDS cases. Others said that a large number of PHAs were not recorded in Forms 506/1 and 507/1 from the lack of a physicians diagnosis to

suggest whether the patient was only tested positive for HIV, were HIV positive with some symptoms, or they are with full-blown AIDS.

- The HIV/AIDS cases are reported according to their current address or 'thii yuu patchubaan', which is not necessarily the same as their province of residence when they become ill. Among migrants who have not yet established a permanent place of residence, if they are found to be with HIV they tend to report the province that they were currently living rather than the province of their origin in which they would return for care and support after developing the symptoms. Some studies suggest that many PHAs are likely to return home to be with their parents for care and support at some stages of their illness (Im-em and Phoungsaichai, 1999; Knodel, Im-em, VanLandingham and Saengtienchai, 1999).
- It is likely that PHAs with high and medium socio-economic status would be missing from the reports as they tend to seek private treatment and their information would not be reported into the Ministry of Public Health's system. Similarly, PHAs seeking care and treatment from AIDS shelters or those adopting home based care and traditional treatment are missing from such reports.
- The computer systems to prevent repeated counts of the same HIV/AIDS cases who may turn up at several health institutions have been fully operational in recent years. The computer software developed by the Epidemiology Division of the Ministry of Public Health was distributed to the Provincial Public Health Offices in 1995 (AIDS Epidemiology Working Group, 1997^a). However, it is not known how reliable it is to prevent repeated counts of the same PHAs before the time the computer system was fully operational. Even after the computer software had been introduced, several hospitals complained of lack of staff who have adequate training on HIV/AIDS data management thus the quality of HIV/AIDS reports vary by province.
- People with AIDS dying at home are excluded from the reports and the causes of death reported by the village death registrars are not reliable.

1.1.2 National HIV Serosurveillance

The Ministry of Public Health started HIV Serosurveillance to monitor the HIV/AIDS situation at the provincial level beginning in 1989. The HIV blood tests of selected risk groups were conducted twice yearly in June and December from 1984 to 1995 and have been conducted once a year in June beginning in 1996. The first round of HIV Serosurveillance in June 1989 covered 14 provinces, and expanded to 31 provinces and 73 provinces in later rounds. Sixteen rounds of HIV Serosurveillance have been performed from

1984 to June 1998. The Provincial Public Health Offices conducts the HIV blood tests among six population groups as follows (AIDS Epidemiology Working Group, 1997^b).

High Risk Population

1. *Female Sex Workers*: Direct sex workers in every province and indirect sex workers in 60 provinces are randomly tested for HIV.
2. *Male sex workers*: Male sex workers in Chiang Mai, Bangkok, Chonburi (Pattaya), Songkhla (Haat Yai) and Phuket are tested for HIV at random.
3. *Injecting Drug Users*: A random number of IDU coming to the Drug Treatment Clinics and the Regional Drug Treatment Centers in 39 provinces are tested for HIV at random.
4. *Men Attending STD Clinics*: All men attending the STD clinics at the Communicable Diseases Control Offices and the Provincial Public Health Offices are tested for HIV.
5. *Foreign Workers*: About 200-400 foreign workers in 43 provinces are tested for HIV from time to time.
6. *Fishermen*: About 200 cases of fishermen in selected provinces are tested for HIV from time to time.
7. *Young Men under Military Conscription*: The HIV Serosurveillance was performed twice yearly beginning in May 1989 and once a year in recent years by the Military Research Institute on Sciences and Medicine under the Defense Ministry. All young men selected for military conscription are tested for HIV.

General Population

1. *Pregnant Women*: The HIV blood tests are performed among pregnant women attending ANC clinics at General Hospitals, Regional Hospitals, and Maternal and Child Health Hospitals in every province and at Community Hospitals in selected provinces. Most hospitals provide HIV blood tests to all pregnant women but a few hospitals do not. For the hospitals where HIV tests are not available to all pregnant women, the HIV blood tests are taken from the blood sampling for Syphilis conducted among all women in their first pregnancy attending the ANC clinics.
2. *Blood Donors*: All units of donated blood at the General Hospitals and Community Hospitals in every province are used to measure the HIV prevalence among blood donors of each province.

Although the HIV Serosurveillance among selected risk groups have been conducted extensively over a long period, the results are limited for the reasons below:

- Although the HIV Seroprevalence obtained from pregnant women are often used to suggest the HIV prevalence of the general population; the results are limited to those attending the ANC clinics in selected government hospitals only.
- The sample sizes for HIV blood tests are usually smaller than the expected size, except among pregnant women and blood donors. For instance, the sample sizes for direct sex workers in recent years were very small as it is getting difficult to find direct sex workers after the spread of AIDS in Thailand. In 1997, only 54 provinces were able to obtain the HIV blood tests from more than 20 sex workers and in 1996 only 35 provinces obtained more than 20 cases for the tests. A small sample size can exaggerate the HIV prevalence reported among sex workers.
- The results of HIV infection rates are limited to the province that PHAs are tested for HIV, not the province of their true residence. For instance, sex workers tested positive for HIV in Haat Yai may come from other region. Pregnant women and blood donors are likely to be the resident of the province that they are tested for HIV, except if they belong to a mobile population.
- Young men are called up for military conscription in the province that they are registered; however, they may live elsewhere. The HIV prevalence reported among the military conscripts do not necessarily suggest the true infection rate of young men in the province that they are drafted. Thus the HIV prevalence among the military conscripts is reported according to the province that they live longest in the past two years prior to conscription.
- Although it is generally known that young Thai men are required to be undergo military conscription at age 21 years old, a large number of men, who tend to be those with good education, are exempted from the conscription. In addition, a number of men aged up to 29 years can volunteer to serve in the military. According to the HIV Serosurveillance in May 1997, there were 4,092 men aged 22-29 years old out of the total 26,152 cases who were conscripted. However, it is likely that the military service can be attractive to young men who became unemployed after they found to be with HIV. PHAs who volunteer to serve in the military before they have developed any symptoms gain benefits with free medical care and monthly allowance (two cases reported by Im-em, 1996). In May 1997 while the HIV infection rate among men aged 21 was 1.7percent, the HIV infection rate among those aged 22-29 was 3.5 percent.

1.1.3 HIV/AIDS estimations and projections

The 1994 Projections for HIV/AIDS in Thailand estimated that by 1998 there would be 1,200,537 cumulative cases with HIV, 331,252 cumulative AIDS cases, and 299,074 cumulative AIDS deaths (NESDB Working Group, 1994: p. 48). A more recent projections provides different figures, estimating that by 1998 there would be 977,000 cumulative HIV cases, 438,800 cumulative AIDS cases, and 426,798 AIDS deaths (Wongboonsin et al., 1997: Table 12). However, how many AIDS deaths have actually occurred and how many people are living with HIV/AIDS is not known. From the experience of people working in the field, it is known that the rise of HIV/AIDS deaths was not likely to have taken place before 1991. In CARE's experience working on AIDS related activities in Chiang Mai villages beginning in 1992, the number of people living with AIDS was very few at that time. A survey conducted by Im-em in 1993-1994 covering 12 villages in Chiang Mai found no more than three people with symptomatic HIV/AIDS per village. However, the cumulative number of PHAs including those who had died with AIDS in some of these villages rose to more than 20 cases per village four years later (1998). Another study conducted in four villages in Chiang Mai found that the villages known to be with high number of PHAs had about 10 cumulative HIV/AIDS deaths per village in the past three years. Only one to three living PHAs were found per village. Many living PHAs were widows whose husbands had died with HIV/AIDS (Im-em and Phoungsaichai, 1999).

HIV/AIDS projections and their drawbacks

The HIV/AIDS projections are based on several assumptions and, according to the assumptions used, it is not clear how valid the projections are. Furthermore, the estimated number of PHAs are given at the national level only, even though the situation is considerably different by region and province as suggested earlier. Only the recent HIV/AIDS projection introduced by Wongboonsin and others in 1997 gave an estimated number of PHAs for the North Region separately from the national level. However, the Working Group for these projections indicated that their projections were based on several parameters, while there was no Thailand specific data. Three groups of parameters were used in this projection (Wongboonsin et al., 1997: 15-16):

1. Parameters with reliable sources of information. They are the population parameters including the number of population by sex and age, fertility rate and mortality rate by sex and age.
2. Parameters with unclear or unconfirmed result taken from studies in Thailand or from other countries. They are biological and behavioural parameters such as probability of transmission per partner, transmission rate among various groups of people, and rate of changes in infection status.

3. Parameters with no reference in Thailand that they were borrowed from studies conducted in other countries. Most of them are behavioral parameters including partner changing rate, partner matching patterns, and proportion of different populations by their level of sexual activities.

The projections by another working group, the 1994 NESDB Projections for HIV/AIDS, based their projections on the assumptions listed below. The starting situation assumed for 1993 around which the projected scenarios are based are as follows:

1. 10 percent of Thai men aged 15-49 years old have visited female commercial sex workers within the last 12 months.
2. Condoms are used in 60 percent of all commercial sex acts.
3. STDs are at 1.63 cases per 1,000 population

Assumptions after 1993 are as follows:

Baseline

1. Male high risk proportion remains at 1993 levels of 10 percent
2. Condom use in commercial sex remains at 60 percent through 2005.
3. STD levels remain unchanged at 1.63 per 1000 through 2005.

Medium Intervention

1. Male high risk proportion drops by half to 5 percent levels by 2005
2. Condom use increases 10 percent for 2 years to 80 percent and then remains at 80 percent through 2005.
3. STD levels drop 10 percent over the next 2 years to 1.47 per 1000 in 1995 and remain at this level through 2005.

High Intervention

1. Male high-risk proportion drops by three-quarters to 2.5 percent in the year 2005
2. Condom use increases 10 percent for 3 years to 90percent.
3. STD levels drop 20 percent over the next 2 years to 1.30 per 1000 in 1995 and remain at this level through 2005.

How reliable the HIV/AIDS projections are depends on how close the assumptions are to reality. The drawbacks for this source of data to be used to monitor the AIDS situation are as follows:

- The HIV/AIDS situation in Thailand varies by province and region. At present, the extensive spread of the epidemic is obvious in the Upper-North region and in selected provinces in other region only. However, the assumptions used for the projections are made at the national level, suggesting that the existing projections assume that the HIV/AIDS situation is similar throughout the country. The HIV/AIDS projections adjusted for different HIV/AIDS situation known at the regional and provincial level are needed.
- There are limited reliable sources of information to suggest good assumptions for the HIV/AIDS projections at the provincial level in Thailand. For instance, it is not known how the domestic migration would differentiate the HIV/AIDS situation at the regional or provincial level. People may be tested positive for HIV in the province that they work but they may return to another province of residence after they had developed AIDS for care and support by their family members.
- The HIV/AIDS projections need to be updated regularly due to changing assumptions.

1.1.4 Behavior Sentinel Surveillance Survey

The Ministry of Public Health has introduced the Behavior Sentinel Surveillance Survey beginning in mid-1995 by collecting information about HIV risk behaviors through self-administered questionnaires. The length of the questionnaire is two pages with 20 questions asking about high-risk sexual behaviors. Selected groups of young men and women in 19 provinces are the target groups. These include male and female factory workers, pregnant women attending ANC clinics at government hospitals, men aged 21 selected for the military conscription, and male and female students in Grade 11 (Matthayom 5). The expected sample size is 350 cases per group per province. The weaknesses of this survey were reported as follows (Division of Epidemiology, 1997):

- Not all respondents understand the questions asked in the questionnaire so the answers given may be unreliable.
- It was difficult to obtain the required sample size of male and female factory workers.
- The respondents lacked motivation to actively participate and the answers may not be valid.
- The results were interpreted according to the choices of answers available, which may not be the answers that the respondents actually would like to answer.

1.1.5 Research studies

Over the past decade a large number of studies on HIV/AIDS in Thailand have been conducted in many disciplinary areas. The results of these studies are a good source of knowledge about the AIDS situation in Thailand. Nevertheless, the HIV/AIDS situations outside the high prevalence area are under-investigated. Little is known about the AIDS situation in the provinces outside the Upper-North region.

1.2 Related studies on deaths statistics and AIDS

One of the potential data sources to verify the AIDS situation is to explore the trends and levels of deaths throughout the country over the period that the AIDS epidemic has occurred in Thailand. If the emergence of AIDS has led to increasing numbers of deaths in the past few years, the vital statistics on death should also have increased. A few studies in sub-Saharan Africa have used death registration statistics as a data source to estimate the impact of AIDS. A pioneer study explored data on deaths registered in Abidjan between 1973 and 1992, and the excess deaths attributable to AIDS are estimated based on the registered death statistics (Garenne et al., 1995, 1996, 1997). Another study examined the use of sibling histories taken from the Demographic and Health Survey (DHS) to directly estimate rates of adult mortality in sub-Saharan Africa (Bicego, 1997). Another working group demonstrated that orphanhood data can be used to estimate adult women's mortality in population experiencing the AIDS epidemic (Timaues and Nunn, 1997). Data from a longitudinal study in Northwest Tanzania were used to assess the levels of adult mortality and the leading causes of death in 1994-1996. Mortality in the study population with an HIV prevalence of about six percent in 1994-1995, has increased by about one-third because of HIV/AIDS. Other infectious diseases caused nearly a quarter of deaths and non-communicable diseases were still a relatively minor cause reported in this study (Boerma et al., 1997).

Three pilot studies on mortality and morbidity data to measure the impact of HIV epidemic in India and Thailand were conducted in 1998 by Godwin et al. (1998). Data sources on mortality were obtained from the deaths registered in Mumbai and Chiang Mai. The Chiang Mai study found that the increased death rate among men was evident beginning in 1994 and the increased death rate among men in age group 25-29 for 1996 was close to 600percent higher than the 1987-1989 death rate baseline. The increased death rates among women were evident in the past two years but the increases were much smaller than the increase for men. Another working group in Thailand led by van Griensven and others in 1998 investigated the use of registered death statistics to indicate the impact of the AIDS epidemic. Trends and levels of mortality based on the death registration covering the period 1989 to 1996 in Chiang Rai, Chiang Mai, Phayao, Narathiwast, Yala, and

Trang were explored with back-calculation of HIV incidence and forecasting of AIDS deaths. However, the estimates of AIDS deaths in this study were not adjusted for incomplete death registration. The 1996-1997 Survey of Population Change in Thailand suggested that death registration had increased from 73.3 percent from 1985-1986 to 95.6 percent in 1995-1996, and the increased registration of deaths was different by region. Another study by Porapakham conducted in 1986 explored the mortality trends and levels in Thailand based on registration of death as one of the data sources. However, this study was conducted before the onset of the AIDS epidemic in Thailand.

Reported causes of death

If a person dies outside a hospital, the local registrars issue the death certificates. At least four studies in Thailand had suggested that the cause of death with AIDS is likely to be written as something else in the death certificates. A study conducted in four villages in Chiang Mai suggested that the cause of deaths reported by the PHAs' relatives were heart failure, lung infection, allergy, fever and headache, and suicide (Im-em and Phuongsachai, 1999). However, the cause of death reported in this study was obtained from a question asked to the relatives of PHAs who had died in the past three years. The death certificates had not been checked to see what was actually written as the cause of death for those who had died with AIDS.

Studies by Rangsin (1994) and Rayong Working Group (unpublished, 1998) similarly suggested that only about 30 percent of PHAs were actually reported as having AIDS as the cause of death in their death certificates. Another study on the cause of deaths suggested that only 70 percent of the people reported as dying with heart diseases actually died with heart diseases (Ninsri et al., 1998). While the under-reports of the actual cause of death in these studies are only limited to the deaths that occurred in health institutions, inaccurate reports on the cause of death outside the health institutions would be even greater.

Although deaths in the government hospitals nationwide were only 30 percent of total deaths, deaths in government hospitals in several provinces were much lower. For instance in Chiang Rai, hospital deaths as a percent of all deaths in the province was 3.7 percent in 1992, 20.7 percent in 1993, 12.1 percent in 1994, 8.6 percent in 1995 and 24.1 percent in 1996 (Public Health Statistics, 1996: Table 2.2.1.3). Over the period 1984 to 1996 the deaths in government hospitals were highest in the Central Region. Low proportions of deaths in hospitals means that a large number of death certificates had been issued by the local registrars, such as village heads or health center personnel who lack adequate knowledge to provide an accurate cause of death. According to death statistics obtained from the Ministry of Public Health using the International Classification of Disease 10 (ICD-10), only 782 AIDS deaths were reported throughout the country in 1996. However, AIDS deaths recorded in Forms 506/1, 507/1 were 4,905 cases for men and 1,238 cases for women that year (see Tables 20, 21; Public Health Statistics, 1996: Table 2.3.2).

2. STUDY OBJECTIVES

This study explores the trends and levels of mortality with the aim to monitor the spread of HIV/AIDS epidemic and its impact at different geographical levels. The mortality trends and levels at the national, regional, and provincial levels at the period before and after the onset of AIDS deaths had sharply increased in Thailand are explored. It suggests the provinces with a rising trend of death rate in recent years. Correlation between mortality levels and AIDS statistics at the provincial level over the period 1984 to 1997 are conducted. Excess deaths at the national, regional, and provincial level over the period 1992-1996 are estimated. The following specific questions are investigated:

1. Is it true that only some provinces in the Upper-North region have had a high prevalence of AIDS deaths in the past years?
2. Is it true that the AIDS situation in other provinces is not at the same high levels as the situation in the Upper-North region?
3. What provinces have had the most rapid increase of deaths in recent years?
4. Is it likely that provinces with similar characteristics may similarly have high numbers of AIDS deaths?
5. What provinces need to be given more attention in terms of AIDS care and prevention?

3. DATA SOURCES

3.1 Death registration statistics

Deaths registered in every province covering the period of 1984 to 1997 recorded by the Ministry of Public Health are used to monitor the mortality trends and levels in this study. According to Thai law all deaths need to be reported to the authorities within 24 hours after detecting the death. Up to 1995, the third copy of death certificates were submitted to the District Health Offices, the Provincial Health Offices, and then to the Health Statistics Division, Ministry of Public Health. After 1996 the death statistics were obtained from the database of the Ministry of Interior (see Appendix C for the flows of registered death data management). The registered death data kept at the Ministry of Public Health were recorded manually before 1991 and were recorded by computer afterwards. The data were transferred with double checks to ensure that they were the same as the original files. The adjustments for under-registration of deaths were taken for the estimation of excess deaths.

3.2 Population statistics

Three Population Projections containing the age-sex distribution of the population at the provincial level over the study period were reviewed: 1995 Population Projections, 1991 Population Projection, and 1986 Population Projections. The 1991 Population Projections are based on the 1980 census and the projections are available for the period 1980-2015. However, the 1991 population estimated for the whole country is 56.08 millions which is higher than the population enumerated in the 1990 census (55.8 millions). The 1995 Population Projections were based on the 1990 census enumeration but the estimation of population before 1990 are not available; thus, the adjustments described below were made to obtain the population for the study period:

- The age-sex distribution of the populations for each year of 1990-1997 was obtained directly from the 1995 Population Projections, which was based on the 1990 census. The 1995 Projections had already included AIDS death assumptions taken from the 1994 NESDB Projections of AIDS/HIV.
- The 1984-1989 population was standardized based on the 1990 Population Census taking the population growth rate from the 1986 Population Projections with no AIDS death assumptions.

3.3 AIDS statistics

The HIV/AIDS statistics at the provincial level are taken from the Ministry of Public Health's records on reported HIV/AIDS cases (recorded in Forms 506/1 and 507/1), the HIV prevalence among pregnant women, and the HIV prevalence among the military conscripts over the study period.

4. METHODS

4.1 Trends and levels of mortality

Annual age-sex specific death rates per 1000 population for the period 1984 to 1997 were calculated at the national, regional, and provincial levels. The onset of AIDS deaths was set in 1992 as only 1.2% of all AIDS deaths (335 deaths) occurred before this year but then tripled in the following year. The mortality trend before the onset of AIDS death onset represents the period 1984-1991 and after the onset of AIDS death represents the period 1992-1997. The death rates from the period 1984-1991 are used as baseline to indicate the annual increased death rates from 1992 to 1997.

4.2 Correlation between registered death statistics and AIDS statistics

Pearson's and Spearman's Rank Correlation between registered death statistics and selected AIDS statistics in 73 provinces over the study period were calculated.

4.3 Excess deaths after the AIDS death onsets

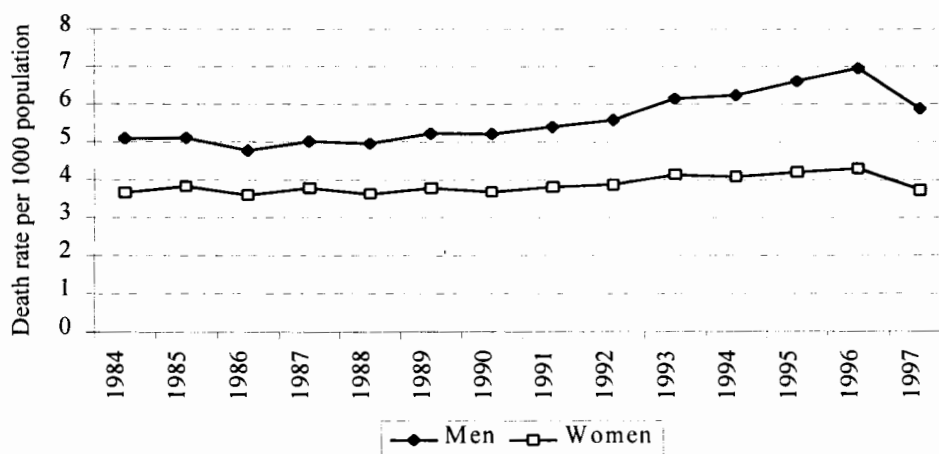
The excess deaths over the period 1992 to 1996 were obtained by extrapolating the 1984-1991 trends in deaths to each year of the 1992-1996 period. The difference between the expected deaths (trends in deaths) and the reported deaths are treated as excess deaths attributable to AIDS. Adjustments for unknown age, under-registration of deaths, and leading causes of death were considered to estimate the excess deaths (see details in Section 5).

5. FINDINGS

5.1 National trends and levels of mortality

The male death rate gradually increased beginning in 1992 as shown in Figure 2 which was the time when a large number of people were found to be HIV and some of them had died with AIDS. The death rate of men in all age groups in 1984 was 5.09 per 1000 population, had declined in the following years, went up to 5.22 per 1000 in 1989, and had increased to over 6 per 1000 in 1993. For women, the death rate increased little - 3.66 per 1000 population in 1984, rose to 3.88 per 1000 in 1992, and had been over 4 per 1000 from 1993 onwards.

Figure 2 Death rates of men and women over the period 1984-1997



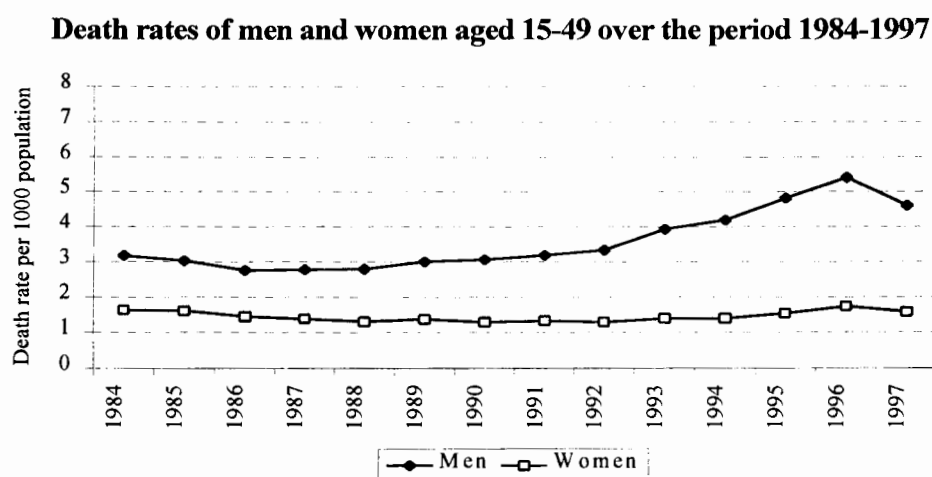
Source: Appendix B - Figure 1

The rising death rates are more distinctive when comparing between the mortality trends and levels of men and women in their reproductive ages. The death rate of adult men aged 15-49 years old in 1984 was 3.17 per 1000, gradually declined in the following years, picked up in 1991, and increased to over 6 per 1000 after 1993. However, the female death rate in the same age group did not increase until 1996 and the increase was small as shown in Figure 3.

According to the HIV/AIDS statistics recorded by the Ministry of Public Health, a large proportion of PHAs are in the age group 25-29 years and it was found that the registered death rates had increased highest among men and women in this age group. In 1984 the male death rate in this age group was 2.19 per 1000, decreased in the following year, picked up in 1992, and had started to increase sharply to over 3 per 1000 after 1993 and to over 4 in 1996. The female death rate in the same age group was quite stable over time but had slightly increased in the past three years as shown in Figure 4.

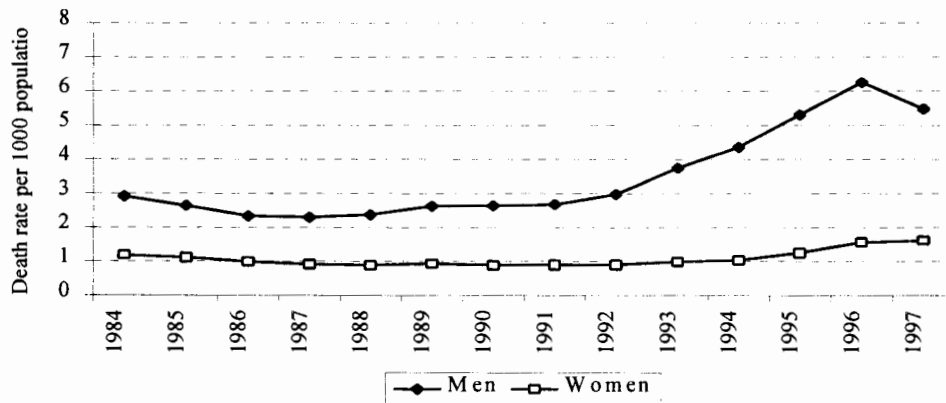
Sudden drops of male and female death rates were observed in 1997 as shown throughout Figures 2-4. The declining death rates does not indicate that the death rates declined in 1997; rather the declines result from the data management system of vital registration that had been transferred from the Ministry of Public Health to the Ministry of Interior in 1996. One of the defects causing by this transfer was that the report of deaths with unknown age significantly increased as shown in Figure 5. When including the number of deaths with unknown age to total deaths, the death rates for 1996 and 1997 had increased. The overall death rates, including deaths with unknown age, are greater than the reported figures in Table 1 by 2.8 times for men and 2.1 times for women in 1996, and 6.2 times for men and 2.9 times for women in 1997.

Figure 3



Source: Appendix B -Figure 1

Figure 4
Death rates of men and women aged 25-29 over the period 1984-1997



Source: Appendix B - Figure 1

The numbers of deaths with unknown age in 1996 and 1997 were high because, after the transfer of data management system, the age of the dead persons whose birth year was recorded in Thai lunar years (such as the years of rabbit, tiger, cow etc.) were not converted to their actual age and they were being recognized as those with unknown age at death. Another defect caused by the transfer of data management was that a large number of infant deaths were missing from 1996. The age of the dead persons is written in the death certificate as the full year of age. However, the age of children who died at age younger than one year old are often written in the death certificate as dying at age 0; thus, the number of infant deaths was missing from the Ministry of Interior's records. These errors have been recognized and are being corrected.²

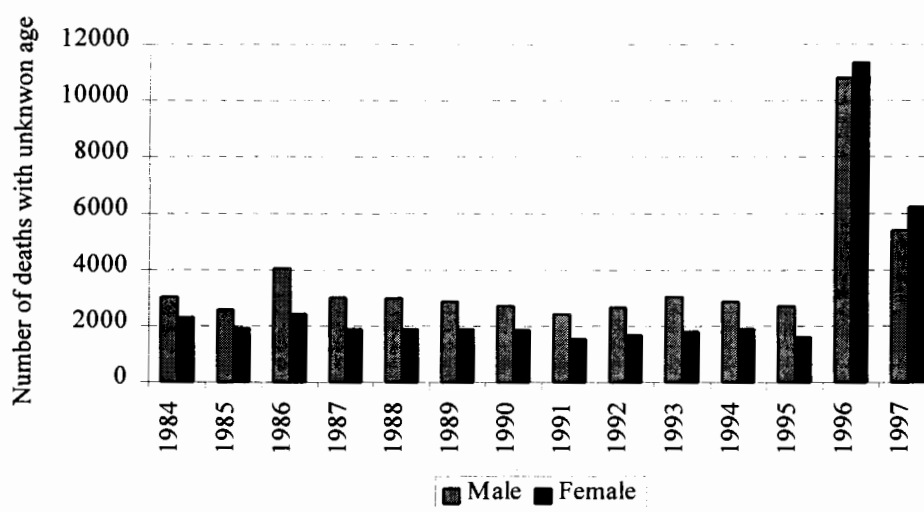
The reported figures of death rates in this study were not corrected for unknown age for two main reasons. Firstly, it is not known if the report of unknown age of the dead was evenly distributed throughout all age groups. While it is generally known that the missing age of the dead tend to be of those who are very young or very old, it is not known if the deaths of PWA are likely to be under-registered or not. Assumptions need to be made to include the unknown age for the calculation of age-sex specific death rates. However, there is no information at this stage to suggest who tends to be under-registered in the era that AIDS deaths have been increasing. Secondly, the actual trends and levels of registered deaths would help suggesting any mistakes caused by data management on death registration. Some recommendations will be given to suggest how data management on death

²

Information was given by Mr. Prasert Sripanaratankul, Head of the Center for Vital Registration Data Processing, Ministry of Interior on February 11, 1999 when the draft report of this work was presented at the S.D. Avenue, Bangkok.

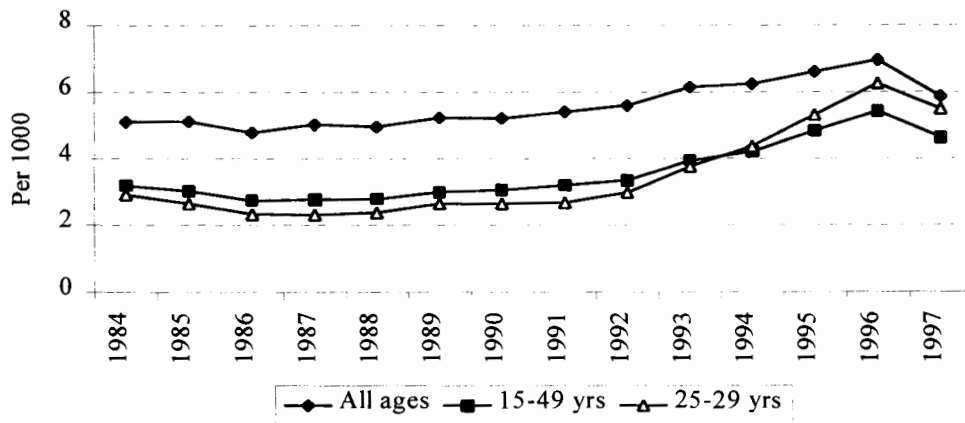
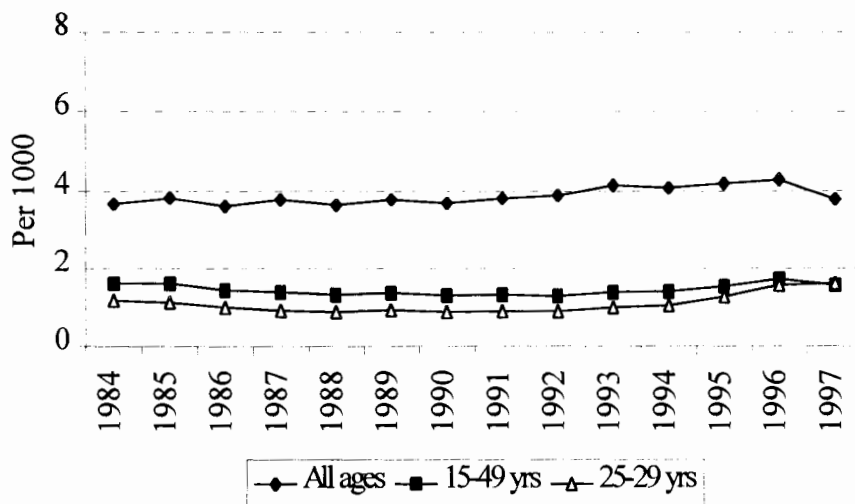
registration should be developed to monitor the AIDS epidemic in Thailand. Nevertheless, the correction for unknown age and for incomplete death registration was taken into consideration when estimating the excess deaths possibly attributable to AIDS.

Figure 5 Number of deaths registered with unknown age of men and women over the period 1984-1997



5.1.1 Male and female death rates

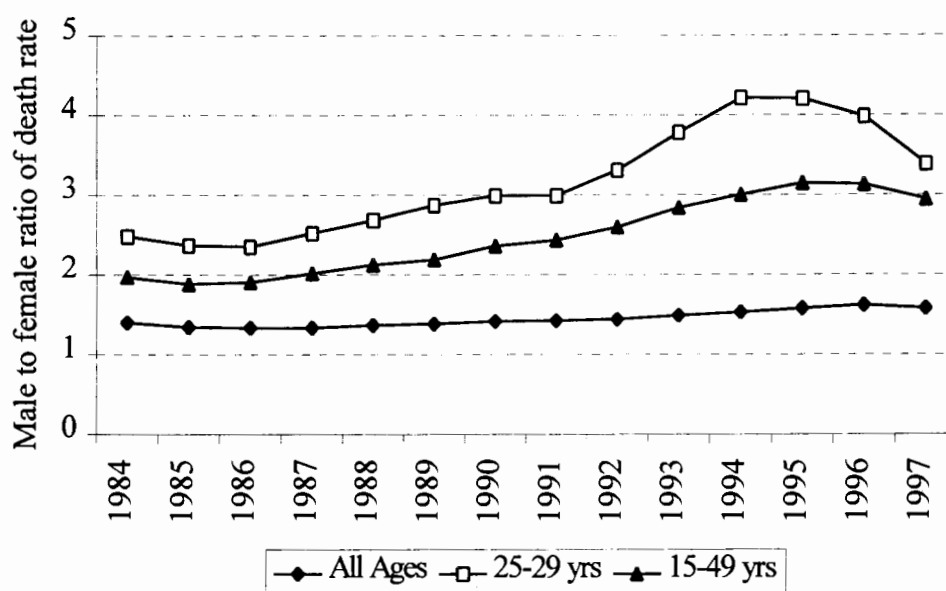
When comparing between sexes, it was clear that the rising death rate is evident among men, particularly among those in their reproductive ages, while the death rate of women has changed very little (see Figure 6 and 7). The trend of rising deaths among men is in accord to what was known about the rising deaths with AIDS in recent years. The cumulative number of AIDS deaths from 1984 to 1997 was 38,372 in which 82 percent of the deaths occurred for men. While there were 15 men reported as dying with AIDS by 1988, only three women were reported as dying with AIDS for the same period. The number of AIDS deaths in men had been always much greater than in women. The male to female ratios of AIDS deaths was 7.7, 4.4, 6.2, 7.2, 5.7, 5.7, 4.5, 3.8, and 4.7 for each year from 1989 to 1997. See the statistics of AIDS deaths of men and women in Tables 20 and 21.

Figure 6**Death rates of men for the whole country by age group, 1984-1997****Figure 7****Death rates of women for the whole country by age groups, 1984-1997****5.1.2 Male to female ratio of death rates**

The overall death rates of men were higher than those of women in all age groups and the difference between male and female death rates increased over time. In all age groups, as given in Figure 8, the male death rate was 39 percent higher than the female death rate in 1984, came down slightly in the following years, rose to 41-48 percent for 1990-1993, and had increased to over 50 percent after 1994. Among those in age group 15-49, the male death

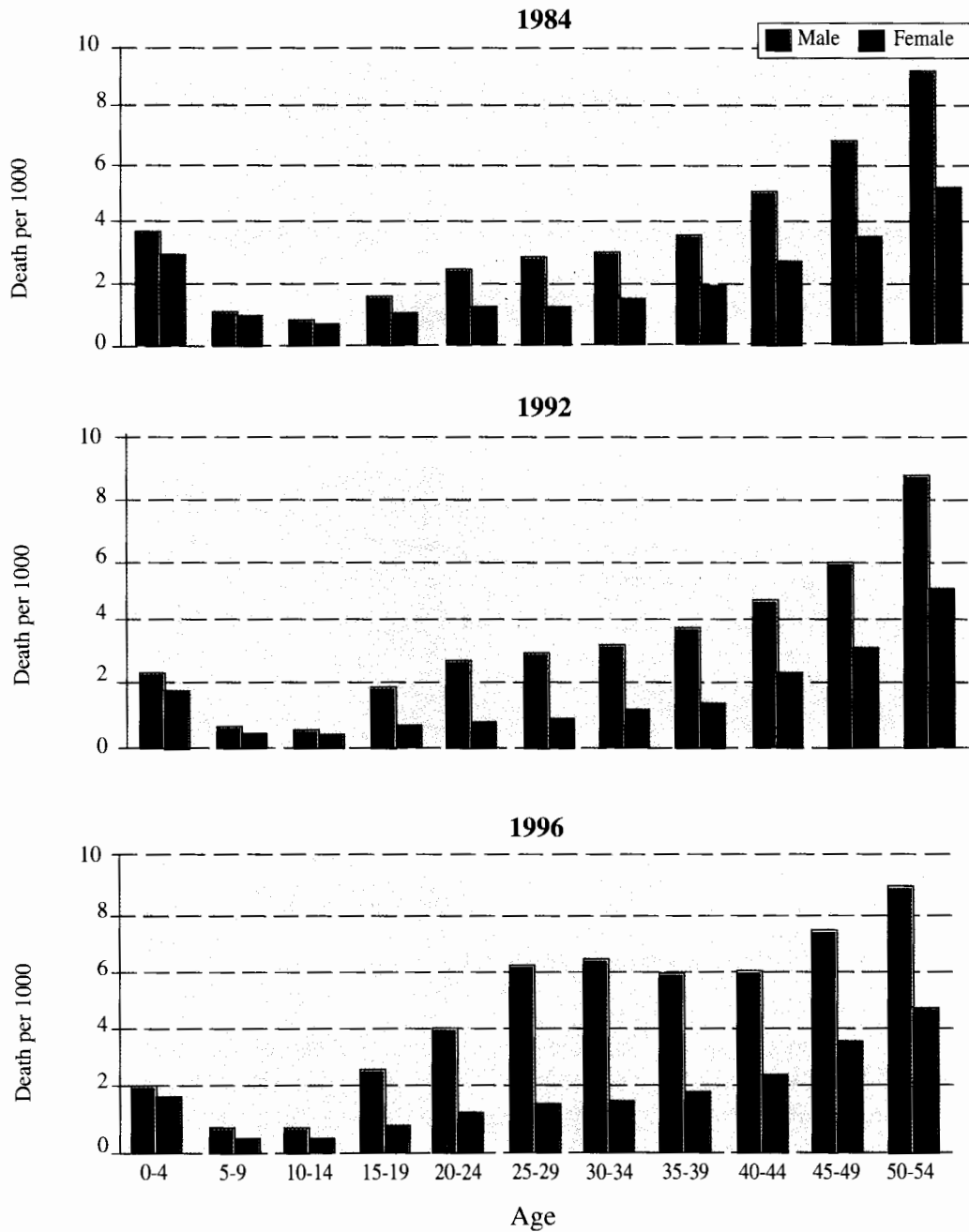
rate was 96 percent greater than female death rate in 1984, decreased to 87 percent in 1985, was more than double from 1988-1993, and was more than three times higher after 1994. The male to female death rates increased most among those in age group 25-29: from 1984-1991, when the male death rates were more than twice that of the female death rates, and were three times higher in 1992 and 1993, and over four times higher from 1994 onwards.

Figure 8 Male to female ratio of death rates over the period 1984-1997



5.1.3 Age-sex specific death rates

When classified into five-year age groups, the death rates of children under five significantly declined for both sexes over the study period. The female death rates were fairly stable over time with a very small increase among those in age groups 20-24, 25-29, and 30-34 only. However, the increased death rates were substantial among adult men in age group 15 to 49 as shown in Figure 9, where the death rate of men in this group gradually increased from 1992 onwards. Increased death rates relative to the 1984-1991 death rate baseline were evident (Table 3). The highest relative increased death rate was among men in age groups 25-29 years where the relative increase to the baseline was 16 percent in 1992 and rose to 140 percent four years later. Among women, the highest relative increase death rate was about 61 percent among women in age group 25-29 in 1996.

Figure 9 Age-sex specific death rates for the whole country, 1984-1997

5.2 Regional trends and levels of deaths

5.2.1 Central region

The total death rates for men in the Central Region declined after 1984, picked up in 1988, and had gradually increased afterwards. The increase in

death rates relative to the 1984-1992 baseline ranged from 10 percent to 31 percent from 1992 to 1997. The highest increased death rate was for men at 80 percent in 1995 among those in age group 25-29. The death rates among children under 10 declined for both sexes and the death rates of women in most age groups changed little. The highest increased death rate for women was for age group 25-29 where the relative increase to baseline was 35 percent in 1997 (Figures 10,11 and Tables 4, 5).

5.2.2 Northeast region

The trends of death rates over the study period were fairly stable except among adult men in age groups 15-19, 20-24, 25-29, and 30-34 in which the death rates increased moderately after 1994. Young men aged 25-29 had the highest increased death rates; the increase was 23 percent in 1993 and had gone up to 195 percent in 1996. Northeast men in age groups 20-24 and 30-34 had substantial increased death rates in the recent years. However, the death rates among women had increased little. The relative increased death rate was highest at 46 percent among women in age group 25-29 years old in 1996.

5.2.3 North region

The North Region had the highest increase in death rates among young adult men and women over the past few years. The onsets of the increase in men were one to two years earlier than those in women. Men aged 25-29 years old had the highest increased death rates -- up to 3.4 times greater than the death rate baseline. The 1984-1991 death rate baseline for men aged 25-29 was 2.9 per 1000 population and the death rate rapidly went up to 10.9 per 1000 in 1996. The increase in death rates were also highest among women aged 25-29 years old where the relative increase was 2.3 times greater than the baseline death rate. The death rate of young women in this age group was 1.5 per 1000 at the baseline period and went up to 3.4 per 1000 in 1996.

5.2.4 South region

The overall death rates of men and women in this region declined over time. A small increase in death rates was detected only among men aged 15-39. While the increased death rate relative to the baseline in other regions was highest among men in age group 25-39, the increased death rate in the South Region was highest among teenage men or those in age group 15-19 years old. The increased death rate in 1996 was 88 percent higher than the baseline for young men in this age group.

5.2.5 Comparison by region

When looking at the death rates of men and women, it is clear that the death rate was highest among men from the North region. The increase

occurred slowly in early 1990s and went up rapidly from 1994 onwards. In 1996 the death rate in the North was almost double the death rate in the Northeast which ranked second in terms of increase. The Central region had the second highest death rate relative to the North but the increased death rate was not as pronounced in recent years compared to that in other regions. The trend of death rates for the Northeast and South regions is rising. Among women, the rising death rate was observed in the North region but the increase was small.

Figure 10 Male death rates by region and age group for 1984-1997

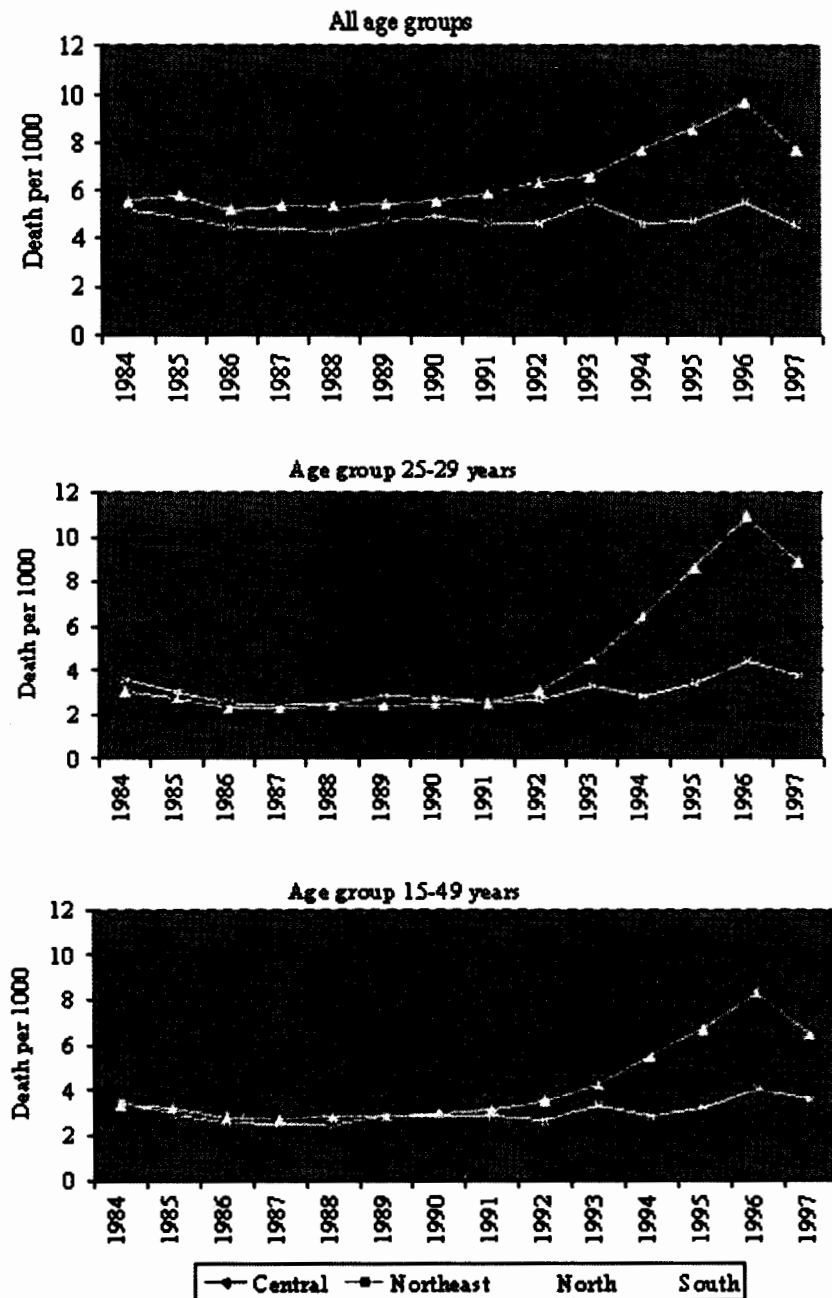
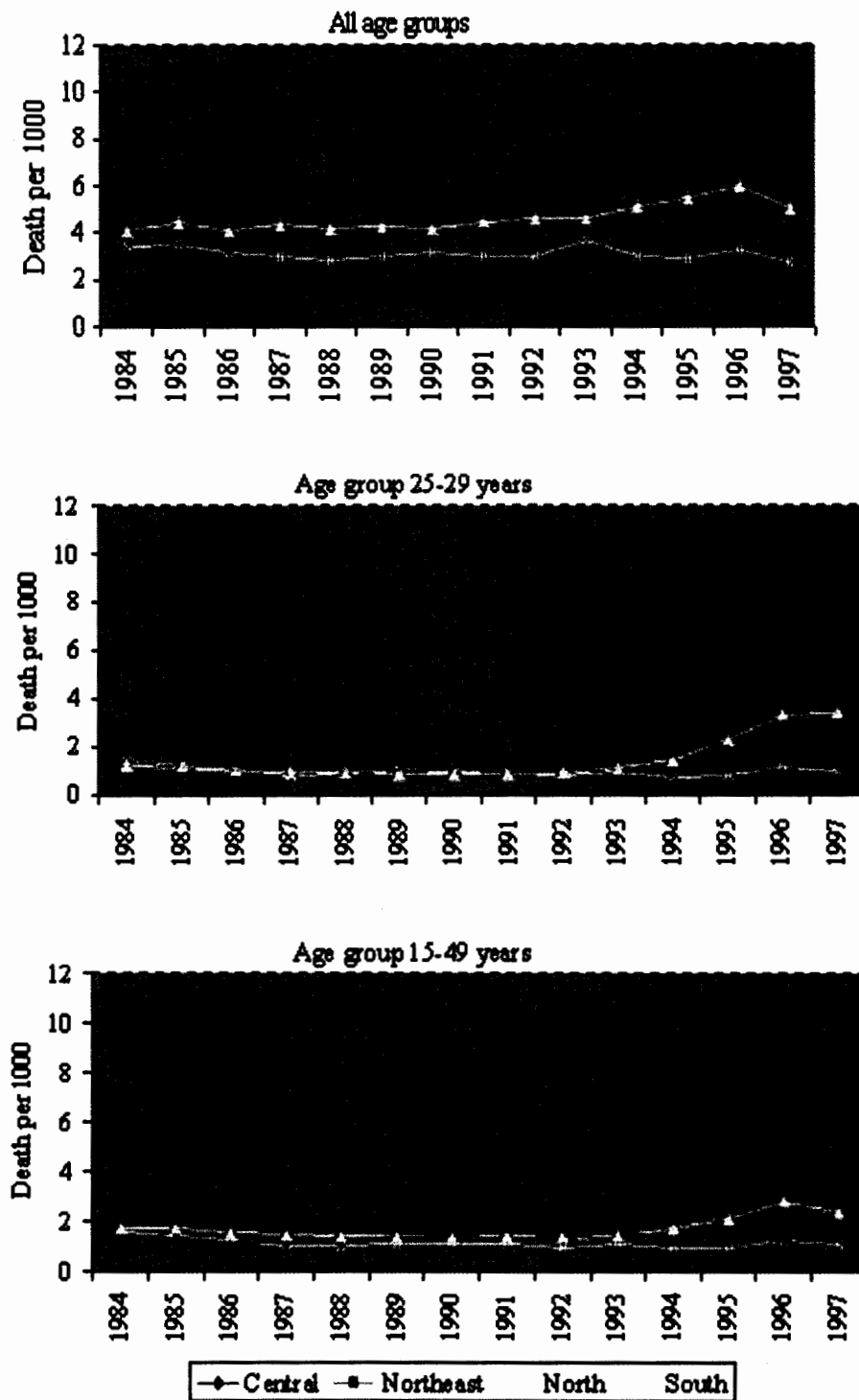


Figure 11
Female death rates by region and age group for 1984-1997



5.3 Provincial trends and levels of deaths

All provinces are grouped according to selected common characteristics to describe trends and levels of deaths at the provincial level. The following description is limited to the death rates of adult men and women aged 15-49. The male and female death rates in all five-year age groups are given in Table 6 to 13 and the relative increases of death rates in Table 14 to 17. Table 29 & 30 in Appendix B show the percents of differences in male death rates for 1992-1996 relative to the baseline period (1984-1991). Figures 1 to 24 in Appendix A show the age-sex specific death rates of men and women aged 15-49 over the study period by province. Provinces in these Figures are grouped according to the Public Health Offices they belong to: the Central Region - Public Health Offices 1 to 4, the Northeast Region - Public Health Offices 5 to 7, the Northeast Region - Public Health Offices 8 to 10, and the South Region - Public Health Offices 11 and 12.

5.3.1 Provinces with high adult death rates (aged 15-49)

Figures 12 to 15 show the levels of death rates of men and women in each province for 1984, 1992 and 1997. Year 1984 was the year that the first AIDS cases were reported in Thailand; 1992 was the onset of high number of reported AIDS deaths in Thailand; and 1996 was the year in which the most recent reliable death statistics are available.³

It is obvious that the death rates among men in the Upper-North provinces including Chiang Rai, Chiang Mai, Lampang and Lamphun substantially increased in the last few years. The 1996 death rates of men aged 15-49 in these four provinces were greater than 8 per 1000 with the highest death rate in Phayao at 14.3 per 1000 in 1996 (Table 8). Saraburi was the province with a very high male death rate in 1992 at 8.4 per 1000; however, the trend of death rates in this province had been unusually high even before the onset of AIDS deaths. The record of death statistics in Saraburi may be defective and need clarification (see Figure 2 in Appendix A).

The highest death rate in 1996 among women aged 15-49 were in Chiang Rai and Phayao in which the death rates were at 5.6 per 1000 and the third highest rate was in Chiang Mai at the rate of 3.8 per 1000 (Table 12, 29, 30).

5.3.2 Provinces with high death rates among young adults (aged 25-29)

Increases in death rates were highest among men and women aged 25-29 years old. Twelve provinces with the death rates of men in this age group higher than 8 per 1000 in 1996 include Chiang Rai (22.4 per 1000), Phayao (22.0 per 1000), Chiang Mai (14.0 per 1000), Lamphun (13.7 per 1000),

³ The use of registered deaths in 1997 is limited as it was shown previously that the shifting of death data management has caused a significant drop of death rates in 1997.

Lampang (12.1 per 1000), Phetchaburi (11.5 per 1000), Phrae (9.7 per 1000), Rayong (8.8 per 1000), Chanthaburi (8.7 per 1000), Prachuap Khiri Khan (8.3 per 1000), Roi Et (8.2 per 1000), and Nan (8.05 per 1000). Substantially higher female death rates in 1996 were detected in only a few provinces including Phayao (8.6 per 1000), Chiang Rai (8.2 per 1000), Chiang Mai (4.5 per 1000), and Mae Hong Son (3.7 per 1000) - see Figure 6, 7, 13

However, when looking at the increases in death rates in 1996 relative to the baseline as given in Table 15, the increases in death rates in Prachuap Khiri Khan, Rayong and Chanthaburi are not very high suggesting that these provinces already had high death rates at the baseline period. Chiang Rai had the highest relative increased death rate in 1996 at 8.6 times higher than the baseline (Table 15). The highest increases in death rate relative to the baseline were in Chiang Rai and Phayao in which the death rate had increased four times among young men aged 25-29 and about three times among women in the same age group followed by the increases in Chiang Mai, Lumphun, and Lumpang (Tables 29&30).

Roi Et was among the top ten provinces with high young adult male death rates, but the AIDS statistics in this province are not high (ranked 57th for reported AIDS death rates, 33rd for HIV Surveillance among pregnant women attending ANC clinics, and 44th among the military conscripts – see Tables 20 to 24 for detail). The discrepancy between provinces with high death rates but having low or medium HIV/AIDS statistics like Roi Et probably suggests that a number of PHAs may be identified with HIV in one province but move to another province and die there with AIDS. In other words, the province that the persons were reported to be with HIV/AIDS and the province that they died and had their deaths registered may be different. Two recent studies suggest that many young people with HIV/AIDS return home for familial care and support after they develop symptoms. Even if they were married, some PHAs were abandoned by their spouse so they would return home for care and support by their family members, particularly by their parents (Im-em and Phoungsaichai, 1999; Knodel et al., ongoing).

If the discrepancies in reports by province as mentioned above do occur, a province like Bangkok, which is a well-known destination for many young people throughout the country, would have moderate or high prevalence of HIV/AIDS with low number of registered deaths. It was found that while the AIDS statistics in Bangkok was at the moderate level (ranked 26th for reported AIDS death rate, 40th for pregnant women, and 29th for military conscripts- see Tables 22, 23, 24) the adult death rate was low (ranked 33th for adult male death rate, and ranked 60th for adult female death rate – see Table 25&26). If the deaths of PHAs were not largely under-registered, then the provinces with high registered deaths probably have high AIDS deaths as well. More discussion on this matter will be provided in the next section to explain the correlation between AIDS statistics and the death registration statistics.

Figure 12 Death rates of men aged 15-49 years old by province

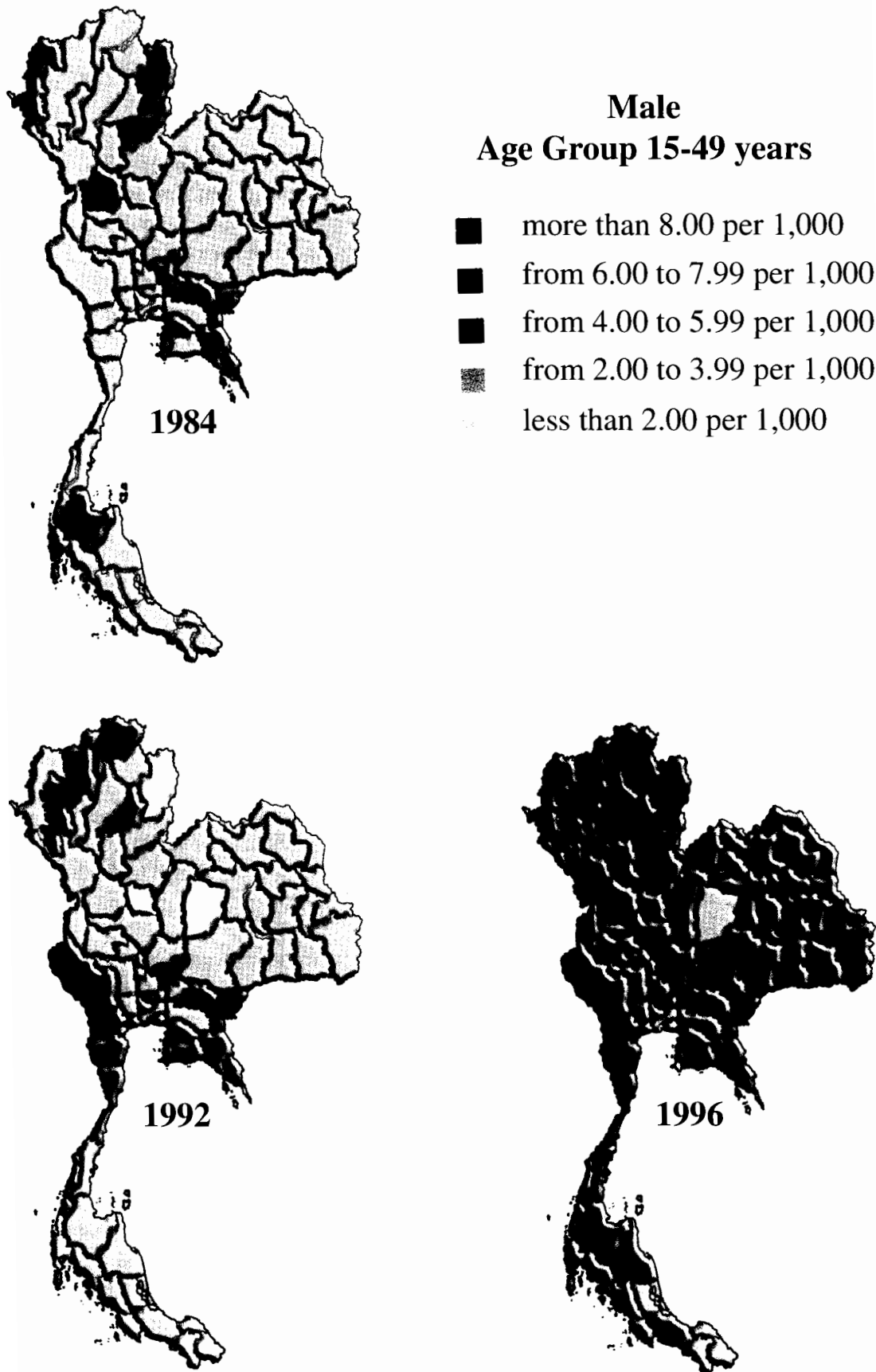


Figure 13 Death rates of women aged 15-49 years old by province

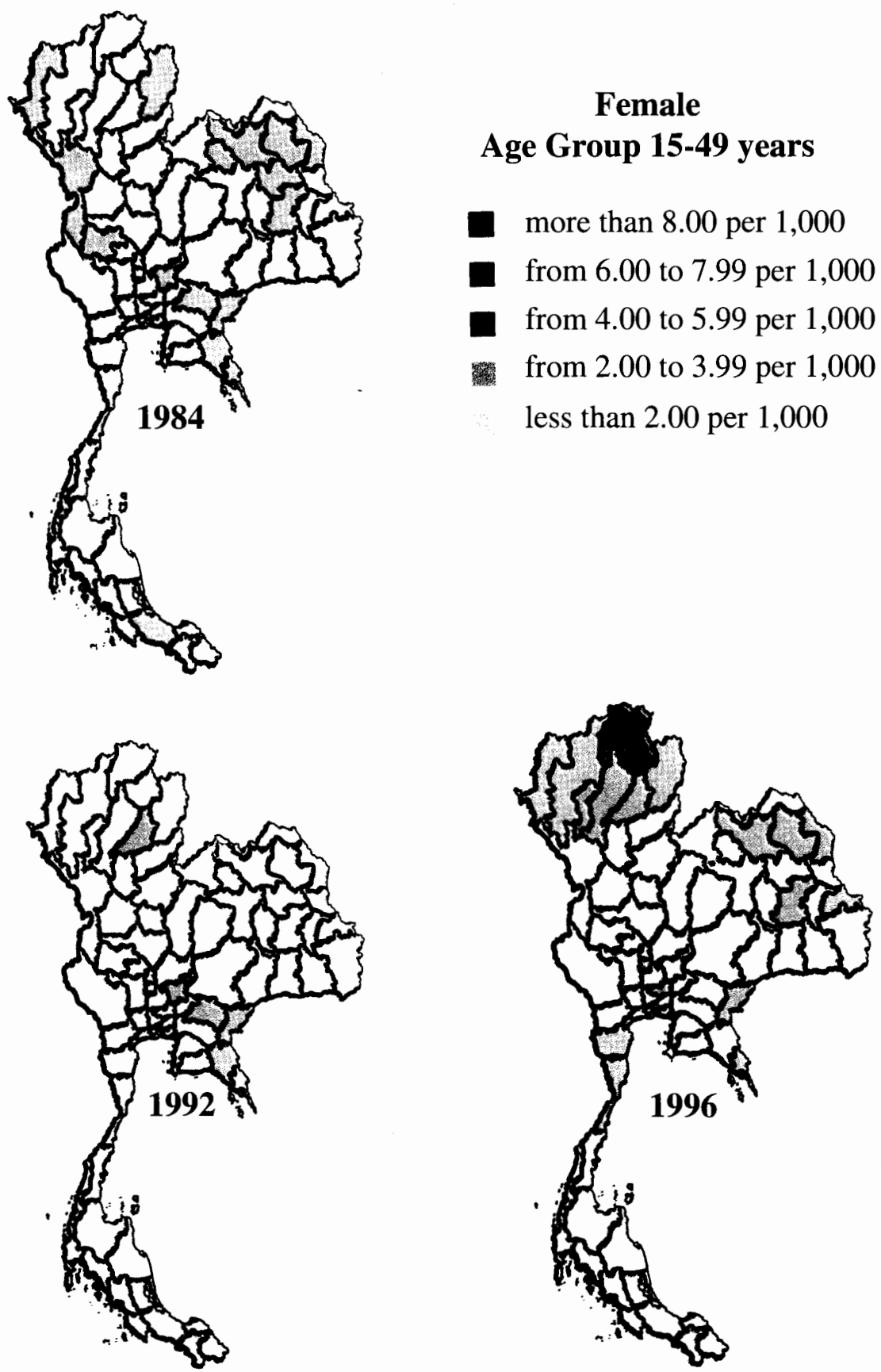


Figure 14 Death rates of men aged 25-29 years old by province

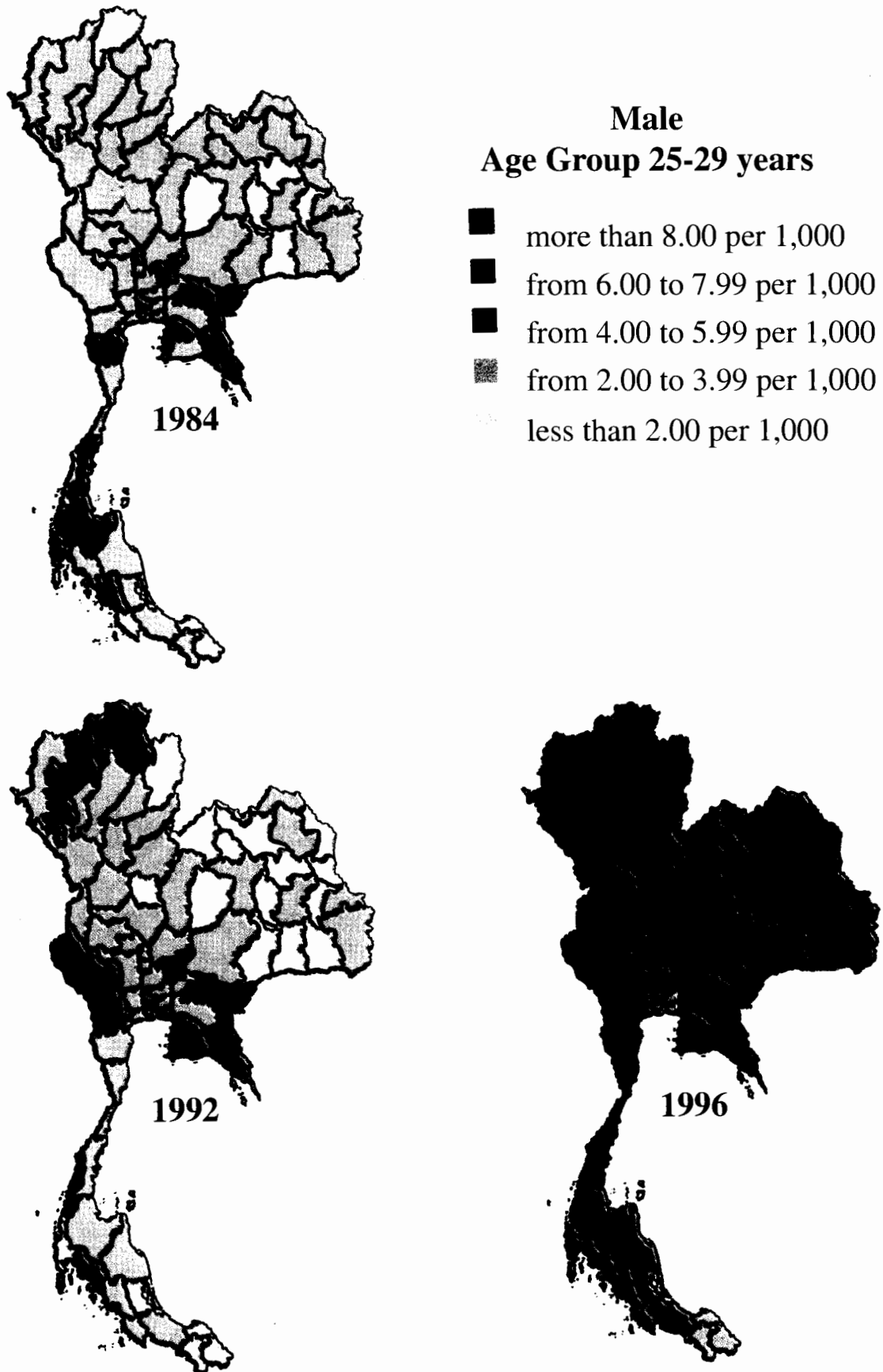
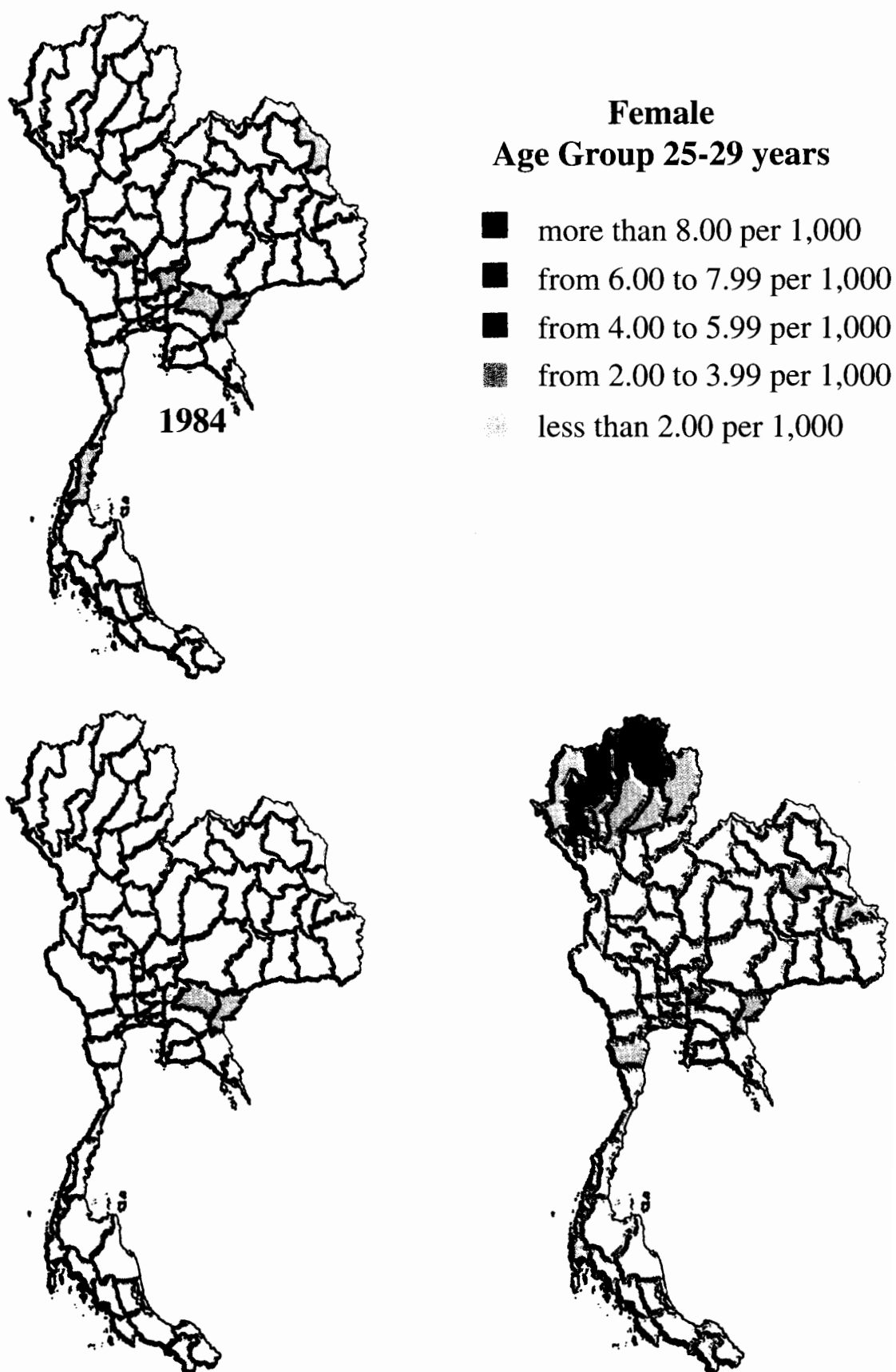


Figure 15 Death rates of women aged 25-29 years old by province



5.3.3 Provinces with medium adult death rate

Provinces with moderate death rates in 1996 include the remaining provinces except those from Public Health Office 12 (the Lower South) and Public Health Office 5 (the Lower Northeast) in which the death rates were low relative to the rest of the country.

5.3.4 Provinces with low adult death rate

Only five provinces had a death rate for men aged 25-29 years between 2 to 4 per 1000 in 1996 including Narathiwat (2.2 per 1000), Bangkok (2.3 per 1000), Yala (2.6 per 1000), Samut Prakan (3.3 per 1000), and Pattani (3.2 per 1000).

5.3.5 Provinces with high child deaths

The level of child deaths declined over the period 1984-1997 in most provinces except Phayao and Chiang Rai where the increases in death rate of children under five were evident (See Tables 14, 28-30). The deaths of children under five had increased over the period 1992-1996 in relative to the baseline period (1984-1991) in 13 provinces. These include Phayao, Chiang Rai, Samut Songkram, Phetchaburi, Phitsanulok, Krabi, Chonburi, Samut Prakan, Kanchanaburi, Saraburi, Ang Thong, and Ranong.

5.3.6 Provinces with defective death statistics

The trend of death rates over the study period exhibits several unusual patterns as shown in Appendix A. Provinces with sudden sharp increases in death rates, which all took place in 1993, include Nakhonphathom, Krabi, Phuket, Chonburi, Prachinburi, Nakornpanom, and Samut Sakorn. Saraburi was another province with a high death rate over time. Nongbua Lamphu, Srakaew, and Amnat Charoen were new provinces established in 1993 so the death registration statistics of these provinces were not available before 1993.

5.3.7 Provinces with high probability of death

The provincial death rates of adult men and women aged 15 to 49 were converted into the probability of death by age 49 as given in Tables 18-19. It was found that the provinces with the highest probability of adult male deaths in 1996 include Chiang Rai and Phayao (39 percent), Chiang Mai (35 percent), Lamphun (30 percent), Lampang (26 percent), Petchaburi (24 percent), Phrae (23 percent), and Chanthaburi (22 percent). For women only three provinces had a probability of death greater than 10 percent including Chiang Rai (18 percent), Phayao (18 percent), and Chiang Mai (13 percent).

5.3.8 Death rates of provinces with selected characteristics

The list of selected provinces and their 1996 death rates for both sexes for male and female adults aged 15-49 years old are given below in order to highlight the correlation between the registered death statistics and the AIDS statistics. Many provinces with high in- and out-migration, high number of sex workers, high HIV/AIDS statistics have high death rates as well. The ranking of adult death rates were taken from Tables 25-28 in Appendix B.

Table I Death rates of men aged 15-49 over the period 1992-1996 in provinces with high reported cumulative AIDS death rates in 1997

Rank	Province	1997 Cumulative AIDS death rate per 1000	1992-1996 Registered death rate per 1000	Ranked by registered death rate
1	Lampang	669.1	6.032	11
2	Phayao	631.1	8.809	3
3	Chiang Rai	611.7	8.974	2
4	Lamphun	478.4	6.770	6
5	Chiang Mai	477.5	8.503	4
6	Mae Hong Son	429.2	3.973	40
7	Rayong	369.2	5.759	15
8	Ranong	355.4	4.960	24
9	Phuket	281.5	5.481	17
10	Nan	267.6	3.603	52

Table II Death rates of women aged 15-49 over the period 1992-1996 in provinces with high reported cumulative AIDS death rates in 1997

Rank	Province	1997 Cumulative AIDS death rate per 1000	1992-1996 Registered death rate per 1000	Ranked by registered death rate
1	Phayao	196.5	2.801	2
2	Chiang Rai	193.8	2.735	3
3	Lampang	130.3	1.644	9
4	Chiang Mai	120.1	1.895	6
5	Ranong	102.5	1.354	28
6	Mae Hong Son	99.1	1.509	14
7	Rayong	80.4	1.254	39
8	Lamphun	76.5	1.608	10
9	Phuket	55.7	1.239	40
10	Nan	55.3	1.258	37

Table III Death rates of women aged 15-49 over the period 1992-1996 in provinces with high HIV prevalence among pregnant women (1989-1997)

Rank	Province	Average percent HIV positive from 1989-1997	1992-1996 Registered death rate per 1000	Ranked by registered death rate
1	Phayao	5.45	2.801	2
2	Rayong	4.94	1.254	39
3	Chiang Rai	4.78	2.735	3
4	Chiang Mai	4.32	1.895	6
5	Lamphun	4.08	1.608	10
6	Phetchaburi	3.53	1.409	24
7	Lampang	3.34	1.644	9
8	Ranong	2.68	1.354	28
9	Phrae	2.57	1.769	7
10	Mae Hong Son	2.57	1.509	14

Table IV Death rates of adult men aged 15-49 over the period 1992-1996 in provinces with high HIV prevalence among military conscripts (1991-1996)

Rank	Province	Average percent HIV positive from 1991-1996	1992-1996 Registered death rate per 1000	Ranked by registered death rate
1	Chiang Rai	11.33	8.974	2
2	Phayao	10.97	8.809	2
3	Chiang Mai	9.61	8.503	4
4	Lamphun	8.93	6.770	6
5	Rayong	8.53	5.759	15
6	Lampang	6.54	6.032	11
7	Prachuap Khiri Khan	6.49	5.025	23
8	Chanthaburi	5.36	7.177	5
9	Phetchaburi	5.08	5.879	14
10	Suphanburi	5.07	4.350	32

Note: Listed only provinces with more than 20 persons were tested for HIV in most years.

Table V Adult male death rates in provinces at the period before and after the onset of AIDS Deaths

Before the onset of AIDS Deaths (1984-1991)			After the onset of AIDS Deaths (1992-1996)		
Rank	Province	Registered death rate per 1000	Rank	Province	Registered death rate per 1000
1	Trat	5.680	1	Saraburi	10.311
2	Chanthaburi	5.526	2	Chiang Rai	8.974
3	Saraburi	4.931	3	Phayao	8.809
4	Phuket	4.663	4	Chiang Mai	8.503
5	Prachinburi	4.362	5	Chanthaburi	7.177
6	Surat Thani	3.924	6	Lamphun	6.770
7	Tak	3.865	7	Chonburi	6.315
8	Rayong	3.840	8	Trat	6.270
9	Chonburi	3.836	9	Samut Sakhon	6.081
10	Samut Sakhon	3.598	10	Prachinburi	6.043

Table VI Adult female registered death rates in provinces at the period before and after the onset of AIDS Deaths

Before AIDS Deaths (1984-1991)			After AIDS Deaths Onset (1992-1997)		
Rank	Province	Death rate per 1000	Rank	Province	Death rate per 1000
1	Chanthaburi	2.400	1	Saraburi	2.809
2	Sakonnakhon	2.251	2	Phayao	2.801
3	Nakhonphanom	2.197	3	Chiang Rai	2.735
4	Trat	2.126	4	Chanthaburi	1.974
5	Prachinburi	2.038	5	Nakhonphanom	1.928
6	Mae Hong Son	1.984	6	Chiang Mai	1.895
7	Roi Et	1.955	7	Phrae	1.769
8	Kalasin	1.894	8	Trat	1.678
9	Udon Thani	1.892	9	Lampang	1.644
10	Tak	1.885	10	Lamphun	1.608

Table VII Adult male death rates in provinces with high rate of in-migration

Rank	Province	1997 Rate per 1000 of in-migration	1992-1996 Registered death rate per 1000	Ranked by Registered death rate
1.	Nonthaburi	89.1	6.025	12
2.	Chonburi	74.3	6.315	7
3.	Bangkok	78.3	3.926	43
4.	Songkhla	63.8	3.713	49
5.	Samut Prakarn	62.9	4.911	25
6.	Nakornratchasima	54.2	3.669	50
7.	Chiang Mai	50.2	8.503	4
8.	Buriram	50.1	3.210	60
9.	Khon Kaen	49.1	4.329	33
10.	Udonthani	44.5	3.364	55

Table VIII Adult male death rates in provinces with high rate of out-migration

Rank	Province	1997 Rate per 1000 of out-migration	1992-1996 Registered death rate per 1000	Ranked by Registered death rate
1.	Bangkok	83.7	3.926	43
2.	Chonburi	67.3	6.315	7
3.	Songkhla	61.9	3.713	49
4.	Nakhon Srithammarat	52.0	2.660	68
5.	Nakorn Ratchasima	49.4	3.669	50
6.	Khonkaen	45.0	4.329	33
7.	Burirum	43.2	3.210	60
8.	Udonthani	41.7	3.364	55
9.	Chiang Mai	40.4	8.503	4
10.	Ubonratchathani	31.7	4.279	34

Table IX Male death rates in provinces with high number of drug users tested for HIV in 1997

Rank	Province	Number of IDU tested for HIV*	Percent IDU with HIV	1992-1996 Registered death rate per 1000	Ranked by death rate
1	Bangkok	1906	33.1	3.926	43
2	Songkhla	203	33.9	3.713	49
3	Narathiwat	147	46.2	2.162	73
4	Samut Prakarn	112	33.0	4.911	25
5	Chachoengsao	101	35.6	3.062	65
6	Prachuab Khiri Khan	100	34.0	5.025	23
7	Suratthani	98	31.6	3.310	57
8	Chiang Mai	86	47.6	8.503	4
9	Samut Sakhon	80	42.5	6.081	9
10	Trang	78	67.9	3.724	48

* Taken from the number of IDU tested for HIV in the HIV Serosurveillance 15th round, June 1987

Table X Adult male death rates in provinces with high number of men attending STD clinic tested for HIV in 1997

Rank	Province	Number tested for HIV	Percent with HIV	1992-1996 Registered death rate per 1000	Ranked by death rate
1	Bangkok	427	6.8	5.831	43
2	Khon Kaen	200	4.0	5.972	41
3	Songkhla	198	8.1	5.462	53
4	Satun	159	8.2	4.824	66
5	Samut Prakran	121	8.3	6.216	36
6	Lampang	120	5.5	9.174	6
7	Chiang Mai	101	18.8	9.909	4
8	Nakhon Pathom	100	5.0	6.964	22
9	Rayong	100	10.0	6.473	31
10	Ayutthaya	100	11.0	6.814	28

Table XI Male death rates in provinces with high number of female direct sex workers tested for HIV in 1997

Rank	Province	Number surveyed	Number tested for HIV	Percent HIV positive	1992-96 Registered death per 1000	Rank by registered death rate
1	Songkhla	724	350	21.0	3.445	56
2	Bangkok	506	351	13.0	3.456	55
3	Yala	371	201	15.9	2.715	70
4	Narathiwat	328	na	na	3.098	68
5	Chonburi	260	155	10.3	4.859	17
6	Samut Sakhon	251	208	36.3	4.233	35
7	Chiang Mai	230	117	30.7	5.833	6
8	Trad	214	156	53.8	4.414	29
9	Chiang Rai	200	48	35.4	6.619	3
10	Ratchaburi	187	113	30.9	4.814	19

Table XII Death rates in provinces with high number of female indirect sex workers tested for HIV in 1997

Rank	Province	Number surveyed	Number tested for HIV	Percent HIV positive	1992-96 Death per 1000	Rank by registered death rate
1	Bangkok	36667	1204	4.9	3.456	55
2	Chonburi	8132	109	8.2	4.859	17
3	Songkhla	4345	361	20.8	3.445	56
4	Rayong	2638	113	11.5	3.236	63
5	Nonthaburi	2419	241	3.7	4.296	32
6	Phuket	2163	227	11.9	4.349	30
7	Chiang Mai	2133	207	27.2	5.833	6
8	Nakhon Srithammarat	1999	234	7.2	2.616	74
9	Nakhon Pathom	1414	913	9.6	4.432	28
10	Khon Kaen	1287	100	10.0	4.151	40

5.4 Correlation between registered death statistics and AIDS statistics

To explore if registered death statistics can be used to verify the AIDS situation, the Pearson's and the Spearman's Rank correlation between the registered death statistics and the selected AIDS statistics for men and women in 73 provinces were computed. Srakaew, Nongbua Lamphu, and Amnat Charoen were excluded as these newly established provinces lacked of data before 1994. Figure 17 shows the scatter plot suggesting a relationship between these two variables.

The registered death statistics and the AIDS statistics were strongly associated for men and women in 73 provinces from the year 1994 onwards. When excluding another eight provinces with defective statistics, as described previously in Session 5.3.5, the correlation between the two variables for the remaining 65 provinces increased and was strongly significant after 1991. The registered death rate for men aged 25-29 appears to be the strongest indicator to suggest AIDS deaths at the provincial level.

Although the correlation between the registered death rate and reported AIDS statistics had increased over time and was significantly correlated in the early 1990s, the correlation of these two variables declined in 1996. There are a few possible explanations for this decline. Firstly, as previously mentioned, the number of registered deaths with unknown age was high beginning in 1996 after the data management on death registration shifted to the Ministry of Interior, and declining death rates had been observed since then. Secondly, the reported number of AIDS deaths relative to the reported number of PHAs who are alive had declined in the last few years suggesting that a number of AIDS deaths are missing from the reports as shown in Figures 18, 19. In recent years an increasing number of PHAs have died outside hospitals thus their deaths would not be recorded in Forms 506/1 and 507/1. Thirdly, in recent years home based care for PHAs have been promoted throughout the country which probably make fewer PHAs go to the health institutions; thus they would not be counted as the reported cases of HIV/AIDS. Lastly, the annual number of AIDS deaths may be declining as a result of HIV/AIDS prevention and care programs, which have been promoted throughout the country for several years. However, an in-depth investigation is needed to confirm such suggestion.

Figure 17 Correlation between reported male AIDS death rates and registered death rates of men in 73 provinces in 1997

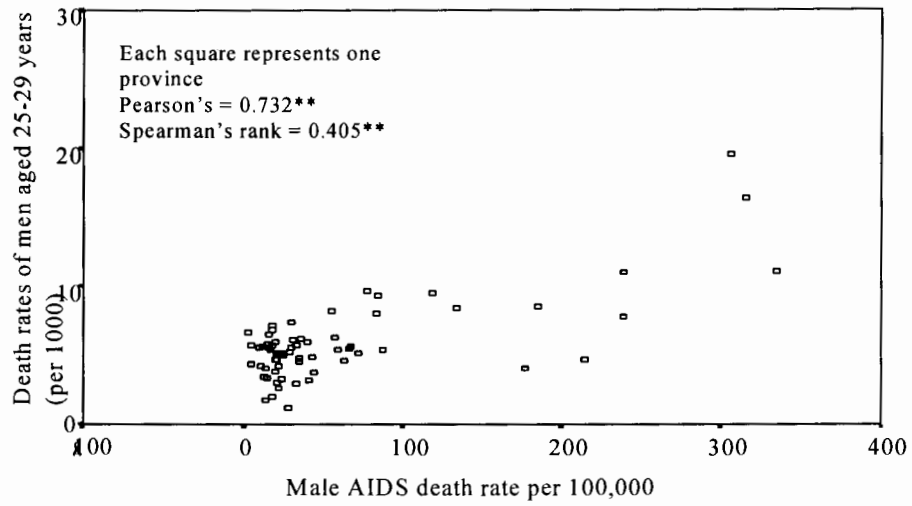


Figure 18 Annual number of people with AIDS and number of AIDS deaths from 1984 to October 1998

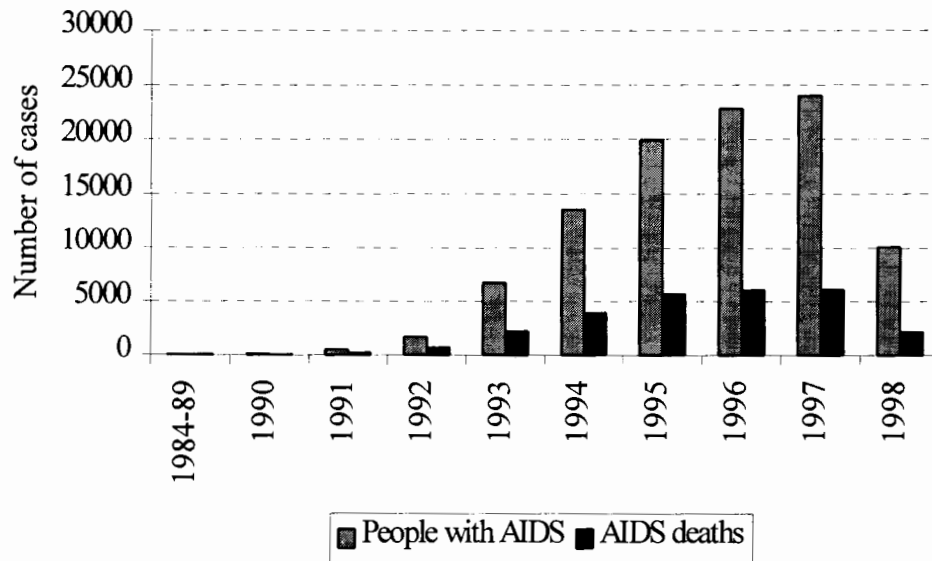
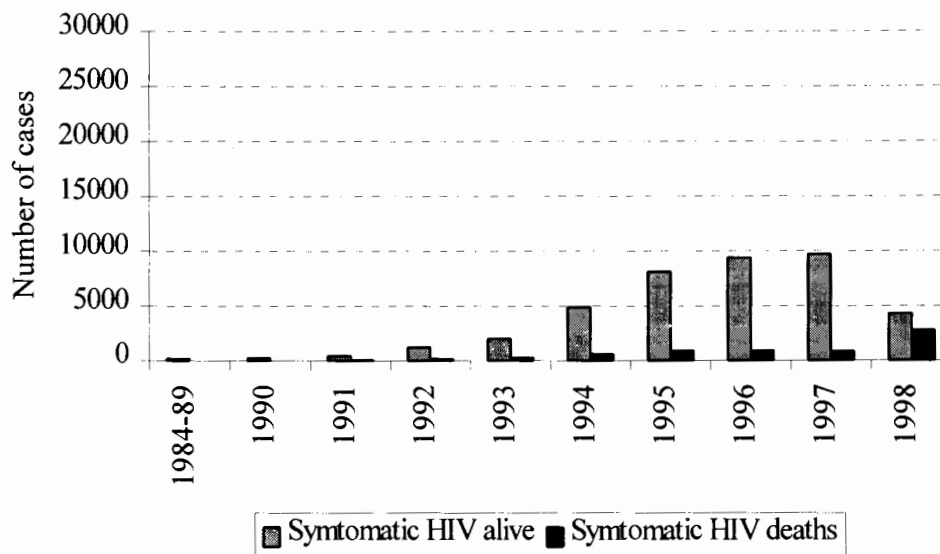


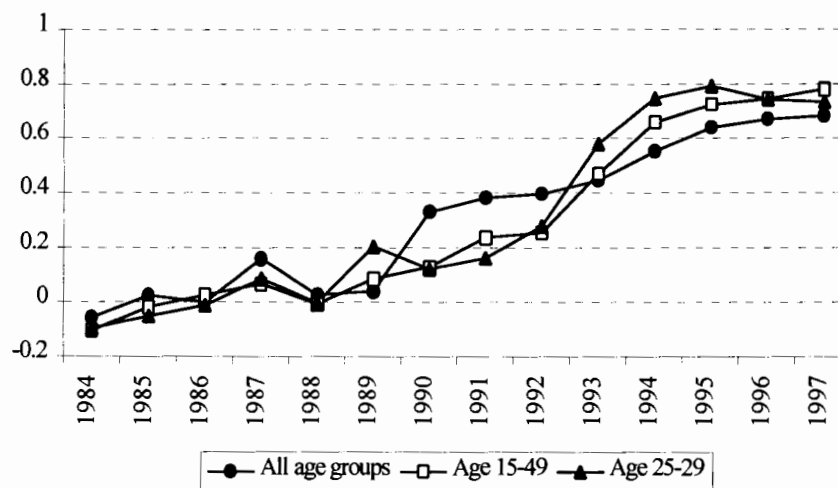
Figure 19 Annual number of people with symptomatic HIV from 1984 to October 1998



5.4.1 Correlation between registered death statistics and reported AIDS deaths by province of residence

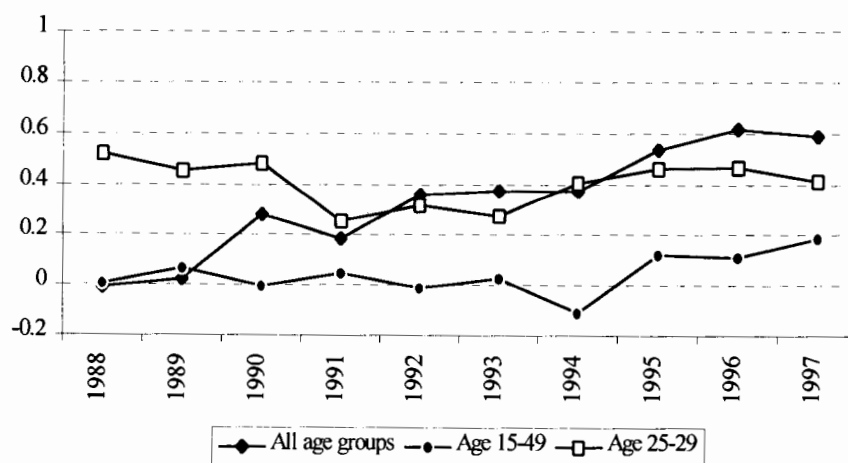
The correlation between reported AIDS death rates and registered death rates in 65 provinces are highly significant and have increased for both sexes after 1990. When comparing between sexes, it is evident that, for men, the correlation between registered death rates and reported AIDS death rates have risen to 60-80 percent from 1995 onwards as shown in Figure 20. However, for women, the correlation between these two variables did not increase significantly over time as shown in Figure 21. The highest correlation between these two variables was among men aged 25-29 in 1995 with a Pearson's correlation of 0.792. For women, these two variables were highly correlated in 1996 with a Pearson's correlation of 0.616. Nevertheless, it is expected that the correlation between these two variables for 1996 and 1997 would be higher than the presented figures after adjusting for deaths with unknown age.

Figure 20 Pearson's correlation between registered death rates and reported AIDS death rates of men: 1984-1997



Source: Appendix B-Table 32

Figure 21 Pearson's correlation between registered death rates and reported AIDS death rates of women: 1984-1997



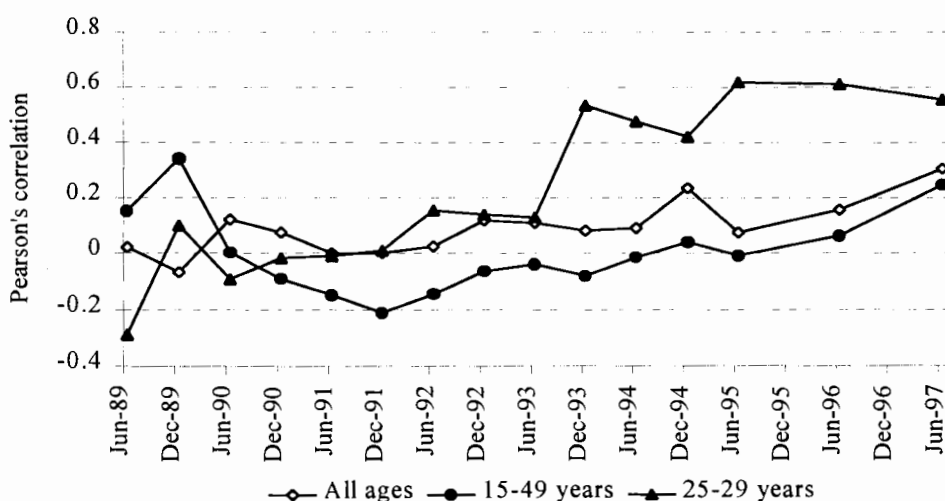
Source: Appendix B-Table 33

5.4.2 Correlation between registered death statistics and HIV Surveillance among pregnant women

The Pearson's correlation between registered death rates and percent of pregnant women with HIV over the period 1989 to 1996 was significant. The correlation between these two variables for women aged 25-29 years was significant at 0.128 in 1992 and rose to 0.611 in 1996 as shown in Figure 22. However, the Spearman's rank correlation of these variables were low relative to the Pearson's correlation and are significant among women aged 25-29 years in the past five years only. The high correlation between registered death rates and HIV prevalence among pregnant women at the provincial level probably suggests that a number of pregnant women were likely to be reported as having HIV/AIDS in the same province where they died with AIDS.

The HIV Surveillance Survey results for pregnant women are highly reliable because a large number of pregnant women in every province are required to have a blood test for HIV when they attend the ANC clinics, although only few were tested in some provinces. The results of fifteen rounds of HIV Surveillance Survey of pregnant women in every province throughout the country beginning from June 1989 are given in Table 23. However, these results tend to be limited to only women from low and medium classes attending the ANC clinic at government hospitals, including general hospitals, regional hospitals, maternal and child hospitals, and the community hospitals (AIDS Epidemiology Group, 1998).

Figure 22 Pearson's correlation between registered death rates and prevalence of HIV among pregnant women from 1989-1997

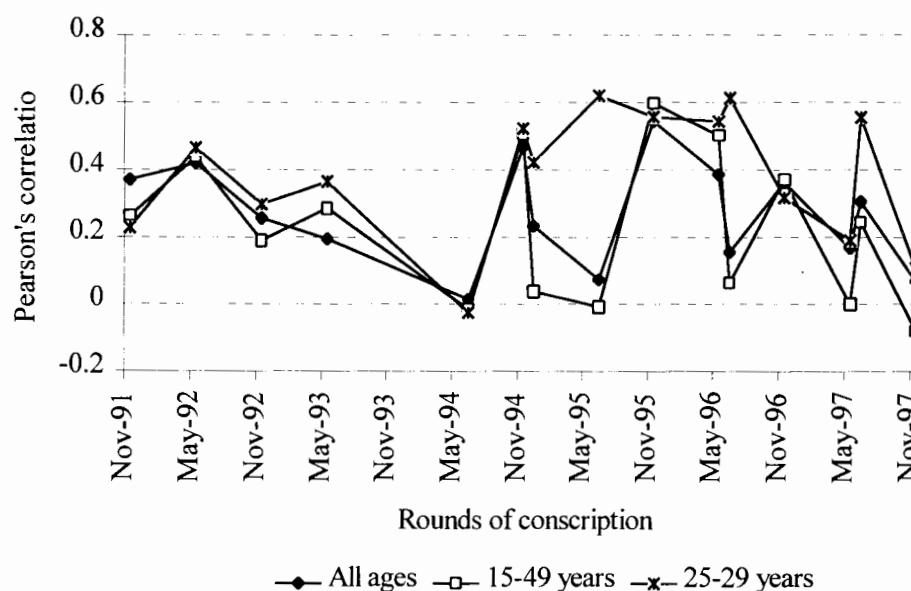


Source: Appendix B-Table 33

5.4.3 Correlation between registered death statistics and HIV Surveillance among military conscripts

The HIV prevalence of military conscripts is highly correlated with registered death rates of men in various age groups, especially from 1994 onwards as shown in Figure 23. Table 24 shows the results of the HIV Surveillance Survey conducted among the military conscripts in 12 rounds from November 1991. It can be seen that in several provinces only a small number of young men were tested for HIV, thus the reported HIV prevalence rates at the provincial level based on this Surveillance Survey are unreliable. For instance, the HIV prevalence in Mae Hong Son was 20 percent in 1992; however, only one out of five men tested positive for HIV. In Phangnga the HIV prevalence rose to 25 percent in November 1992 and May 1993 but only one out of four men tested positive for HIV. The fluctuation of the correlation between registered death rates among adult men and prevalence of HIV among military probably reflects the problem of small sample size of conscripts in some provinces.

Figure 23 Pearson's correlation between registered death rates and prevalence of HIV among military conscripts from 1991-1997



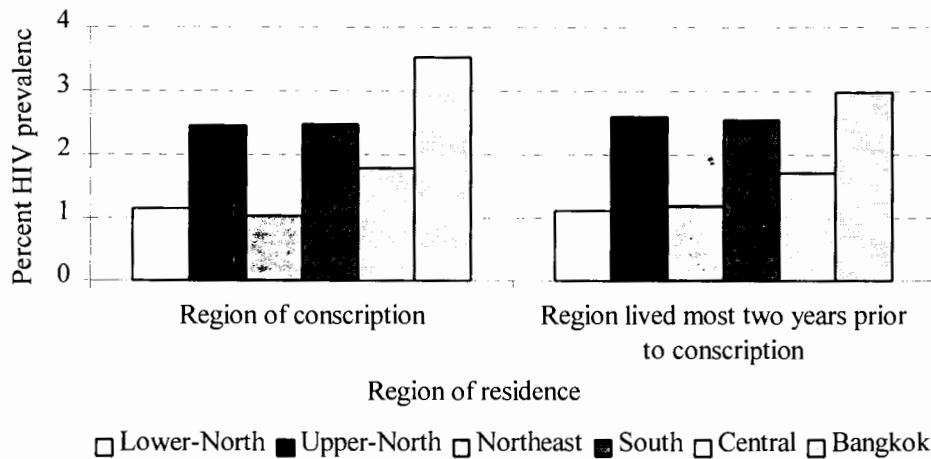
Source: Appendix B-Table 32

Despite its small sample size, the HIV Surveillance Survey conducted among young men taking the military conscription provides important information about the previous place of residence of these young men prior to conscription. The HIV prevalence of the military conscripts are reported by their province of residence in two time periods -- the province where the

conscription took place, and the province where they lived most of their time in the two years prior to the survey. Even though the HIV prevalence among the military conscripts is known to be consistently highest in the Upper-North region, the latest HIV prevalence, reported in May 1998, suggested that the HIV prevalence among the military conscripts in the South was as high as those in the North (North- 2.54 percent, South - 2.59 percent).

Figure 24 Percent of HIV prevalence among military conscripts by region (May 1998)

Region	Region taking conscription			Region living most in the past two years		
	Number tested for HIV	Number HIV positive	% HIV positive	Number tested for HIV	Number HIV positive	% HIV positive
Lower-North Region	2548	29	1.14	2072	23	1.11
Upper-North Region	1714	42	2.45	1697	44	2.59
Northeast Region	5307	55	1.03	4192	50	1.19
South region	2507	62	2.47	2432	62	2.54
Central Region	10748	193	1.79	10809	186	1.72
Bangkok	3988	141	3.53	4523	135	2.98
Total	26812	522	1.94	25725	490	1.90



Source: Armed Forces Research Institute of Medical Sciences (AFRIM), May 1998.

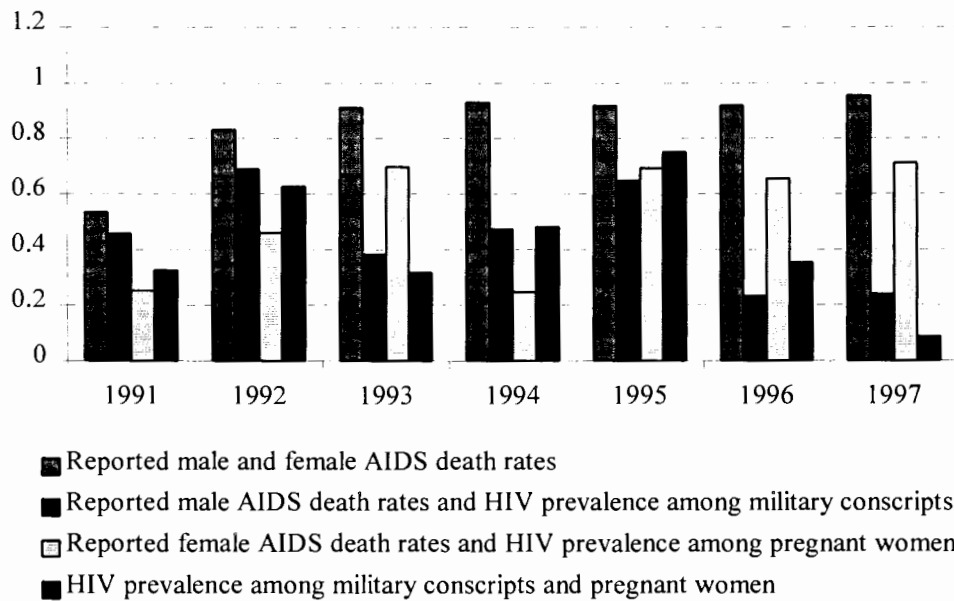
Except for Bangkok, the HIV prevalence rates were not different by region of residence (see Figure 24). Young men in Bangkok had the highest HIV prevalence both by province of conscription and by province lived prior to conscription. However, in terms of the AIDS situation, Bangkok is not known to be among the top provinces -- ranked 25th and 42nd for reported male and female AIDS death rates, and ranked 42nd and 56th for registered death

rates of men and women respectively (see Tables 20-21 & Tables 27-28 for details). Bangkok is a well-known destination for many migrants throughout the country, and it is possible that a large number of young men and women may be infected with HIV while they live in Bangkok but they were not aware of being infected. A few years later these people may move to other province and eventually develop the HIV/AIDS symptoms there. Another explanation is that many people found to be with HIV tend to move back to their original place of residence for care and support when they develop the illness. Thus there is a clear discrepancy about the reports on the province of residence of PHAs.

5.4.4 Correlation between selected AIDS statistics

The reported AIDS death rates of men and women were highly correlated from 1990 onwards, and the correlation was highest in 1997 at a Pearson's correlation of 0.954 and a Spearman's rank correlation of 0.858 (see Figure 25 and Table 36). It suggests that the provinces with high AIDS deaths among men tend to be those with high AIDS deaths among women. For men, the correlation between reported male AIDS death rates and HIV prevalence among the military conscripts fluctuated over time suggesting that the provinces with high male AIDS death rates are not necessary be those with high HIV prevalence among the military conscripts. For women, the reported female AIDS deaths and HIV prevalence among pregnant women attending the ANC clinics were high suggesting that pregnant women with HIV are likely to be resident of that province. However, the HIV prevalence among young men undergone the military conscription and those of pregnant women fluctuated over time which probably indicate that the province where young men and women contracted HIV and died with AIDS may in many cases be different. On the assuming that PHAs tend to die in the province of residence where their parents or relatives live, men more than women tend to obtain HIV from provinces other than their province of residence.

Figure 25 Pearson's correlation between AIDS statistics obtained from various sources in 65 provinces, 1990-1997



Source: Appendix B-table 36

5.5 Excess deaths attributable to AIDS

The trends of mortality for the period 1984-1991 are used to estimate the excess deaths attributable to AIDS for the period 1992-1996. The three adjustments described below were made to correct the death statistics before the excess deaths were estimated. Calculations are given in Table 40.

5.5.1 Adjustments for the estimation of excess deaths

I. Unknown age

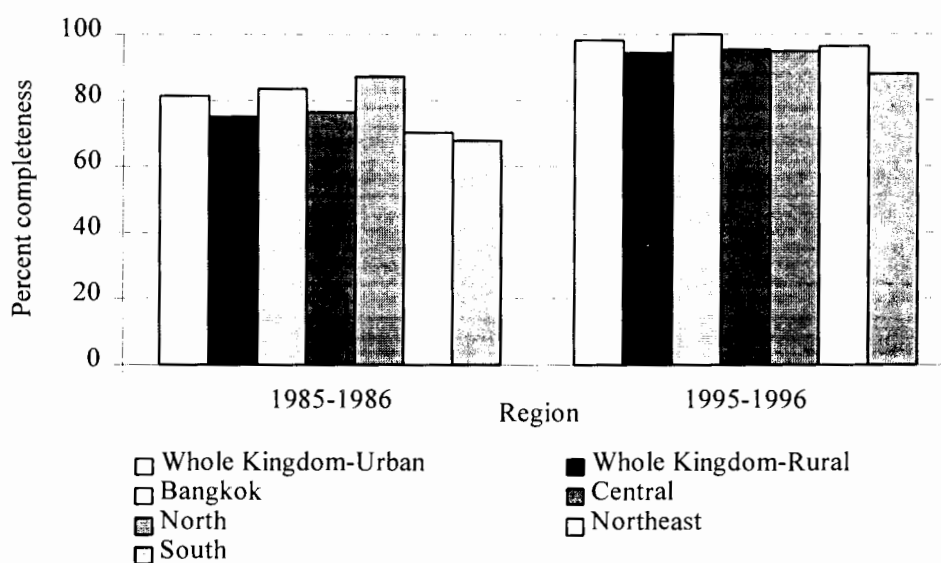
The unknown age of the registered deaths were added to the total number of deaths of each province from 1984 to 1997.

II. Incomplete Registration

Although the increase in registered deaths suggests that a rising number of deaths in recent years were caused by AIDS, it is not known what proportion of the increase was attributed to the increase in completeness of death registration in recent years. In other words, the improvement in completeness of registered death means that, without AIDS, the death rates would have been rising over time anyway. The 1995 Survey of the Population Change indicates that the death registration for the whole country had improved by nearly 20 percent within a decade -- from 75.7 percent in 1985-

1986 to 94.8 percent in 1995-1996. Bangkok was reported to have complete death registration in 1995-1996. The increase in death registration was lowest in the North region (7.7 percent) followed by Bangkok (16.5 percent), Central (18.9 percent), South (20 percent), and Northeast (26.1 percent). The increase of death registration in the rural areas was 19.2 percent compared to that in the urban areas (16.9 percent) as shown in Figure 26. To adjust for incomplete death registration, the differences between the percent completeness of death registration between these two periods were obtained. It is assumed that registered death had equally increased year by year from 1985 onwards. Thus the estimations of excess deaths were adjusted based on complete death registration (see Table 40 for calculation details).

Figure 26 Percent completeness of the official death registration, by regions, 1985-1986 & 1995-1996

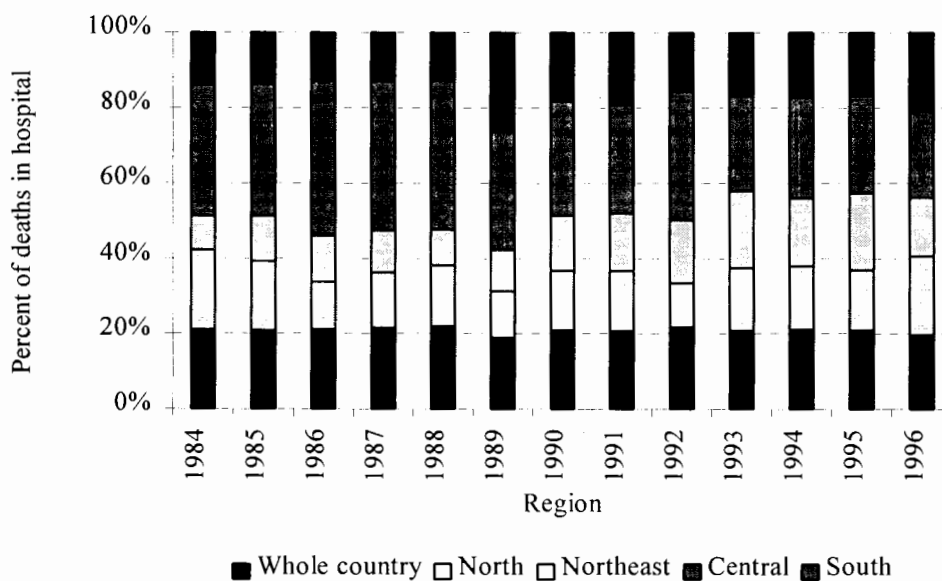


Source: The 1995-1996 Survey of Population Change, NESDB

III. Cause groups of death in adults other than AIDS

Although the increases in death rates in recent years probably due to increases in AIDS deaths, it is not known if any other causes of death have also increased over the same period. Causes of death were explored for any adjustments needed. It is known that the causes of death written in the death certificates are not reliable, particularly when the deaths occurred outside hospitals. Even if someone died in a hospital, the causes of death written in the death certificate by physicians are not reliable, as suggested in one recent study (Ninsri et al., 1998). Only about 20 percent of the deaths throughout the country occurred in the government hospitals as shown in Figure 27.

Figure 27 Percent of deaths in government hospitals by regions, 1984-1996

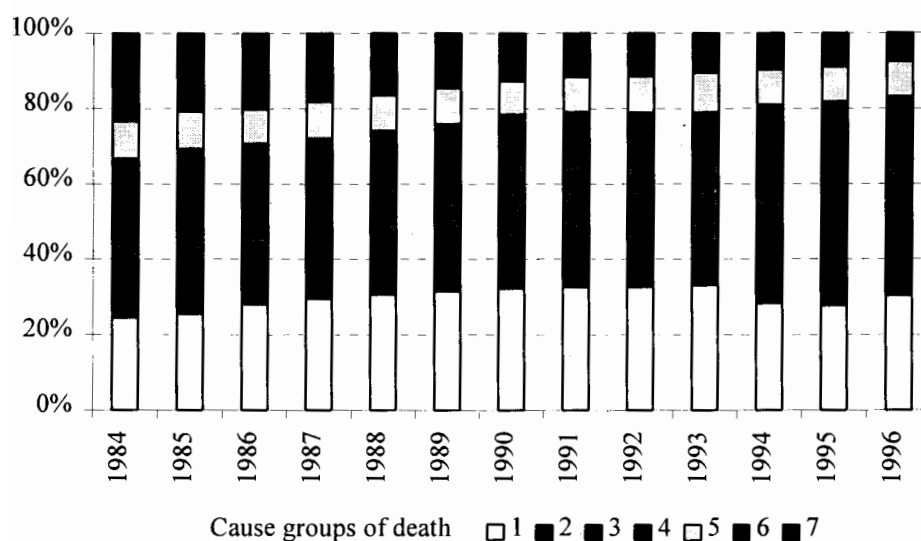


Source. Public Health Statistics Yearbook, Ministry of Public Health, 1984-1996

AIDS is an epidemic largely infecting adult men and women in their reproductive ages. Other than the increases in traffic accidents, it is difficult to explain what else other than AIDS could have contributed to increases in death rates. The trends of leading cause groups of death over the period 1984-1997 were explored to detect any significant increases of particular causes of death. The shifting of the International Classification of Diseases (ICD) from ICD-9 to ICD-10 in 1994 has led to inconsistent death trends by cause groups of death as shown in Figure 28.

Although over a decade the cause of death by accident had increased rapidly, with the highest increase among young men aged 20-24 years, the proportion of deaths caused by accidents are small relative to other causes of death. Thus the estimations of excess number of deaths in this study did not adjust for other causes of death.

Figure 28 Percent of top cause groups of death in men according to ICD-9 (1984-1993) and ICD-10 (1994-1997)



ICD-9 Cause groups of death (1984-1993)

1. Diseases of circulatory system
2. Other accidents, including late effect
3. Neoplasms
4. Diseases of the respiratory system
5. Certain infections and parasitic diseases
6. Diseases of digestive system
7. Diseases of genitourinary system

ICD-10 Cause groups of death (1994 onwards)

1. Diseases of pulmonary circulation and other forms of heart disease
2. Diseases of the digestive system other than oral cavity, salivary glands and jaws
3. Other accident, including late effect
4. Malignant neoplasm of other and unspecified sites
5. Diseases of the respiratory system other than the upper respiratory tract
6. Homicide and injury purposely inflicted by other persons
7. Tuberculosis

Source: Public Health Statistics Yearbook, Ministry of Public Health, 1984-1996

5.5.2 Estimation of excess deaths

To estimate excess deaths attributed to AIDS (see Figure 29), it was assumed that if the trends of death rates of the period 1984-1991 continued, the differences between the observed deaths (deaths with AIDS) and the actual deaths (deaths without AIDS taking into account the continuing trends of deaths from 1984-1991) would show the excess death caused by AIDS.

Form the estimates, there were a cumulative 143,000 male AIDS deaths and 61,000 female AIDS deaths, or a total of 205,000 AIDS deaths throughout the country for the period 1992-1996. See Table 42 for estimated figures of AIDS deaths by province. Provinces with a high number of excess deaths presumably caused by AIDS were Chiang Mai, Chiang Rai, Nan, Nakhon Sawan, and Phayao.

A similar calculation was done based on the death rates to estimate the excess death rates at the national level (see Table 44). The excess number of deaths after 1991 were obtained by multiplying excess death rates with the population used as the denominator for that year. The cumulative excess number of deaths for the whole kingdom was 230,659 based on the 1991 Population Projections and 245,630 based on the 1995 Population Projections. In summary, the estimated cumulative AIDS deaths over the period 1992-1996 ranged from a cumulative of 205,000 to 245,630 deaths, numbers that are close to other estimates. The estimated annual number of AIDS deaths had increased from about 15,000 deaths in 1992 to 40,000 deaths in the following year and was estimated at 70,000-80,000 deaths in 1996.

Figure 29 Excess number of deaths based on the 1984-1991 trend of registered deaths extrapolating for the period 1992-1996

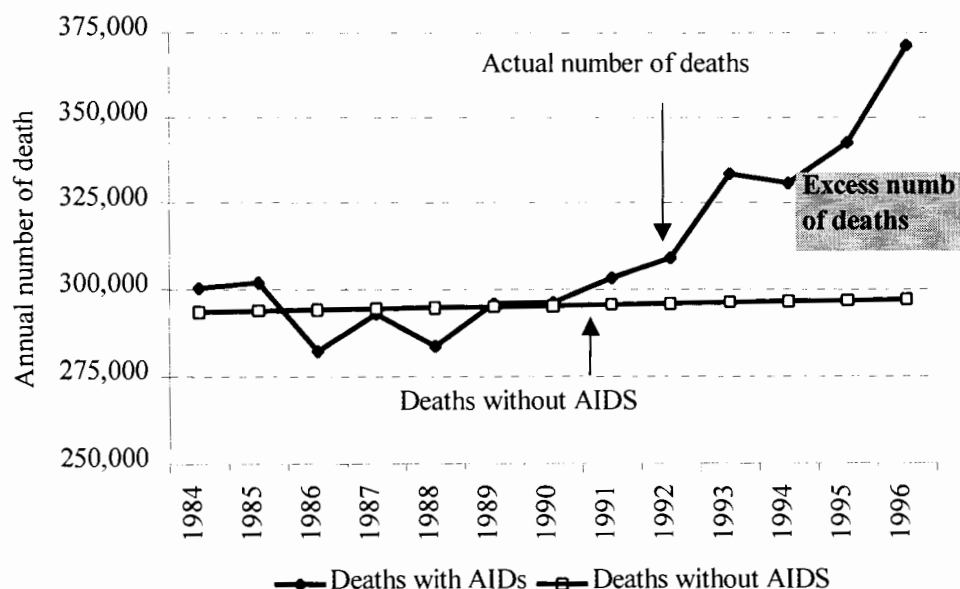
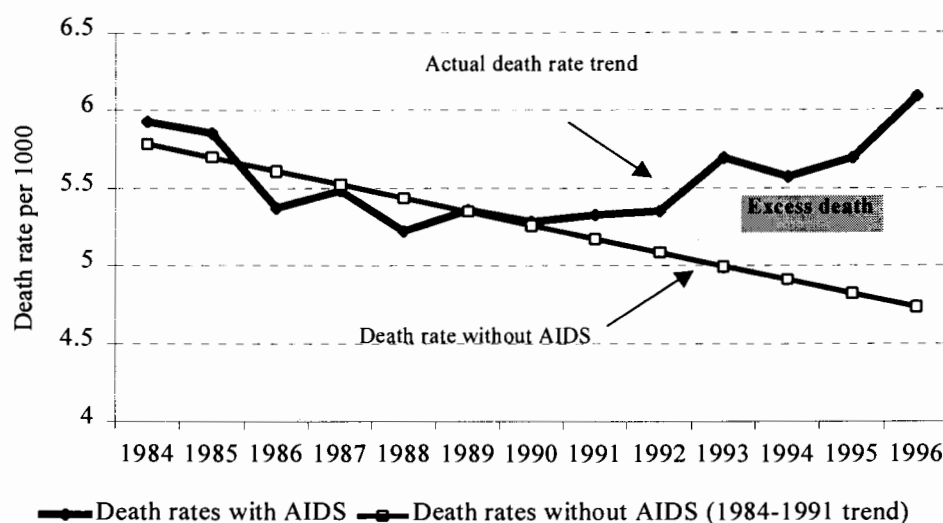


Figure 30 Excess death rates based on the 1984-1991 trend of death rate extrapolating for the period 1992-1996



6. DISCUSSION

The increases in death rates throughout the country that have occurred over the past few years are not a result of the health transition. Though there is evidence of increasing longevity among the aged in the data; the classic pattern of the health transition does not suggest such increases in young adult mortality. Nor do they suggest a single incident in time: an outbreak of one of the common communicable diseases (e.g. cholera, a war, or bloody civil unrest), causing a sudden increase in mortality; that decreases as soon as the peak of deaths is past. Equally, the concentration of the increases in mortality among the least vulnerable, young adults, and primarily men, rules out their being the result of a deterioration in environmental, nutritional or social conditions, which would affect the population more generally, and primarily the most vulnerable -- children and women. The pattern is one of increasing mortality over a fairly lengthy period of time, primarily affecting adults in their reproductive years, spreading first through men, then including women; a clear definition of the impact of the spread, on a very large scale, of a chronic, ultimately fatal, sexually transmitted epidemic: HIV. Evidence of such a process, though distressing, is invaluable for policy and decision-makers: real data, rather than the projections and estimate of what might be.

That the assumptions made in the HIV/AIDS projections do not reflect actual situation provides a strong justification for using mortality data to monitor the AIDS epidemic and develop more accurate projections. The mortality trends and levels described in this study are highly suggestive of an extensive spread of HIV among the Thai population. The preponderance of

the increase in mortality among prime age adults, the initial concentration among men, and more recently spreading into women, and the increasingly young ages at which the changes are occurring; all reflect what is known about the HIV/AIDS epidemic. A possible other cause that might fit such a pattern, given what we know of the situation in Thailand, would be traffic accidents. It is unlikely, however, that such an enormous and consistent change in mortality could be caused by accidents alone.

The technique used in this study, while not relying on behavioral assumptions, does require that the data used be of high quality. Nevertheless, the mortality data from the vital registration system has been subject of criticisms related to the quality of data. Beginning over 30 years ago, there have been a series of mostly mid-censal surveys called the Surveys of Population Change (SPC), that have been used to estimate vital rates and to assess the quality of data from vital registration (dual record system). The surveys in the mid 1960s, 1970s, and 1980s included matching survey information with vital registration data. Therefore there are relatively accurate estimates of the level of under-reporting of births and deaths. Starting from 1989 there has been several additional SPCs but these have relied on survey questions to assess coverage.

There was a rapid increase in estimated coverage of deaths between the SPC carried out in 1985-1986 and that carried out in 1995-1996. While coverage of death registration probably did increase over the period, it is unlikely to have increased by nearly 20 percent within a decade. Thus it is likely that coverage levels from the latest survey are overestimated. In terms of the analysis -- this would result in an underestimation of mortality from AIDS. It should also be noted that there are differences in coverage by sex -- males are more likely to be registered than females.

Although some technical problems related to the data and techniques used in this study give limited confidence in the exact magnitude of the numbers estimated, the focal point of this study is to use available data and relatively simple techniques and assumptions to obtain rough estimates of the levels and the patterns of AIDS mortality in Thailand. The estimates provided in this report are generally consistent about what is known about the course of the epidemic in Thailand (e.g. the heavy impact in the North, and the impact over young men), but also provide other interesting findings. For example, mortality data from the vital registration data is based on place of death, it is possible to identify those provinces where there is probably high burden of care. By comparing the geographical patterns of other sources of data on HIV with that based on mortality would infer patterns of movement from areas of source of infection to areas where care and support is provided.

The findings of this study hold up when compared to other sources of data. For geographical patterns, the provincial patterns of mortality based on vital registration are reasonably highly correlated with provincial patterns

from other data sources. A perfect correlation can not be obtained because of differences in the sources in terms of the stage of the disease being recorded and also the differences between place of infection and place of death. The estimate of the number of cumulative deaths from AIDS is much higher than the officially recorded number, but are at levels that are similar to some projections.

Many questions raised by this study need for the investigation relying on intensive fieldwork. For instance, the death rate in Lopburi province where Wat Pra Baat Numphu is located did not increase over the recent past even though over 500 PHAs were reported to have died there and most deaths claimed to be registered. Another concern is to find out if the deaths of PHAs tend to be under-registered. Various reasons explain why AIDS deaths are likely to be registered or not. The long establishment of village funeral funds in the rural areas throughout the country encourages its fund members to register the death of their relatives or else the fund benefits can not be claimed. In contrast, a number of PHAs probably die alone without the awareness of their relatives and it is not known if their deaths would be registered.

7. CONCLUSION

This study attempts to overcome the problem of the under report of AIDS deaths by relying on a data source that has almost universal coverage and that is geographically extensive -- mortality data from a vital registration system. The argument is that the levels and patterns of AIDS mortality can be indirectly estimated through the use of mortality data from the vital registration system. This is not done through using cause of death information, but rather through assessing changes in death rates. This study confirms the viability of simple monitoring techniques, based largely upon existing data, to reveal the direct impact of the HIV epidemic. Like many countries of Asia, Thailand has adequate data in hospital records, census and vital statistics system to describe basic mortality patterns, and to observe changes in them. Indeed, for many child survival and safe motherhood program, similar techniques have been used for some time. The vital registration statistics is basic data that has been underutilized by demographers despite its availability and universal coverage.

The main objective of this study is to demonstrate that registration statistics can be used to monitor AIDS mortality in a situation of defective AIDS statistics, and to describe the patterns demonstrated by this monitoring at various levels, particularly at the provincial level. There is a need to know the extent of mortality resulting from AIDS and the geographical distribution of that mortality among local areas. Such knowledge contributes to understanding the development of the disease and is vital to planning for the consequences of the epidemic. The mortality patterns described in this study with a focus on the place of residence are useful for planning to deal with the burden of care and resource allocation for PHAs.

In summary, this study confirms that use of mortality from vital registration is a valuable and accessible tool in examining the course of the HIV/AIDS epidemic, especially at disaggregated levels. However, in order to take full advantage of this data source, there is a need to improve the vital registration data.

REFERENCES

- AIDS Epidemiology Working Group, Epidemiology Division, the Ministry of Public Health. Manual and codebook for Report Forms 506/1 and 507/1, March 1997^a.
- AIDS Epidemiology Working Group, Epidemiology Division, the Ministry of Public Health. Manual for HIV Serosurveillance, (new improved edition), April 1997^b.
- AIDS Epidemiology Working Group, Epidemiology Division, the Ministry of Public Health. Report of AIDS Statistics in Thailand, dated 31 October 1998.
- AIDS Epidemiology Working Group, Epidemiology Division, the Ministry of Public Health. Manual for the National HIV Sentinel Surveillance in Thailand, Round 16th, 1998.
- Armed Forces Research Institute of Medical Sciences (AFRIM). Report of AIDS Statistics tested among military conscripts, November 1991-May 1998.
- Bicego G. Estimating adult mortality rates in the context of the AIDS epidemic in sub-Saharan Africa: analysis of DHS sibling histories. *Health Transition Review: Evidence of the Socio-demographic Impact of AIDS in Africa* 1997, suppl 2 to Volume 7: 7-22.
- Boerma T, Ngalula J, Isingo R and others. Levels and causes of adult mortality in rural Tanzania with special reference to HIV/AIDS. *Health Transition Review: Evidence of the Socio-demographic Impact of AIDS in Africa* 1997, suppl 2 to Volume 7: 63-74.
- Brinkman, Uwe K. Features of the AIDS epidemic in Thailand. Harvard School of Public Health, Working Paper No. 3, 1992. Cambridge MA: Harvard University.
- Division of Epidemiology, Ministry of public Health. Weekly Epidemiology Surveillance Report, Vol. 28, No. 18, May 1997.
- Garenne ML, Madison M, Tarantola D and others. Mortality impact of AIDS in Abidjan, 1986-1992. *AIDS* 1996, 10: 1279-1286.
- Garenne M, Friedberg F, Zanou B. Reconstructing the dynamics of the HIV/AIDS epidemic in Abidjan, Cote Ivory, 1986-1995. A paper presented at the IUSSP seminar on the 'Socio-demographic impact of AIDS in Africa' Durban, 3-6 February 1997 (unpublished).

- Garenne M, Madison M, Tarantola D and others. Consequences Demographiques Du SIDA en Abidjan, 1986-1992. Paris: CEPED, 1995.
- Godwin P, Eliot E, Chawla SC, Koithra I, and Im-em W. Mortality and morbidity data to measure the impact of HIV epidemic in Asia: three pilot studies from India and Thailand. A poster presentation at the World Conference on AIDS, Netherland, 1998.
- Im-em W. Partner relations and AIDS in Chiang Mai villages. Ph.D. Dissertation, the Australian National University, 1996.
- Im-em W. and Phuangsaichai S. Household Resources Allocation and Responses Toward the AIDS Epidemic. IPSR Publication Number 237, 1998.
- Knodel, John, Wassana Im-em, Mark VanLandingham, Chanpen Saengtienchai. Impact of AIDS on the Older Persons in Thailand. Ongoing research, 1999-2000.
- Ministry of Public Health. Public Health Statistics. Bangkok: 1984 (to 1996).
- National Economic and Social Development Board (NESDB). Population Projections for Thailand: 1986-1991, July 1986.
- National Economic and Social Development Board (NESDB). Population Projections for Thailand: 1980-2015, July 1991.
- National Economic and Social Development Board (NESDB). The Population Projections for Thailand: 1990-2020, March 1995.
- NESDB Working Group on HIV/AIDS Projection. Projections for HIV/AIDS in Thailand: 1987-2020, November 1994.
- National Statistical Office (NSO). Report of the 1995-1996 Survey of the Population Change. Bangkok: Office of the Prime Minister, 1997.
- Ninsri D, Thaplon O, Pansoda S, and others. The correction of reports on the cause of deaths by heart diseases in the Death Certifying Letter. Office of Public Health Plans and Policies, Ministry of Public Health, 1998 (unpublished paper).
- Porapakkham Y. Levels and trends of mortality in Thailand. Bangkok: Economic and Social Commission for Asia and the Pacific, 1986.

- Rangsin R, Silarug N, Sangwanloi O., et al. AIDS as the leading cause of death in Phayao province, Thailand, 3rd International Conference on AIDS in Asia and the Pacific, Chiang Mai [abstract B206].
- Rayong Working Group. The causes of death reported in the death certificate in Rayong province, on going study, 1998.
- Tanprasertsuk S and Pinyothammakorn S. Epidemiology of AIDS epidemic in Thailand. A paper presented in the First National AIDS Conference in Thailand, 1991: 134-160.
- Timaeus IM and Nunn AJ. Measurement of adult mortality in populations affected by AIDS: an assessment of the orphanhood method. *Health Transition Review: Evidence of the Socio-demographic Impact of AIDS in Africa*, 1997, suppl 2 to Volume 7: 23-44.
- United States Bureau of the Census. The HIV/AIDS Surveillance Data Base. Prevalence in percent of HIV selected from all available data. Washington DC., 1995, 1997
- van Griensven, G JP, Surasiengsunk S and Panza A. The use of mortality statistics as a proxy indicators for the impact of the AIDS epidemic on the Thai population, IPS Publication No. 267/98, 1998.
- Weniger BG, Limpakanchanarat K, Ungshusak K, et al. The epidemiology of HIV infection and AIDS in Thailand. *AIDS*, 5 (supple 2): S71-85, 1991.
- Wongboonsin K and others. Demographic Impact of the HIV/AIDS Epidemic in Thailand : Mathematical and Statistical Projections. IPS Publication No. 250/40, 1997.

Appendix A

Figures 1-24 Death Rates of Adults by Province

Figure 1 Adult male death rates by province, 1984-1997
Public Health Office 1 and Bangkok

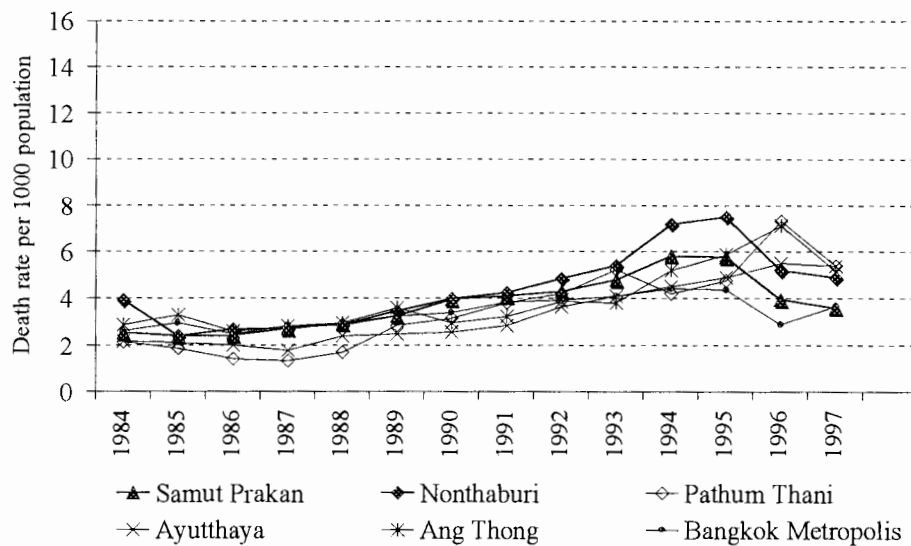


Figure 2 Adult female death rates by province, 1984-1997
Public Health Office 1 and Bangkok

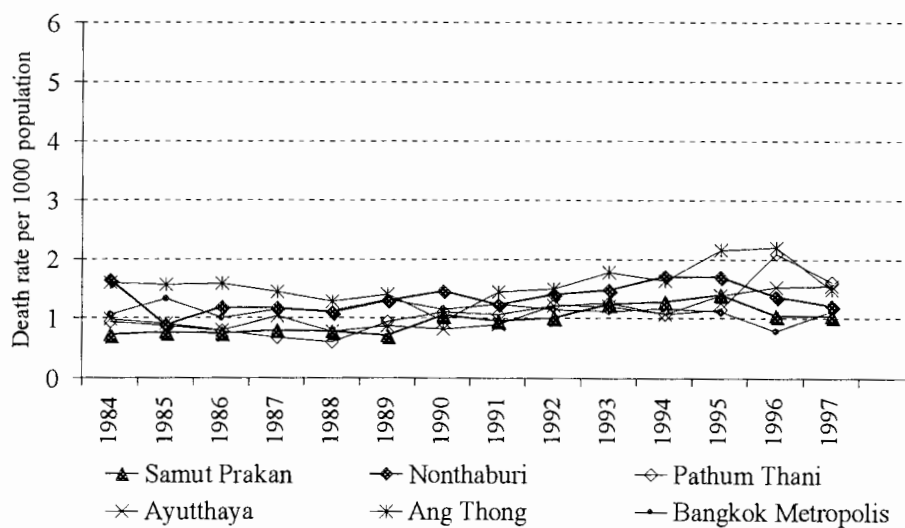


Figure 3 Adult male death rates by province, 1984-1997
Public Health Office 2

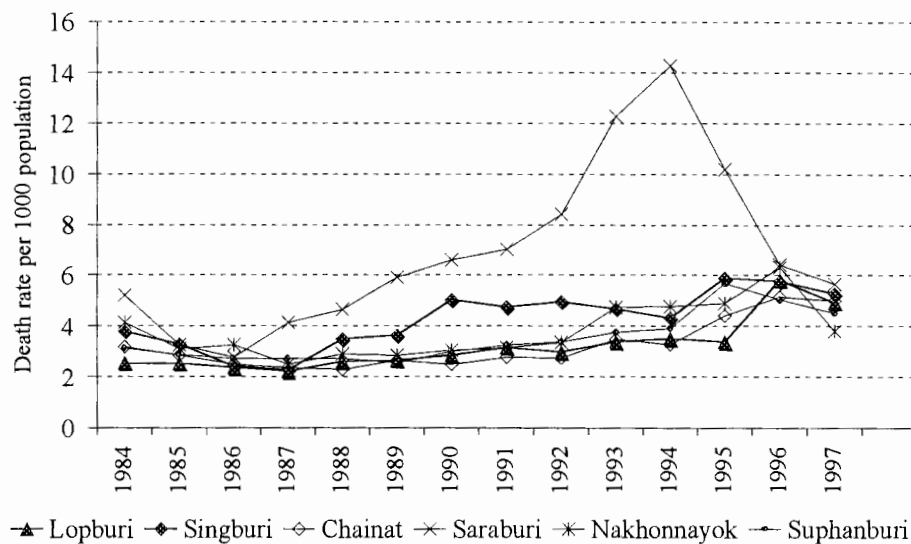


Figure 4 Adult female death rates by province, 1984-1997
Public Health Office 2

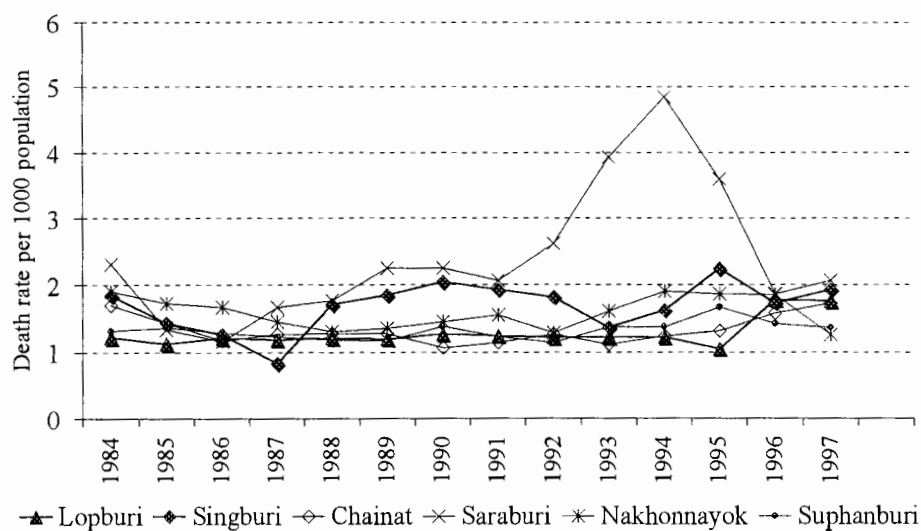


Figure 5 Adult male death rates by province, 1984-1997
Public Health Office 3

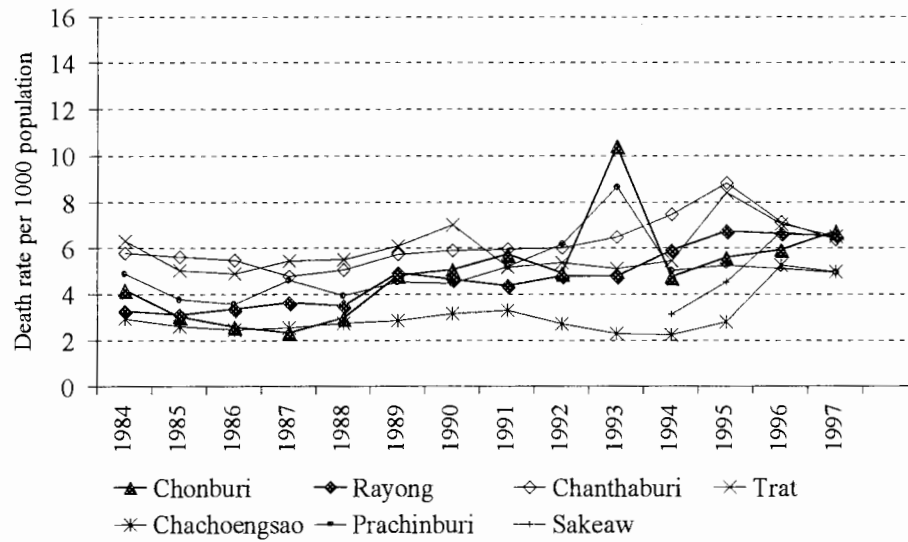


Figure 6 Adult female death rates by province, 1984-1997
Public Health Office 3

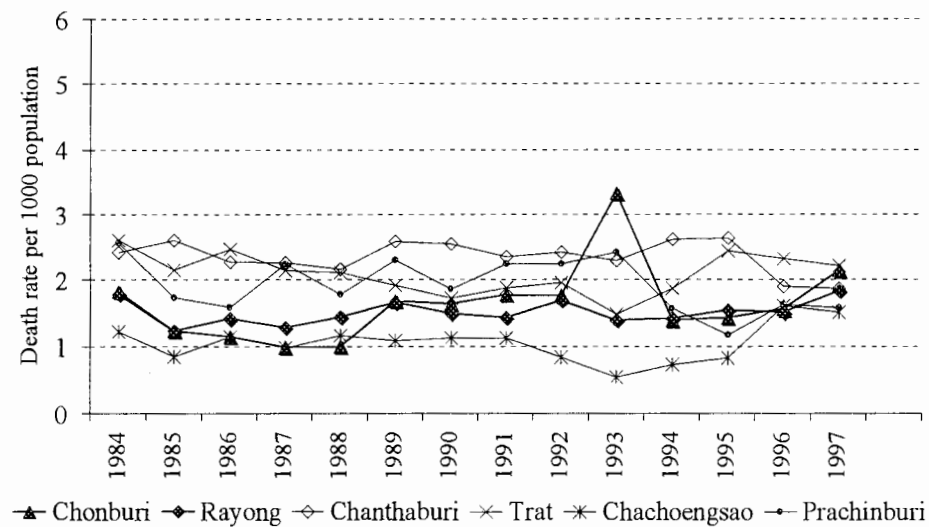


Figure 7 Adult male death rates by province, 1984-1997
Public Health Office 4

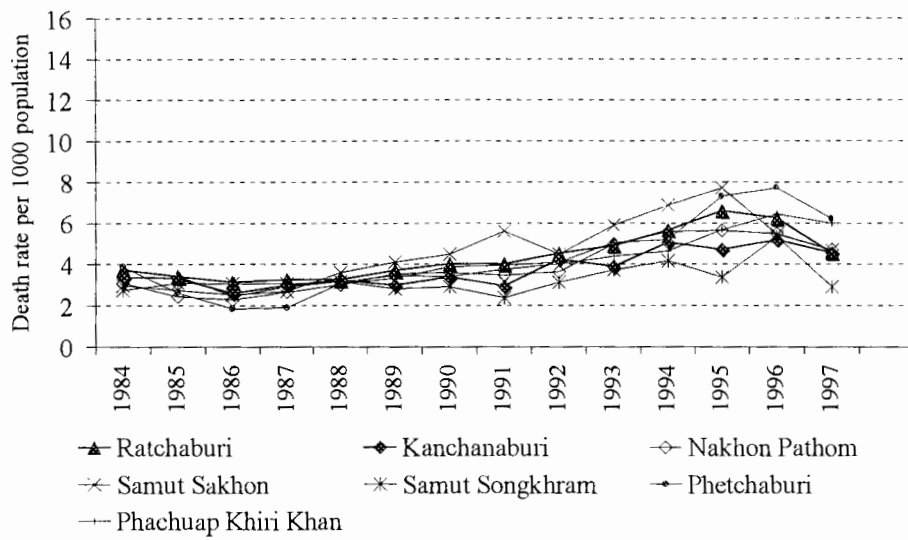


Figure 8 Adult female death rates by province, 1984-1997
Public Health Office 4

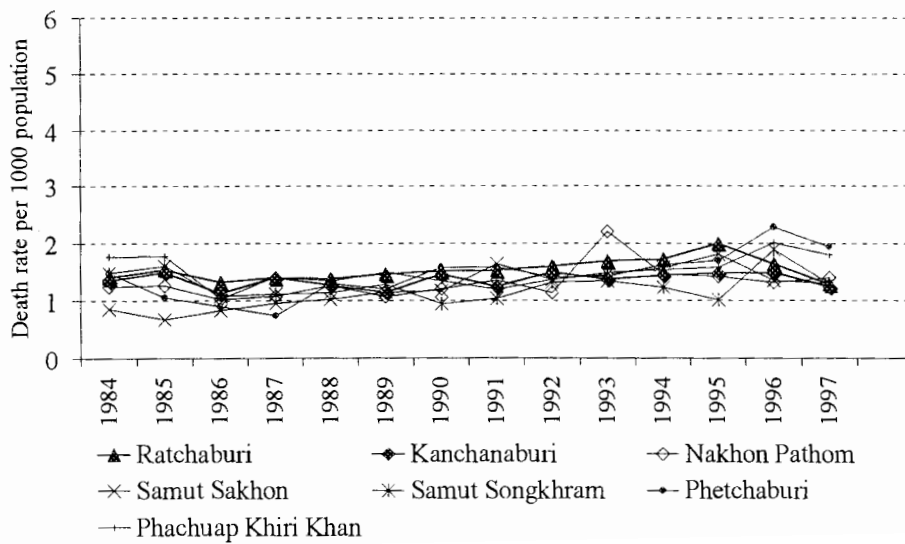


Figure 9 Adult male death rates by province, 1984-1997
Public Health Office 5

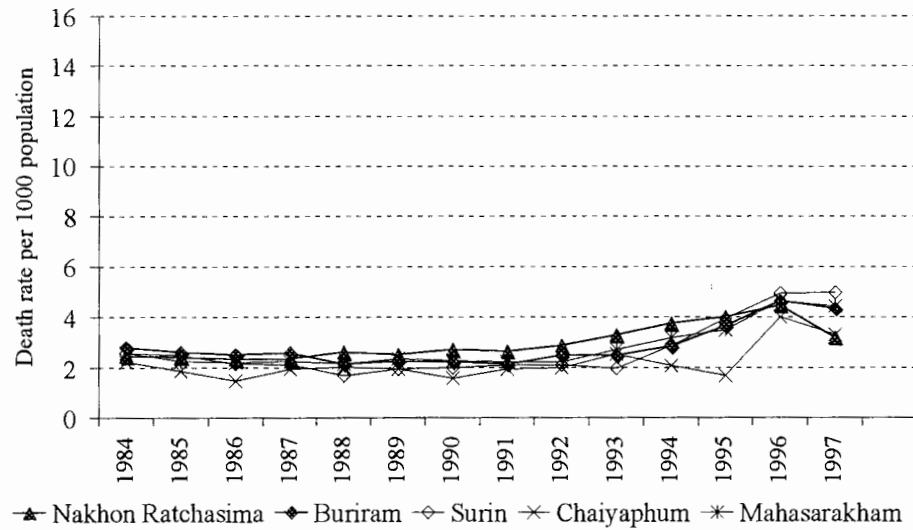


Figure 10 Adult female death rates by province, 1984-1997
Public Health Office 5

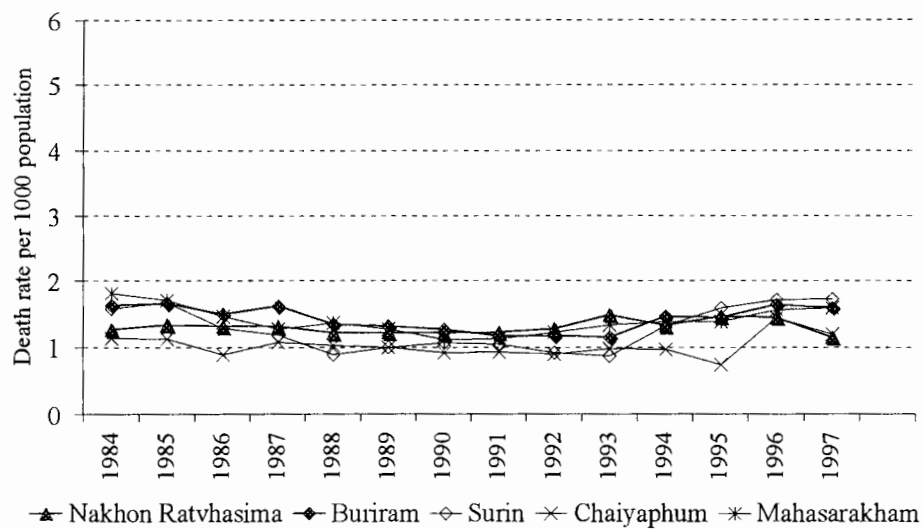


Figure 11 Adult male death rates by province, 1984-1997
Public Health Office 6

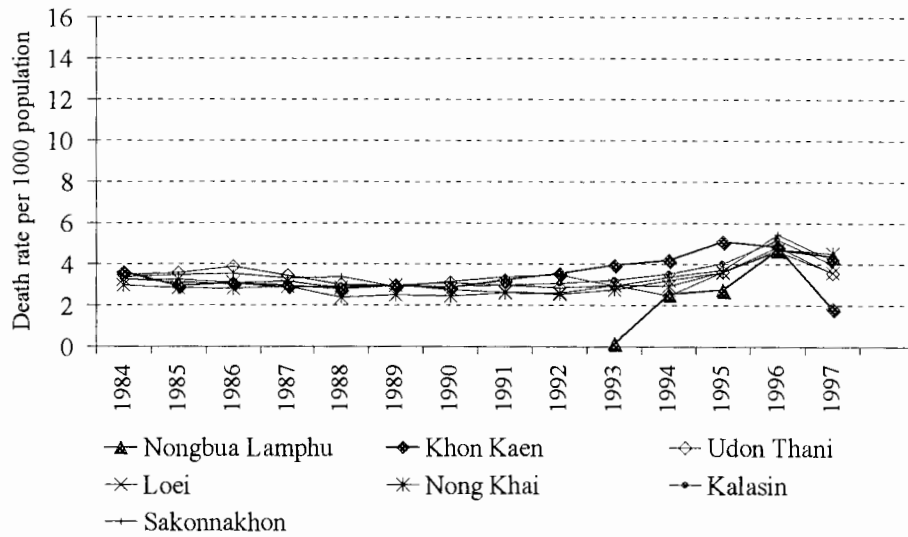


Figure 12 Adult female death rates by province, 1984-1997
Public Health Office 6

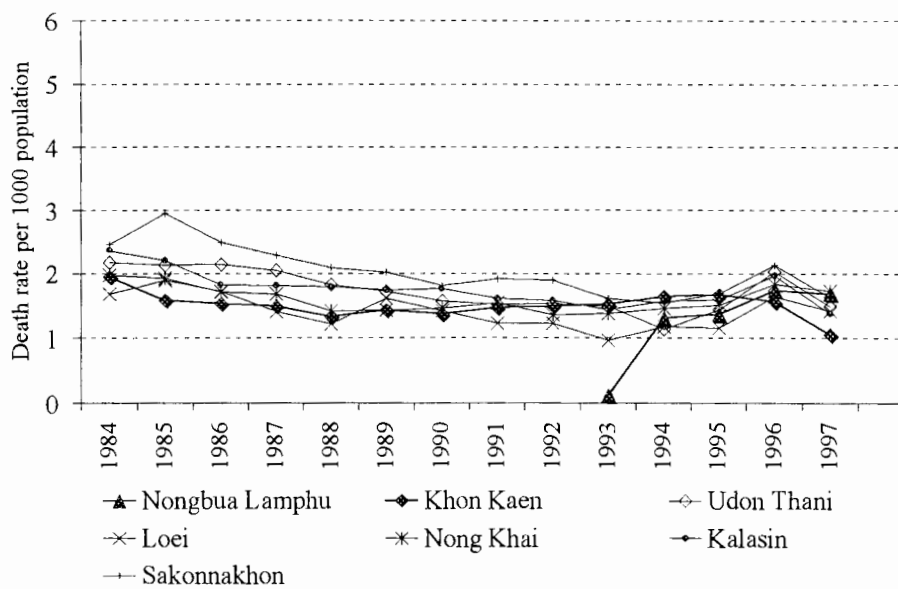


Figure 13 Adult male death rates by province, 1984-1997
Public Health Office 7

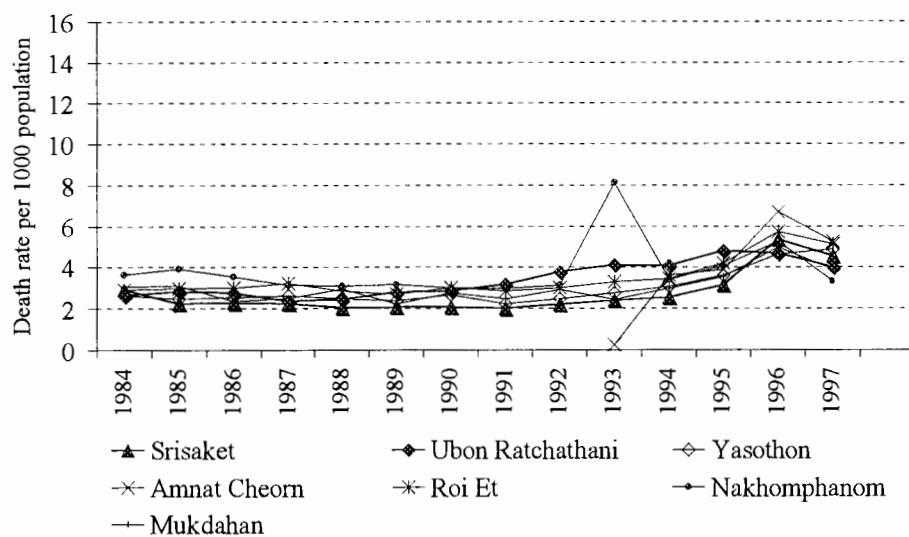


Figure 14 Adult female death rates by province, 1984-1997
Public Health Office 7

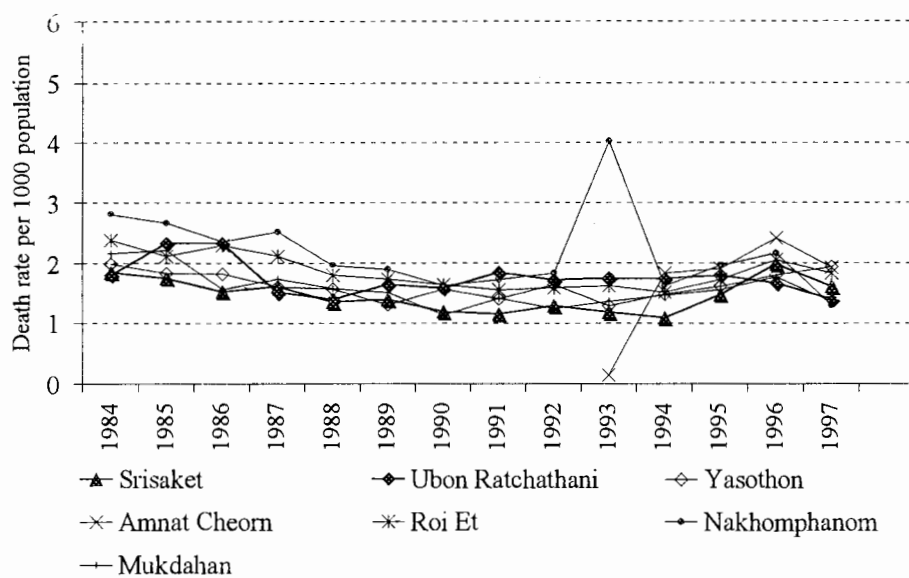


Figure 15 Adult male death rates by province, 1984-1997
Public Health Office 8

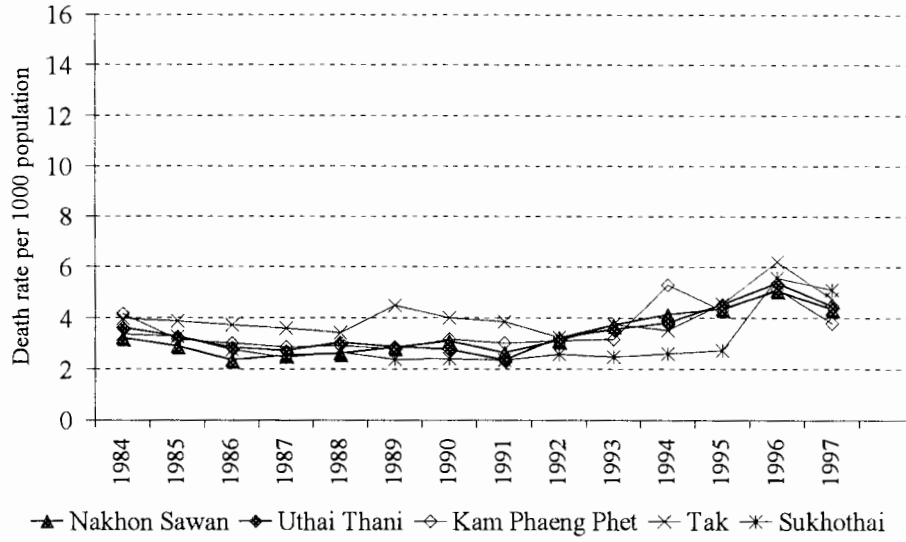


Figure 16 Adult female death rates by province, 1984-1997
Public Health Office 8

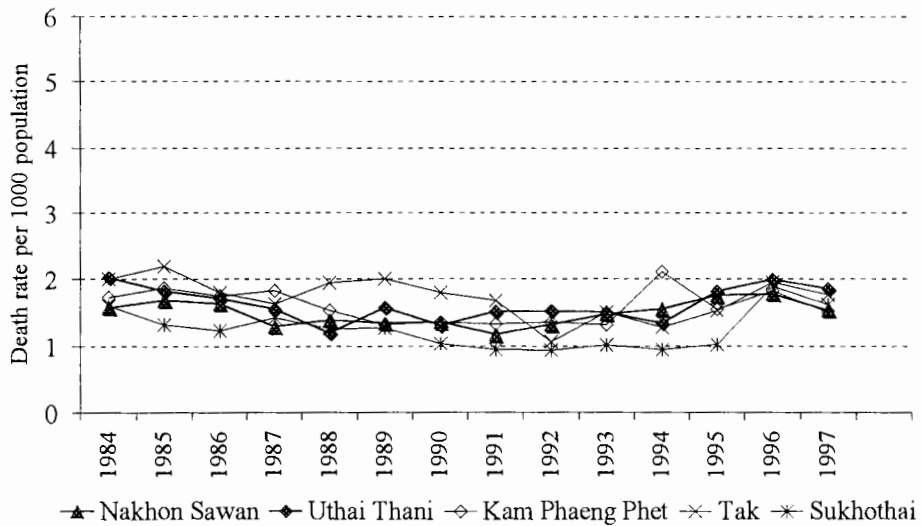


Figure 17 Adult male death rates by province, 1984-1997
Public Health Office 9

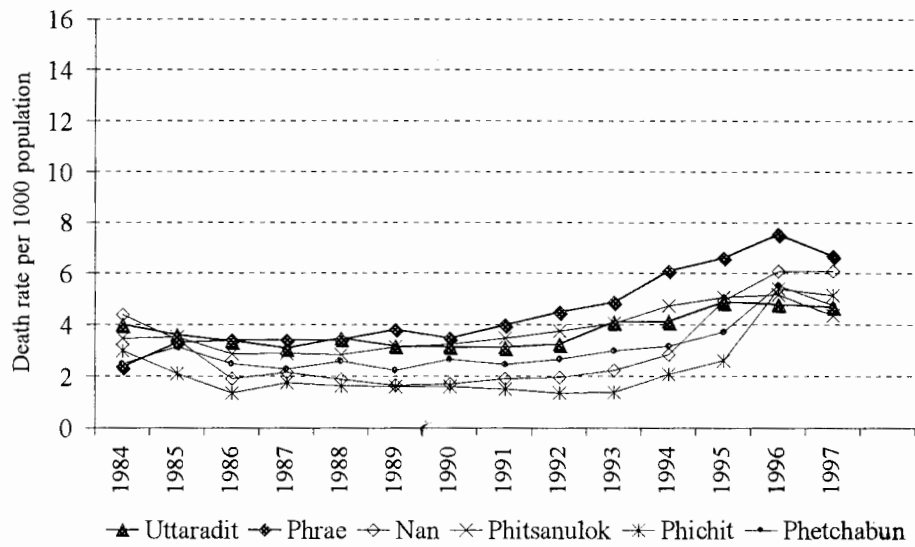


Figure 18 Adult female death rates by province, 1984-1997
Public Health Office 9

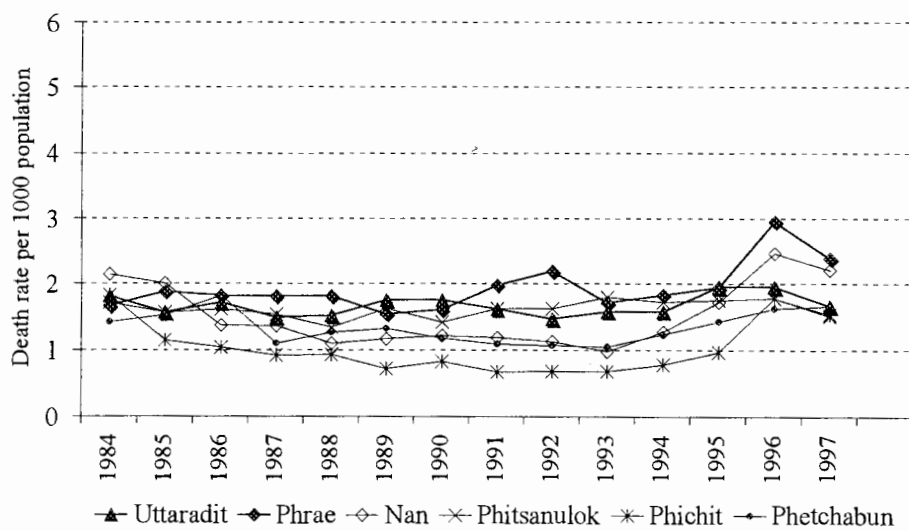


Figure 19 Adult male death rates by province, 1984-1997
Public Health Office 10

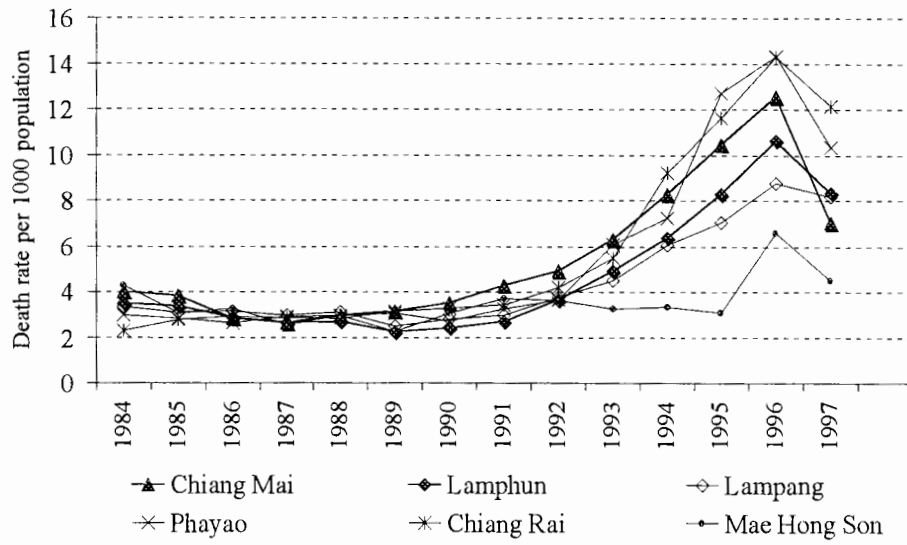


Figure 20 Adult female death rates by province, 1984-1997
Public Health Office 10

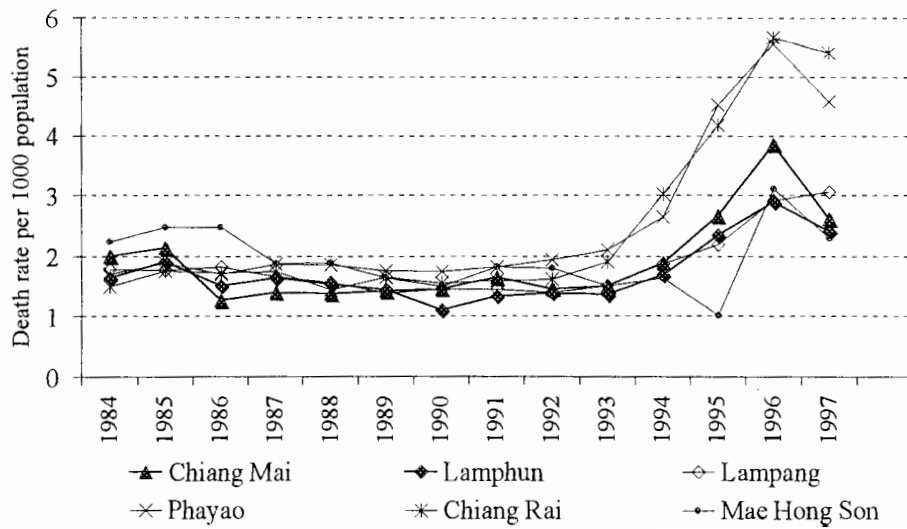


Figure 21 Adult male death rates by province, 1984-1997
Public Health Office 11

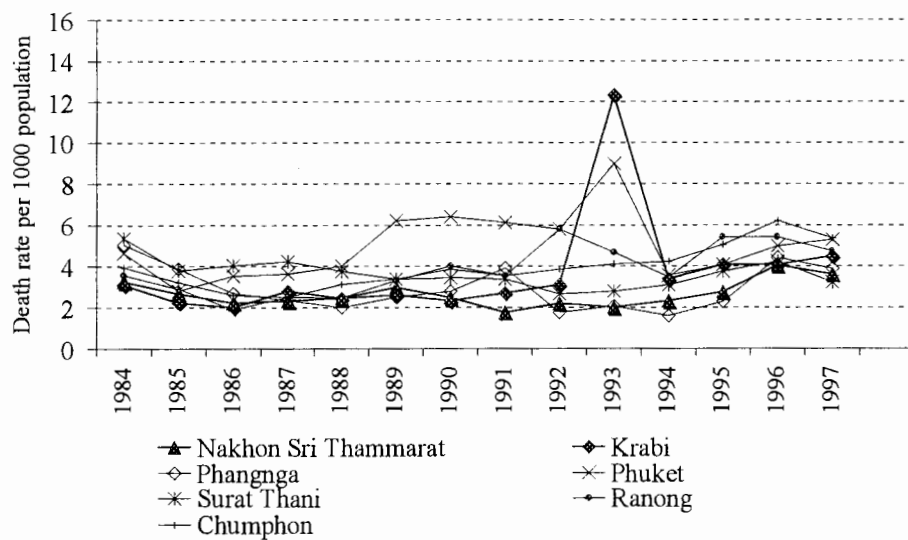


Figure 22 Adult female death rates by province, 1984-1997
Public Health Office 11

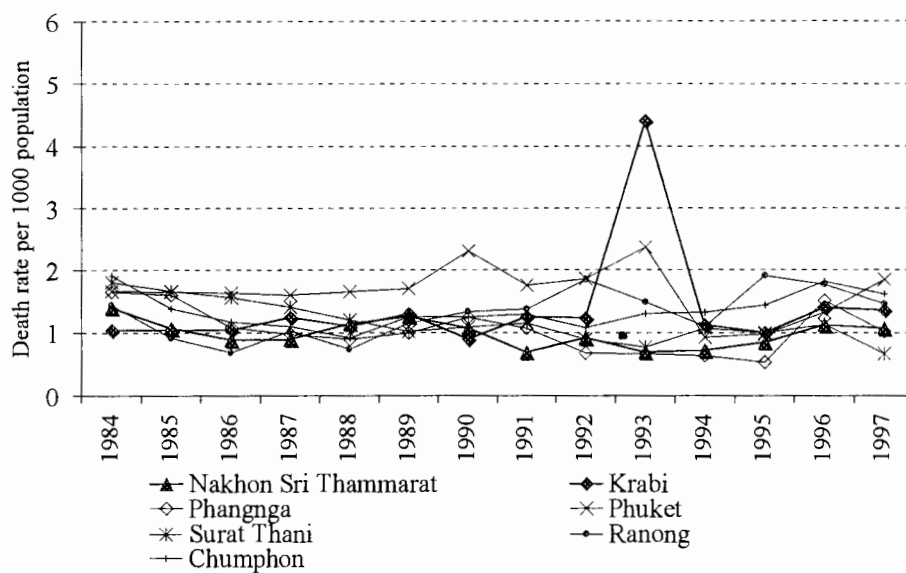


Figure 23 Adult male death rates by province, 1984-1997
Public Health Office 12

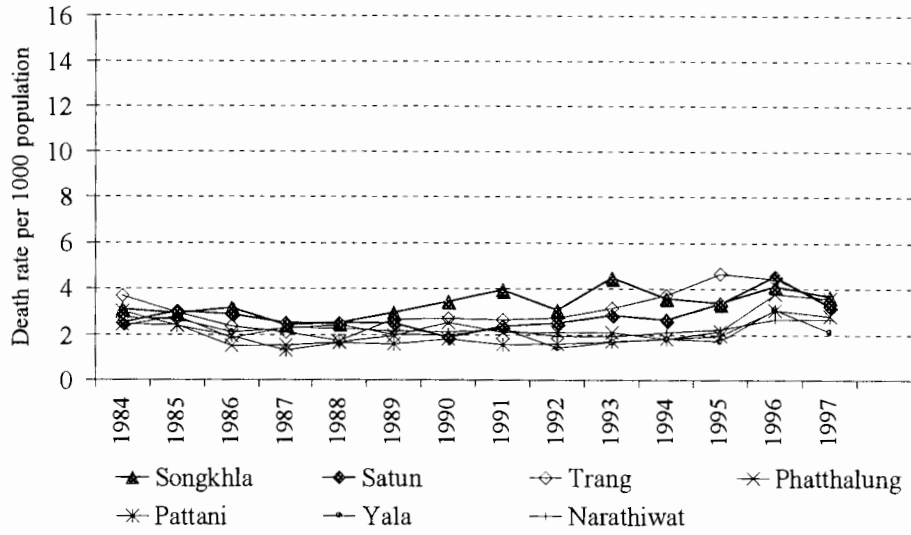
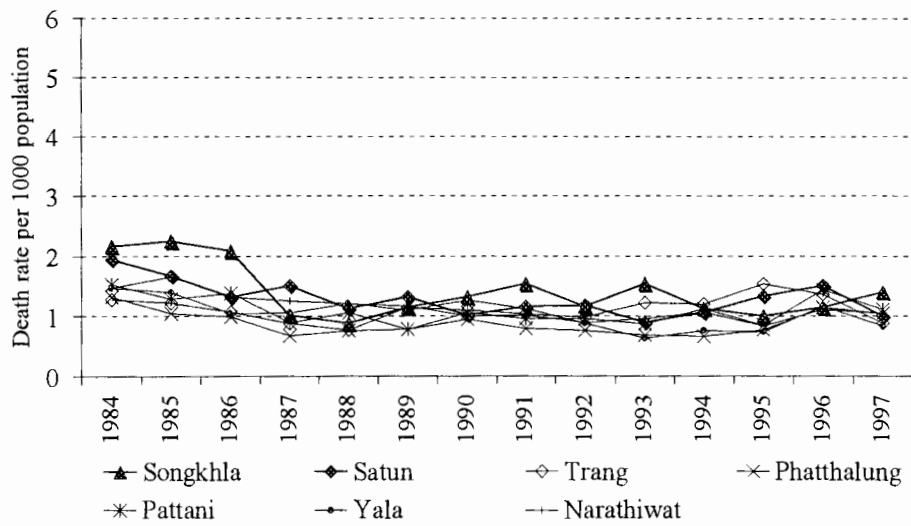


Figure 24 Adult female death rates by province, 1984-1997
Public Health Office 12



Appendix B

Tables 1-44 Death Rates and Related Data

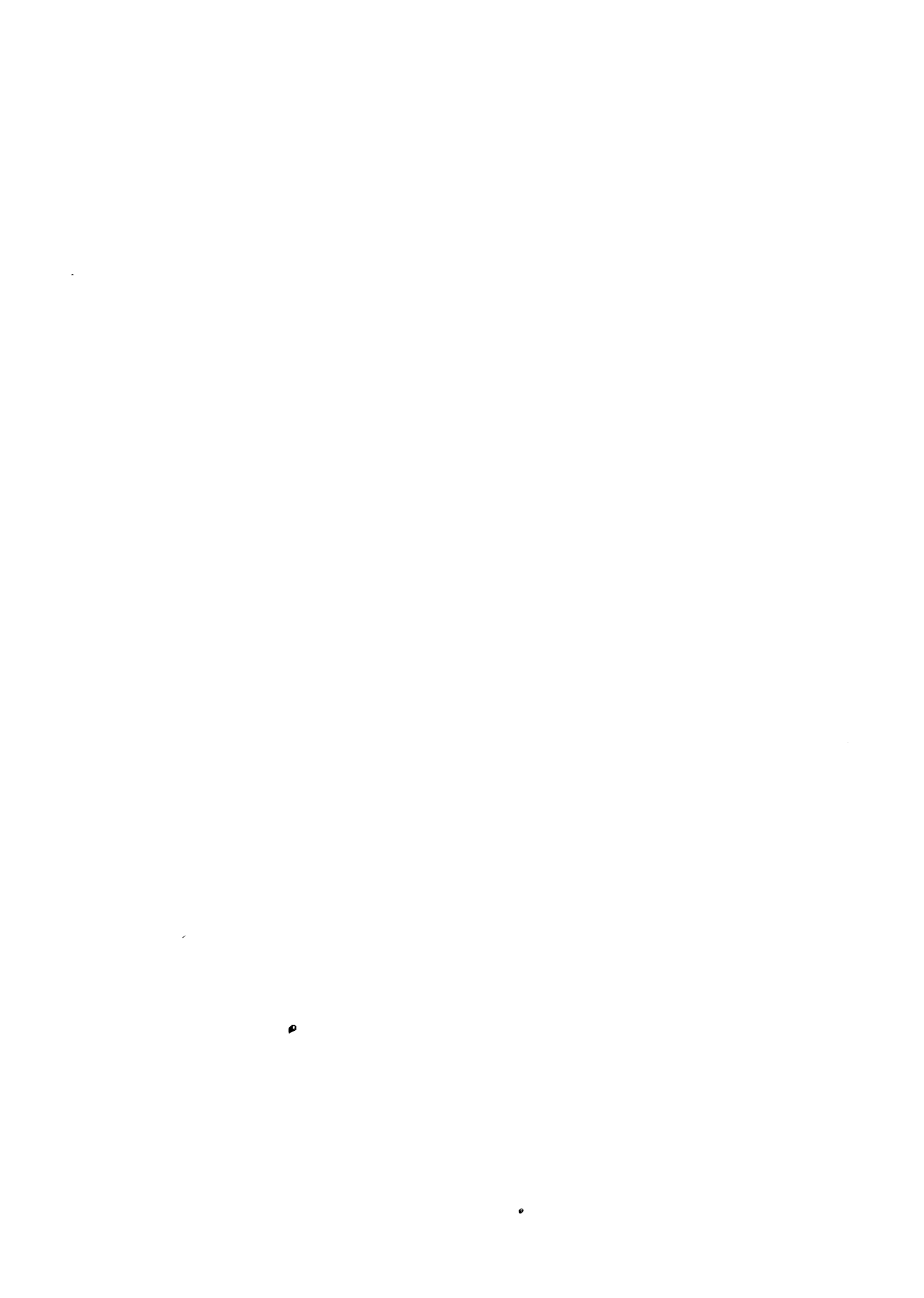


Table 1 Crude death rates, age-sex specific death rates, and male to female ratios of death rates over the period 1984-1997

<i>Crude death rates (all age groups)</i>														
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Men	5.09	5.1	4.77	5.01	4.95	5.22	5.2	5.39	5.58	6.14	6.23	6.6	6.95	5.86
Women	3.66	3.82	3.6	3.78	3.63	3.78	3.68	3.81	3.88	4.14	4.08	4.2	4.3	3.73
<i>Age-sex specific death rates (age group 15-49 years old)</i>														
Men	3.176	3.016	2.741	2.775	2.786	2.991	3.057	3.19	3.34	3.927	4.193	4.819	5.403	4.607
Women	1.613	1.605	1.438	1.376	1.31	1.366	1.296	1.313	1.287	1.386	1.397	1.531	1.729	1.565
<i>Age-sex specific death rates (age group 25-29 years old)</i>														
Men	2.912	2.646	2.33	2.3	2.371	2.634	2.647	2.677	2.976	3.747	4.355	5.303	6.246	5.47
Women	1.175	1.117	0.99	0.913	0.884	0.919	0.884	0.896	0.899	0.991	1.033	1.261	1.567	1.614
<i>Male to female ratios of death rates</i>														
All Ages	1.391	1.335	1.325	1.325	1.364	1.381	1.413	1.415	1.438	1.483	1.527	1.571	1.616	1.571
15-49 yrs	1.969	1.879	1.906	2.017	2.127	2.190	2.359	2.430	2.595	2.833	3.001	3.148	3.125	2.944
25-29 yrs	2.478	2.369	2.354	2.519	2.682	2.866	2.994	2.988	3.310	3.781	4.216	4.205	3.986	3.389

Table 2 Age-sex specific death rates, whole country, 1984-1997

MALE														
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	3.83	3.88	3.21	3.29	2.83	2.70	2.61	2.59	2.39	2.48	2.33	2.33	2.19	1.25
5-9 years	1.05	1.02	0.84	0.92	0.77	0.70	0.72	0.65	0.62	0.66	0.64	0.63	0.67	0.62
10-14 years	0.83	0.78	0.68	0.67	0.60	0.61	0.60	0.61	0.58	0.63	0.68	0.65	0.69	0.58
15-19 years	1.54	1.45	1.30	1.42	1.41	1.64	1.76	1.82	1.89	2.21	2.31	2.54	2.69	2.09
20-24 years	2.46	2.28	1.97	2.07	2.09	2.38	2.48	2.62	2.80	3.24	3.40	3.87	4.16	3.19
25-29 years	2.91	2.65	2.33	2.30	2.37	2.63	2.65	2.68	2.98	3.75	4.36	5.30	6.25	5.47
30-34 years	2.93	2.74	2.52	2.46	2.67	2.79	2.90	3.02	3.23	3.98	4.52	5.37	6.47	5.74
35-39 years	3.60	3.44	3.16	3.07	3.16	3.34	3.38	3.63	3.88	4.46	4.85	5.39	6.02	5.33
40-44 years	5.18	4.75	4.29	4.23	4.28	4.39	4.53	4.72	4.69	5.36	5.42	5.71	6.03	5.21
45-49 years	6.85	6.39	6.06	6.20	5.91	5.97	5.87	5.93	5.97	6.89	6.68	7.13	7.47	6.12
50-54 years	9.19	8.93	8.59	8.59	8.43	8.76	8.52	8.61	8.75	9.29	8.99	8.88	9.02	7.33
55-59 years	11.75	11.96	11.08	11.96	11.44	12.00	11.62	12.13	11.91	12.54	12.03	12.09	12.32	10.16
60-64 years	17.90	18.11	16.79	17.87	17.70	18.73	18.23	18.72	18.71	18.90	18.17	17.63	18.31	14.64
65-69 years	26.59	27.27	25.27	25.87	25.19	26.72	25.21	26.28	27.06	28.86	27.83	26.69	26.32	21.04
70-74 years	35.50	37.15	36.30	38.83	39.04	38.33	38.45	37.87	38.04	38.69	38.14	38.54	38.34	30.88
75+	70.22	74.86	73.03	79.25	77.63	81.78	79.27	83.72	87.91	92.57	88.73	89.95	86.61	72.41
Total	5.09	5.10	4.77	5.01	4.95	5.22	5.20	5.39	5.58	6.14	6.23	6.60	6.95	5.86
FEMALE														
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	3.02	3.05	2.54	2.57	2.18	1.98	1.87	1.93	1.77	1.84	1.77	1.84	1.77	0.93
5-9 years	0.88	0.88	0.69	0.76	0.59	0.54	0.54	0.48	0.45	0.45	0.43	0.43	0.42	0.43
10-14 years	0.64	0.64	0.53	0.54	0.47	0.45	0.43	0.41	0.39	0.43	0.42	0.41	0.41	0.34
15-19 years	0.94	0.88	0.75	0.77	0.74	0.77	0.72	0.73	0.69	0.77	0.73	0.69	0.76	0.63
20-24 years	1.13	1.06	0.97	0.90	0.85	0.89	0.83	0.79	0.80	0.84	0.90	1.03	1.27	1.14
25-29 years	1.18	1.12	0.99	0.91	0.88	0.92	0.88	0.90	0.90	0.99	1.03	1.26	1.57	1.61
30-34 years	1.41	1.34	1.24	1.14	1.10	1.12	1.11	1.10	1.08	1.18	1.23	1.39	1.63	1.60
35-39 years	1.88	1.92	1.65	1.61	1.53	1.58	1.43	1.49	1.46	1.55	1.63	1.72	1.86	1.65
40-44 years	2.84	2.78	2.60	2.38	2.23	2.41	2.29	2.34	2.28	2.34	2.35	2.36	2.45	2.13
45-49 years	3.61	3.82	3.39	3.43	3.16	3.39	3.27	3.28	3.22	3.53	3.30	3.53	3.60	3.04
50-54 years	5.21	5.43	5.20	5.15	5.12	5.01	4.97	4.97	4.99	5.13	4.92	4.87	4.84	4.28
55-59 years	7.37	7.59	6.81	7.40	7.07	7.35	6.90	7.24	7.00	7.63	7.11	6.91	7.18	6.16
60-64 years	12.21	12.24	11.55	11.87	11.24	11.74	11.55	11.32	11.65	11.88	11.29	11.25	11.64	9.76
65-69 years	17.47	18.38	16.51	17.68	16.50	17.49	16.81	17.57	18.21	19.26	18.67	18.06	17.49	14.68
70-74 years	24.63	25.97	26.29	27.67	27.19	27.06	26.59	25.95	26.72	28.06	27.92	27.83	27.91	24.11
75+	52.42	57.46	57.94	63.81	62.85	67.46	66.31	70.89	73.66	78.73	76.66	78.02	76.13	65.52
Total	3.66	3.82	3.60	3.78	3.63	3.78	3.68	3.81	3.88	4.14	4.08	4.20	4.30	3.73

Table 3 Increases in death rates relative to the 1984-1991 death rates baseline, by age and sex, whole country, 1992-1997

Male	1992	1993	1994	1995	1996	1997	Female	1992	1993	1994	1995	1996	1997
0-4 years	-0.232	-0.204	-0.254	-0.255	-0.299	-0.599	0-4 years	-0.260	-0.232	-0.260	-0.232	-0.261	-0.610
5-9 years	-0.264	-0.215	-0.233	-0.241	-0.199	-0.258	5-9 years	-0.326	-0.328	-0.365	-0.359	-0.370	-0.353
10-14 years	-0.139	-0.064	0.018	-0.036	0.030	-0.135	10-14 years	-0.233	-0.169	-0.184	-0.194	-0.200	-0.346
15-19 years	0.227	0.436	0.497	0.648	0.748	0.354	15-19 years	-0.120	-0.026	-0.075	-0.120	-0.036	-0.199
20-24 years	0.219	0.411	0.481	0.687	0.812	0.392	20-24 years	-0.139	-0.091	-0.026	0.115	0.372	0.224
25-29 years	0.160	0.461	0.698	1.068	1.435	1.133	25-29 years	-0.076	0.019	0.063	0.297	0.611	0.660
30-34 years	0.173	0.444	0.640	0.950	1.351	1.084	30-34 years	-0.099	-0.017	0.025	0.161	0.364	0.335
35-39 years	0.159	0.332	0.448	0.610	0.798	0.591	35-39 years	-0.107	-0.052	-0.003	0.053	0.134	0.007
40-44 years	0.033	0.180	0.193	0.255	0.326	0.146	40-44 years	-0.080	-0.058	-0.054	-0.050	-0.012	-0.144
45-49 years	-0.028	0.120	0.087	0.160	0.215	-0.004	45-49 years	-0.057	0.034	-0.033	0.032	0.055	-0.110
50-54 years	0.006	0.067	0.033	0.021	0.037	-0.157	50-54 years	-0.027	0.000	-0.041	-0.052	-0.058	-0.166
55-59 years	0.014	0.068	0.025	0.029	0.049	-0.135	55-59 years	-0.030	0.058	-0.014	-0.042	-0.004	-0.146
60-64 years	0.039	0.049	0.009	-0.021	0.017	-0.187	60-64 years	-0.006	0.014	-0.036	-0.039	-0.006	-0.167
65-69 years	0.039	0.108	0.068	0.025	0.010	-0.192	65-69 years	0.052	0.113	0.079	0.044	0.011	-0.151
70-74 years	0.010	0.027	0.012	0.023	0.018	-0.181	70-74 years	0.011	0.062	0.057	0.054	0.056	-0.088
75+	0.135	0.195	0.145	0.161	0.118	-0.065	75+	0.181	0.262	0.229	0.251	0.220	0.050
Total	0.096	0.207	0.224	0.296	0.364	0.152	Total	0.043	0.114	0.098	0.129	0.157	0.003

Indicate that death rates are lower than the 1984-1991 death rates baseline

Table 4 Age-sex specific death rates by region, 1984-1997

MALE-CENTRAL

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	3.50	3.48	2.94	3.05	2.85	2.95	2.92	3.01	2.77	3.06	2.84	2.91	2.57	1.09
5-9 years	0.89	0.87	0.72	0.85	0.71	0.65	0.64	0.63	0.60	0.65	0.64	0.61	0.63	0.60
10-14 years	0.76	0.68	0.63	0.70	0.62	0.72	0.64	0.72	0.63	0.82	0.81	0.75	0.65	0.54
15-19 years	1.70	1.60	1.41	1.70	1.78	2.31	2.51	2.64	2.83	3.32	3.33	3.39	2.56	2.14
20-24 years	2.41	2.39	2.00	2.33	2.54	3.07	3.31	3.67	3.90	4.55	4.56	4.75	3.74	3.41
25-29 years	3.00	2.73	2.45	2.57	2.79	3.37	3.47	3.62	3.90	4.59	5.00	5.43	4.84	5.23
30-34 years	3.22	2.81	2.55	2.67	2.94	3.37	3.59	3.81	3.86	4.69	4.95	5.41	5.29	5.31
35-39 years	3.72	3.31	3.12	3.16	3.34	3.77	3.89	4.28	4.53	5.20	5.45	5.75	5.45	5.53
40-44 years	5.06	4.57	3.85	3.96	4.19	4.58	4.73	5.22	5.18	6.03	6.21	6.25	5.61	5.38
45-49 years	6.37	6.25	5.60	5.90	5.82	5.87	6.02	6.27	6.21	7.46	7.07	7.43	6.98	6.21
50-54 years	8.43	8.12	7.66	8.11	8.18	8.57	8.32	8.85	9.01	9.91	9.31	9.33	8.11	7.30
55-59 years	11.87	11.63	11.03	11.71	11.34	11.98	12.02	12.52	12.08	12.58	12.62	12.05	11.43	9.89
60-64 years	17.99	17.22	15.90	17.64	17.92	19.15	18.76	19.45	18.74	19.69	19.00	17.52	17.24	14.59
65-69 years	26.46	26.60	23.76	24.30	24.15	26.23	24.81	26.28	26.27	29.05	27.65	25.75	24.82	22.10
70-74 years	36.03	35.78	35.26	38.41	39.62	38.71	38.28	38.77	38.77	40.64	39.39	38.17	34.54	30.18
75+	79.99	79.75	77.11	84.86	82.14	86.92	83.31	88.20	89.48	95.84	88.54	89.21	79.70	70.67
Total	5.29	5.16	4.79	5.21	5.29	5.77	5.79	6.14	6.28	7.05	7.02	7.15	6.57	6.01

MALE-NORTHEAST

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	3.48	3.66	3.11	3.42	2.85	2.55	2.30	2.29	2.13	1.97	1.85	1.78	1.74	1.14
5-9 years	1.09	1.08	0.87	0.95	0.76	0.71	0.71	0.62	0.64	0.67	0.71	0.66	0.73	0.61
10-14 years	0.85	0.80	0.68	0.68	0.57	0.55	0.50	0.54	0.56	0.53	0.61	0.59	0.66	0.51
15-19 years	1.30	1.29	1.17	1.14	1.07	1.14	1.11	1.16	1.26	1.45	1.62	1.94	2.71	1.92
20-24 years	2.23	1.89	1.80	1.70	1.54	1.65	1.68	1.70	1.88	2.18	2.35	3.04	3.99	2.86
25-29 years	2.44	2.34	2.18	1.94	1.85	1.88	1.81	1.78	2.02	2.50	2.99	3.98	5.98	4.70
30-34 years	2.38	2.32	2.36	2.23	2.17	2.22	2.23	2.25	2.46	2.82	3.17	3.94	5.31	4.68
35-39 years	3.24	3.33	3.19	3.05	3.10	2.95	2.96	3.03	3.23	3.55	3.75	4.21	5.02	4.30
40-44 years	5.03	4.77	4.72	4.95	4.63	4.59	4.46	4.65	4.48	4.98	4.66	4.93	5.53	4.65
45-49 years	7.47	6.94	7.17	7.29	6.79	6.72	6.32	6.18	6.52	7.09	6.82	7.12	7.69	6.03
50-54 years	10.68	10.47	10.66	10.49	10.12	10.07	9.73	9.64	9.69	10.06	9.63	9.40	9.97	8.04
55-59 years	12.65	13.27	12.71	14.18	13.38	13.51	12.55	13.16	13.07	14.06	12.82	13.64	14.02	11.41
60-64 years	20.40	21.18	19.97	21.46	20.53	21.37	20.19	20.41	20.34	19.94	19.22	18.85	19.78	16.20
65-69 years	29.24	30.40	30.56	31.23	29.38	31.30	28.09	28.82	30.26	31.78	30.90	30.26	29.10	22.61
70-74 years	38.86	43.43	43.12	46.44	45.66	43.39	42.95	39.18	38.29	39.20	39.09	40.75	42.55	37.53
75+	69.14	74.38	73.06	81.14	78.71	81.94	75.32	81.95	84.42	91.96	88.43	91.30	89.99	73.86
Total	4.59	4.74	4.62	4.89	4.67	4.77	4.56	4.70	4.86	5.26	5.28	5.70	6.38	5.21

Table 4 Age-sex specific death rates by region, 1984-1997

MALE-NORTH															
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
0-4 years	4.34	4.51	3.46	3.44	2.89	2.54	2.52	2.72	2.49	2.57	2.81	3.05	2.76	1.21	
5-9 years	1.09	1.09	0.86	0.91	0.80	0.68	0.69	0.69	0.57	0.56	0.60	0.64	0.67	0.56	
10-14 years	0.86	0.84	0.77	0.68	0.61	0.64	0.66	0.58	0.58	0.54	0.75	0.69	0.84	0.55	
15-19 years	1.76	1.60	1.40	1.46	1.55	1.55	1.79	1.80	1.84	1.99	2.28	2.58	2.90	2.15	
20-24 years	2.61	2.61	2.18	2.17	2.23	2.33	2.38	2.43	2.74	3.10	3.99	4.67	5.64	3.72	
25-29 years	3.03	2.74	2.26	2.25	2.35	2.37	2.46	2.50	3.05	4.50	6.44	8.65	10.92	8.88	
30-34 years	2.82	3.03	2.60	2.43	2.92	2.55	2.76	2.94	3.60	4.69	6.68	8.77	11.88	9.90	
35-39 years	3.75	3.85	3.27	3.06	3.17	3.33	3.34	3.77	4.25	4.91	6.31	7.43	9.39	7.62	
40-44 years	5.80	5.47	4.64	4.10	4.20	4.21	4.63	4.57	4.94	5.43	6.39	7.19	8.46	6.72	
45-49 years	7.32	6.49	5.86	6.07	5.47	5.60	5.52	5.67	5.85	6.59	7.44	8.35	9.44	7.38	
50-54 years	8.97	9.09	8.45	8.31	8.10	8.49	8.26	8.37	8.72	8.71	9.53	9.80	10.60	7.99	
55-59 years	11.58	11.94	10.44	11.13	10.81	11.29	10.91	11.82	11.93	11.79	12.54	12.54	13.74	11.02	
60-64 years	17.85	18.97	16.74	17.04	17.25	18.00	17.58	18.98	19.14	18.35	18.96	19.09	20.31	16.03	
65-69 years	25.61	27.76	24.41	25.19	25.12	24.67	24.37	26.27	28.73	28.24	29.80	28.66	28.48	23.16	
70-74 years	35.58	38.30	35.75	38.41	38.25	37.82	38.68	36.98	38.40	35.28	38.15	40.90	44.29	37.03	
75+	69.41	77.37	75.86	80.39	80.24	80.82	81.47	86.53	95.02	86.42	95.29	97.51	94.90	77.57	
Total	5.55	5.77	5.19	5.34	5.36	5.43	5.54	5.85	6.33	6.60	7.71	8.57	9.67	7.72	
MALE-SOUTH															
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
0-4 years	4.47	4.10	3.41	2.87	2.37	2.51	2.64	2.13	1.98	2.32	1.82	1.62	1.80	0.98	
5-9 years	1.24	1.07	0.98	1.00	0.86	0.80	0.95	0.74	0.63	0.74	0.52	0.62	0.59	0.73	
10-14 years	0.84	0.84	0.67	0.55	0.61	0.54	0.72	0.58	0.53	0.60	0.55	0.55	0.68	0.87	
15-19 years	1.46	1.27	1.24	1.40	1.25	1.49	1.68	1.70	1.46	1.94	1.77	2.11	2.70	2.43	
20-24 years	3.05	2.38	2.06	2.05	1.98	2.38	2.45	2.44	2.26	2.68	2.22	2.66	3.74	3.01	
25-29 years	3.58	3.00	2.48	2.45	2.47	2.81	2.75	2.52	2.62	3.26	2.82	3.39	4.41	3.75	
30-34 years	3.82	3.18	2.72	2.55	2.69	2.98	2.92	2.82	2.68	3.57	3.01	3.36	4.52	3.91	
35-39 years	4.15	3.45	3.04	2.93	2.81	3.24	3.17	3.13	3.02	3.83	3.24	3.71	4.40	3.76	
40-44 years	5.11	4.22	3.77	3.22	3.71	3.71	4.08	3.85	3.54	4.43	3.58	3.59	4.28	3.92	
45-49 years	6.05	5.46	4.95	4.65	4.74	5.04	4.95	4.94	4.16	5.44	4.23	4.55	5.21	4.96	
50-54 years	8.40	7.47	6.75	6.22	6.04	7.00	6.88	6.17	6.11	6.90	5.89	5.17	6.68	5.82	
55-59 years	9.89	9.90	8.70	9.03	8.42	9.98	9.80	9.35	8.82	10.33	8.03	8.03	8.62	8.06	
60-64 years	13.78	13.53	13.33	13.32	13.09	14.55	14.85	13.81	15.09	16.26	12.80	12.88	14.73	11.64	
65-69 years	23.78	22.15	19.51	19.70	19.11	21.88	21.55	21.37	20.37	24.55	19.91	19.19	21.08	17.00	
70-74 years	29.71	29.23	28.97	28.36	28.42	30.64	31.64	35.87	36.29	40.46	33.86	31.90	32.26	25.35	
75+	54.17	62.84	61.07	63.20	62.78	71.69	74.03	73.04	81.14	95.94	81.26	78.95	85.61	64.17	
Total	5.17	4.89	4.46	4.36	4.25	4.74	4.86	4.65	4.62	5.53	4.59	4.73	5.49	4.57	

Table 4 Age-sex specific death rates by region, 1984-1997

FEMALE-CENTRAL

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	2.66	2.83	2.25	2.52	2.22	2.15	2.16	2.30	2.05	2.16	2.31	2.30	2.05	0.96
5-9 years	0.75	0.74	0.56	0.65	0.48	0.49	0.44	0.48	0.43	0.40	0.41	0.37	0.36	0.42
10-14 years	0.59	0.56	0.47	0.48	0.46	0.47	0.42	0.41	0.40	0.48	0.42	0.41	0.34	0.30
15-19 years	0.91	0.77	0.64	0.78	0.78	0.85	0.81	0.84	0.80	1.01	0.90	0.80	0.65	0.69
20-24 years	0.95	0.87	0.76	0.81	0.82	0.90	0.88	0.91	0.90	1.00	0.94	0.96	0.87	0.96
25-29 years	0.93	0.93	0.77	0.84	0.87	0.97	0.94	0.97	0.95	1.01	1.02	1.09	0.97	1.22
30-34 years	1.13	1.12	1.00	0.99	1.03	1.10	1.12	1.10	1.12	1.17	1.19	1.27	1.17	1.33
35-39 years	1.55	1.56	1.31	1.41	1.44	1.53	1.39	1.49	1.45	1.58	1.62	1.59	1.47	1.49
40-44 years	2.40	2.26	2.01	1.92	1.93	2.28	2.13	2.21	2.20	2.34	2.25	2.27	1.99	1.97
45-49 years	3.05	3.25	2.75	3.00	2.73	3.21	3.12	3.05	3.07	3.44	3.19	3.13	2.94	2.89
50-54 years	4.45	4.38	4.12	4.41	4.34	4.72	4.47	4.39	4.66	4.95	4.67	4.59	4.02	3.78
55-59 years	6.50	6.40	6.00	6.47	6.29	6.65	6.32	6.67	6.30	7.02	6.59	6.28	6.07	5.42
60-64 years	9.97	10.47	9.38	10.17	9.72	10.29	10.41	10.66	10.53	11.23	10.49	10.14	9.61	8.64
65-69 years	14.43	15.03	13.06	14.11	13.52	14.75	14.12	15.24	16.02	17.17	16.49	15.68	14.57	13.10
70-74 years	22.03	22.23	21.97	23.80	23.21	24.06	24.17	24.14	24.80	27.04	25.93	24.97	22.83	19.72
75+	58.35	59.65	59.71	66.10	65.52	69.87	68.38	73.20	72.88	78.10	74.28	74.80	70.41	62.78
Total	3.55	3.62	3.37	3.70	3.62	3.90	3.80	3.99	4.00	4.34	4.21	4.20	3.92	3.62

FEMALE-NORTHEAST

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	2.85	2.88	2.58	2.55	2.19	1.86	1.65	1.67	1.59	1.52	1.31	1.37	1.47	0.86
5-9 years	0.95	1.01	0.74	0.80	0.64	0.58	0.55	0.50	0.46	0.49	0.44	0.48	0.45	0.44
10-14 years	0.67	0.68	0.57	0.58	0.49	0.43	0.41	0.41	0.38	0.42	0.42	0.43	0.43	0.34
15-19 years	0.94	0.94	0.79	0.74	0.67	0.69	0.62	0.61	0.60	0.60	0.57	0.58	0.73	0.54
20-24 years	1.30	1.23	1.11	1.00	0.84	0.84	0.71	0.69	0.70	0.67	0.76	0.85	1.15	0.98
25-29 years	1.36	1.27	1.23	0.99	0.84	0.82	0.79	0.82	0.83	0.86	0.91	1.06	1.49	1.40
30-34 years	1.67	1.44	1.37	1.23	1.16	1.16	1.10	1.09	1.05	1.18	1.18	1.27	1.58	1.34
35-39 years	2.17	2.15	1.91	1.89	1.62	1.69	1.44	1.45	1.51	1.61	1.57	1.75	1.87	1.56
40-44 years	3.07	3.18	3.27	3.01	2.72	2.69	2.49	2.53	2.47	2.52	2.55	2.51	2.77	2.20
45-49 years	4.19	4.73	4.14	4.26	3.91	3.97	3.69	3.70	3.72	4.02	3.79	4.18	4.14	3.28
50-54 years	6.54	6.78	6.87	6.65	6.51	6.06	6.16	5.88	5.88	5.90	5.60	5.70	5.88	4.95
55-59 years	8.43	9.13	8.14	9.22	8.41	8.82	7.98	8.29	8.27	9.01	8.50	8.17	8.72	7.06
60-64 years	15.50	14.43	14.81	14.94	14.16	14.12	13.50	12.70	13.81	13.75	12.71	12.94	13.78	10.98
65-69 years	20.55	22.48	21.12	22.96	20.88	22.25	20.08	21.24	21.78	23.28	22.06	21.80	20.42	16.64
70-74 years	29.54	31.60	33.86	34.41	34.05	33.05	31.15	29.02	28.32	29.92	29.91	30.65	32.93	28.99
75+	52.71	57.74	58.97	66.38	62.85	67.44	64.91	68.61	72.65	77.00	76.41	79.77	78.71	67.50
Total	3.59	3.78	3.67	3.84	3.59	3.67	3.48	3.55	3.66	3.88	3.80	3.98	4.19	3.53

Table 4 Age-sex specific death rates by region, 1984-1997.

FEMALE-NORTH

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	3.841	4.348	2.947	3.454	2.410	2.258	2.017	2.036	1.706	2.036	2.391	1.953	1.990	1.191
5-9 years	0.90	0.79	0.67	0.86	0.63	0.50	0.49	0.41	0.48	0.41	0.46	0.46	0.50	0.46
10-14 years	0.67	0.69	0.57	0.64	0.50	0.44	0.41	0.43	0.39	0.43	0.49	0.39	0.50	0.34
15-19 years	1.10	1.11	0.95	0.95	0.89	0.84	0.79	0.81	0.73	0.77	0.93	0.87	1.02	0.73
20-24 years	1.22	1.12	1.08	1.01	1.00	0.98	0.91	0.76	0.84	0.95	1.31	1.82	2.73	2.11
25-29 years	1.24	1.19	1.01	0.99	0.95	0.89	0.88	0.87	0.93	1.13	1.45	2.30	3.36	3.43
30-34 years	1.32	1.40	1.38	1.30	1.19	1.16	1.09	1.14	1.14	1.18	1.55	2.08	2.91	2.85
35-39 years	1.93	2.28	1.79	1.64	1.69	1.61	1.56	1.62	1.49	1.62	1.94	2.21	2.78	2.24
40-44 years	3.39	3.13	2.88	2.52	2.27	2.60	2.58	2.67	2.54	2.30	2.59	2.83	3.22	2.65
45-49 years	3.86	4.04	3.80	3.58	3.31	3.47	3.31	3.56	3.38	3.37	3.50	3.98	4.68	3.54
50-54 years	5.04	5.84	5.39	5.33	5.26	5.02	5.01	5.54	5.41	5.23	5.42	5.29	5.69	4.80
55-59 years	7.77	8.06	7.16	7.59	7.31	7.60	7.26	7.87	7.59	7.78	7.82	8.01	8.29	7.05
60-64 years	12.67	13.58	12.25	12.71	12.00	12.94	12.24	12.42	12.31	11.87	12.46	12.54	13.88	11.42
65-69 years	18.07	19.91	17.53	19.05	18.08	18.19	18.66	19.14	20.34	19.89	21.48	20.61	20.83	16.59
70-74 years	26.52	29.89	28.83	31.97	30.99	29.80	29.22	28.32	29.46	27.74	31.26	32.92	34.48	29.75
75+	54.06	62.23	62.96	68.16	69.53	73.67	71.46	78.71	83.95	81.08	88.26	90.98	87.88	74.44
Total	4.08	4.44	4.13	4.36	4.22	4.31	4.21	4.48	4.64	4.61	5.13	5.50	5.97	5.03

FEMALE-SOUTH

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
0-4 years	3.71	3.40	2.95	2.39	1.92	1.96	1.95	1.74	1.50	1.71	1.36	1.37	1.41	0.92
5-9 years	0.93	0.90	0.81	0.79	0.62	0.58	0.81	0.55	0.45	0.51	0.39	0.37	0.37	0.43
10-14 years	0.59	0.64	0.50	0.47	0.42	0.46	0.49	0.35	0.43	0.33	0.34	0.40	0.42	0.39
15-19 years	0.81	0.71	0.68	0.59	0.61	0.68	0.66	0.67	0.61	0.62	0.49	0.52	0.79	0.61
20-24 years	1.18	1.17	1.13	0.79	0.74	0.85	0.86	0.77	0.67	0.69	0.62	0.70	0.86	0.79
25-29 years	1.46	1.25	1.07	0.84	0.92	1.04	0.97	0.91	0.85	1.03	0.78	0.83	1.17	0.98
30-34 years	1.73	1.69	1.37	1.06	1.02	1.04	1.16	1.05	0.92	1.18	0.94	0.96	1.23	1.20
35-39 years	1.89	1.66	1.65	1.35	1.28	1.36	1.35	1.36	1.32	1.16	1.27	1.24	1.44	1.34
40-44 years	2.51	2.47	1.82	1.58	1.60	1.67	1.72	1.60	1.60	1.89	1.70	1.40	1.73	1.50
45-49 years	3.23	2.67	2.48	2.16	2.04	2.17	2.38	2.28	1.95	2.61	1.91	2.04	2.31	2.04
50-54 years	4.27	4.14	3.61	3.12	3.50	3.22	3.24	3.30	2.89	3.40	2.93	2.60	2.79	2.96
55-59 years	6.25	5.90	4.94	4.83	5.22	5.01	4.91	4.83	4.58	5.54	3.90	3.70	4.58	4.47
60-64 years	9.83	9.63	8.64	7.86	7.30	8.09	8.80	7.85	8.14	8.81	7.64	7.53	7.76	6.90
65-69 years	17.85	15.36	13.26	12.31	11.18	11.99	12.52	12.21	12.12	14.74	12.12	11.54	12.72	10.69
70-74 years	19.77	19.75	19.74	18.60	18.75	19.07	19.58	19.26	22.74	26.53	21.88	19.78	20.82	17.98
75+	36.26	45.56	45.31	48.11	46.92	52.63	56.10	57.61	62.81	80.42	66.89	64.79	70.11	55.70
Total	3.45	3.49	3.19	2.97	2.84	3.01	3.14	3.00	3.04	3.65	3.02	2.95	3.26	2.77

Table 5 Relative increases in death rates based on the 1984-1991 death rates by age, sex, and region, 1992-1997+A74

0-4 years: Male	1992	1993	1994	1995	1996	1997	0-4 years: Female	1992	1993	1994	1995	1996	1997
Central Region	-0.103	-0.008	-0.079	-0.057	-0.169	-0.646	Central region	-0.140	-0.095	-0.030	-0.036	-0.141	-0.599
North-Eastern Region	-0.278	-0.333	-0.373	-0.398	-0.411	-0.613	North-Eastern Region	-0.303	-0.332	-0.424	-0.400	-0.353	-0.624
North Region	-0.247	-0.222	-0.149	-0.075	-0.164	-0.632	North Region	-0.246	-0.181	-0.118	0.002	-0.095	-0.577
South Region	-0.352	-0.244	-0.406	-0.470	-0.412	-0.680	South Region	-0.401	-0.316	-0.454	-0.454	-0.438	-0.633
5-9 years : Male							5-9 years : Female						
Central Region	-0.198	-0.126	-0.141	-0.188	-0.155	-0.197	Central Region	-0.253	-0.303	-0.280	-0.350	-0.363	-0.264
North-Eastern Region	-0.243	-0.212	-0.160	-0.221	-0.135	-0.281	North-Eastern Region	-0.361	-0.323	-0.395	-0.326	-0.369	-0.393
North Region	-0.329	-0.338	-0.300	-0.246	-0.213	-0.344	North Region	-0.270	-0.382	-0.299	-0.295	-0.243	-0.303
South Region	-0.342	-0.224	-0.460	-0.356	-0.385	-0.232	South Region	-0.402	-0.316	-0.481	-0.508	-0.508	-0.429
10-14 years : Male							10-14 years : Female						
Central Region	-0.080	0.196	0.182	0.099	-0.052	-0.212	Central Region	-0.170	-0.008	-0.129	-0.151	-0.306	-0.386
North-Eastern Region	-0.141	-0.178	-0.062	-0.095	0.025	-0.212	North-Eastern Region	-0.284	-0.207	-0.215	-0.182	-0.195	-0.352
North Region	-0.181	-0.239	0.069	-0.020	0.188	-0.213	North Region	-0.288	-0.217	-0.096	-0.276	-0.081	-0.367
South Region	-0.206	-0.097	-0.181	-0.184	0.021	0.298	South Region	-0.129	-0.321	-0.314	-0.190	-0.137	-0.205
15-19 years : Male							15-19 years : Female						
Central Region	0.446	0.700	0.704	0.735	0.308	0.093	Central Region	0.005	0.261	0.124	-0.001	-0.183	-0.140
North-Eastern Region	0.071	0.235	0.384	0.651	1.306	0.634	North-Eastern Region	-0.194	-0.204	-0.244	-0.227	-0.025	-0.273
North Region	0.139	0.236	0.413	0.596	0.798	0.332	North Region	-0.210	-0.173	-0.002	-0.067	0.095	-0.214
South Region	0.019	0.353	0.233	0.473	0.884	0.692	South Region	-0.107	-0.079	-0.272	-0.226	0.162	-0.104
20-24 years : Male							20-24 years : Female						
Central Region	0.439	0.675	0.680	0.749	0.379	0.256	Central Region	0.047	0.154	0.092	0.109	0.012	0.108
North-Eastern Region	0.062	0.229	0.325	0.711	1.250	0.614	North-Eastern Region	-0.272	-0.308	-0.213	-0.122	0.194	0.018
North Region	0.159	0.311	0.686	0.971	1.382	0.571	North Region	-0.166	-0.059	0.292	0.803	1.697	1.089
South Region	-0.038	0.142	-0.056	0.130	0.591	0.281	South Region	-0.279	-0.261	-0.338	-0.249	-0.081	-0.156
25-29 years : Male							25-29 years : Female						
Central Region	0.299	0.531	0.665	0.809	0.615	0.742	Central Region	0.057	0.125	0.127	0.203	0.080	0.352
North-Eastern Region	-0.005	0.234	0.473	0.964	1.952	1.319	North-Eastern Region	-0.181	-0.148	-0.101	0.046	0.467	0.375
North Region	0.221	0.805	1.582	2.470	3.380	2.559	North Region	-0.072	0.126	0.443	1.290	2.341	2.411
South Region	-0.051	0.184	0.021	0.231	0.601	0.362	South Region	-0.198	-0.027	-0.264	-0.214	0.111	-0.066
30-34 years: Male							30-34 years: Female						
Central Region	0.238	0.502	0.588	0.733	0.697	0.703	Central Region	0.042	0.088	0.106	0.180	0.090	0.237
North-Eastern Region	0.082	0.244	0.395	0.733	1.339	1.062	North-Eastern Region	-0.178	-0.075	-0.079	-0.009	0.232	0.045
North Region	0.307	0.702	1.424	2.181	3.311	2.591	North Region	-0.088	-0.056	0.240	0.664	1.334	1.287
South Region	-0.094	0.207	0.017	0.136	0.526	0.321	South Region	-0.275	-0.064	-0.260	-0.242	-0.029	-0.054
35-39 years : Male							35-39 years : Female						
Central Region	0.269	0.457	0.526	0.608	0.525	0.548	Central Region	-0.008	0.081	0.111	0.086	0.005	0.023
North-Eastern Region	0.040	0.143	0.209	0.354	0.616	0.383	North-Eastern Region	-0.158	-0.098	-0.124	-0.024	0.044	-0.129
North Region	0.234	0.428	0.832	1.160	1.727	1.213	North Region	-0.156	-0.080	0.101	0.250	0.575	0.272
South Region	-0.068	0.183	0.000	0.145	0.360	0.162	South Region	-0.110	-0.217	-0.143	-0.165	-0.029	-0.098
40-44 years : Male							40-44 years : Female						
Central Region	0.147	0.335	0.375	0.382	0.242	0.191	Central Region	0.026	0.095	0.053	0.061	-0.069	-0.079
North-Eastern Region	-0.052	0.055	-0.015	0.044	0.170	-0.017	North-Eastern Region	-0.139	-0.123	-0.113	-0.126	-0.036	-0.233
North Region	0.051	0.155	0.359	0.530	0.799	0.430	North Region	-0.078	-0.165	-0.061	0.028	0.168	-0.039
South Region	-0.107	0.119	-0.097	-0.094	0.081	-0.011	South Region	-0.147	0.009	-0.090	-0.250	-0.078	-0.201
45-49 years : Male							45-49 years : Female						
Central Region	0.033	0.241	0.176	0.236	0.161	0.033	Central Region	0.018	0.140	0.056	0.038	-0.027	-0.043
North-Eastern Region	-0.050	0.034	-0.006	0.038	0.121	-0.122	North-Eastern Region	-0.087	-0.013	-0.070	0.027	0.016	-0.196
North Region	-0.025	0.098	0.239	0.391	0.573	0.230	North Region	-0.066	-0.069	-0.034	0.100	0.295	-0.022
South Region	-0.184	0.067	-0.170	-0.108	0.022	-0.028	South Region	-0.196	0.074	-0.212	-0.159	-0.048	-0.159
50-54 years : Male							50-54 years : Female						
Central Region	0.088	0.197	0.125	0.127	-0.020	-0.119	Central Region	0.057	0.121	0.058	0.040	-0.088	-0.143
North-Eastern Region	-0.053	-0.016	-0.059	-0.081	-0.025	-0.214	North-Eastern Region	-0.087	-0.084	-0.130	-0.114	-0.086	-0.230
North Region	0.026	0.024	0.121	0.152	0.247	-0.060	North Region	0.021	-0.013	0.022	-0.003	0.072	-0.095
South Region	-0.110	0.005	-0.142	-0.248	-0.028	-0.152	South Region	-0.187	-0.043	-0.174	-0.269	-0.213	-0.167
55-59 years : Male							55-59 years : Female						
Central Region	0.027	0.069	0.073	0.024	-0.028	-0.159	Central Region	-0.017	0.096	0.028	-0.021	-0.053	-0.155
North-Eastern Region	-0.008	0.067	-0.027	0.035	0.064	-0.134	North-Eastern Region	-0.033	0.053	-0.007	-0.045	0.020	-0.175
North Region	0.061	0.049	0.116	0.115	0.222	-0.020	North Region	0.002	0.027	0.032	0.058	0.094	-0.070
South Region	-0.060	0.101	-0.144	-0.145	-0.081	-0.142	South Region	-0.126	0.057	-0.256	-0.293	-0.126	-0.146
60-64 years: Male							60-64 years: Female						
Central Region	0.041	0.094	0.055	-0.027	-0.042	-0.189	Central Region	0.039	0.108	0.035	0.001	-0.052	-0.147
North-Eastern Region	-0.017	-0.036	-0.071	-0.089	-0.044	-0.217	North-Eastern Region	-0.032	-0.036	-0.109	-0.093	-0.034	-0.231
North Region	0.075	0.031	0.065	0.072	0.141	-0.100	North Region	-0.023	-0.058	-0.011	-0.005	0.101	-0.093
South Region	0.095	0.180	-0.072	-0.066	0.068	-0.156	South Region	-0.042	0.037	-0.101	-0.114	-0.087	-0.188

Table 5 Relative increases in death rates based on the 1984-1991 death rates by age, sex, and region, 1992-1997

65-69 years: Male	1992	1993	1994	1995	1996	1997	65-69 years: Female	1992	1993	1994	1995	1996	1997
Central Region	0.037	0.147	0.092	0.017	-0.020	-0.127	Central Region	0.122	0.202	0.155	0.098	0.020	-0.083
North-Eastern Region	0.013	0.064	0.034	0.013	-0.026	-0.243	North-Eastern Region	0.016	0.086	0.029	0.017	-0.048	-0.224
North Region	0.130	0.111	0.172	0.127	0.120	-0.089	North Region	0.095	0.070	0.156	0.109	0.121	-0.107
South Region	-0.036	0.162	-0.058	-0.092	-0.003	-0.195	South Region	-0.091	0.105	-0.091	-0.134	-0.046	-0.198
70-74 years : Male							70-74 years : Female						
Central Region	0.031	0.081	0.047	0.015	-0.081	-0.198	Central Region	0.069	0.165	0.118	0.076	-0.016	-0.150
North-Eastern Region	-0.107	-0.086	-0.088	-0.050	-0.008	-0.125	North-Eastern Region	-0.117	-0.067	-0.068	-0.045	0.026	-0.096
North Region	0.025	-0.059	0.018	0.091	0.182	-0.012	North Region	0.001	-0.058	0.062	0.118	0.171	0.011
South Region	0.195	0.333	0.116	0.051	0.063	-0.165	South Region	0.177	0.373	0.133	0.024	0.078	-0.069
75+ : Male							75+ : Female						
Central Region	0.081	0.158	0.070	0.078	-0.037	-0.146	Central Region	0.119	0.200	0.141	0.149	0.082	-0.036
North-Eastern Region	0.097	0.195	0.149	0.186	0.169	-0.040	North-Eastern Region	0.163	0.233	0.223	0.277	0.260	0.081
North Region	0.203	0.094	0.206	0.234	0.201	-0.018	North Region	0.242	0.199	0.306	0.346	0.300	0.101
South Region	0.242	0.468	0.243	0.208	0.310	-0.018	South Region	0.293	0.656	0.377	0.334	0.444	0.147
Total : Male							Total : Female						
Central Region	0.156	0.299	0.294	0.317	0.210	0.107	Central Region	0.082	0.176	0.139	0.136	0.063	-0.021
North-Eastern Region	0.036	0.121	0.125	0.215	0.361	0.110	North-Eastern Region	0.003	0.063	0.042	0.091	0.150	-0.033
North Region	0.151	0.200	0.400	0.556	0.756	0.402	North Region	0.085	0.076	0.197	0.284	0.394	0.175
South Region	-0.012	0.182	-0.018	0.012	0.175	-0.023	South Region	-0.031	0.162	-0.038	-0.061	0.041	-0.116

Indicate that death rates were lower than the 1984-1991 death rates baseline

Table 6 Children under five death rates classified by province, 1984-1997 (male only)

0-4 years : Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	3.831	3.879	3.215	3.292	2.834	2.702	2.614	2.591	2.395	2.483	2.328	2.325	2.188	1.252
Central Region	3.496	3.476	2.938	3.055	2.846	2.948	2.919	3.010	2.767	3.060	2.841	2.909	2.565	1.092
Bangkok Metropolis:	3.176	4.143	3.472	3.673	3.314	3.705	3.845	4.316	3.679	4.012	3.929	3.884	2.487	0.417
Zone 01	3.555	3.274	2.814	2.397	2.539	2.351	2.096	2.548	2.449	3.038	2.752	2.635	2.893	0.696
Samut Prakan	4.091	3.753	3.690	2.957	3.732	3.074	2.742	3.659	3.569	4.313	3.370	4.278	3.934	0.620
Nonthaburi	4.780	3.779	2.835	2.086	2.253	2.141	2.119	2.249	2.352	2.548	2.741	2.084	2.459	0.643
Pathum Thani	2.960	2.503	2.117	1.744	1.549	2.066	1.657	2.200	1.425	2.093	1.858	1.644	3.402	0.932
Ayutthaya	2.989	2.901	2.234	2.432	2.354	1.985	1.796	2.254	2.220	2.662	2.716	2.010	1.785	0.601
Ang Thong	2.920	3.541	3.408	2.497	2.088	2.286	1.777	1.353	1.739	2.972	2.620	2.263	2.474	0.865
Zone 02	3.124	2.334	2.106	2.670	2.542	2.195	2.233	2.218	2.413	1.979	2.099	2.160	2.064	1.516
Lopburi	2.678	2.424	2.134	2.159	1.977	1.672	1.480	1.103	1.615	1.165	1.870	1.372	1.482	0.846
Singburi	2.629	1.480	1.982	1.348	2.359	1.304	2.149	3.326	2.955	2.035	1.079	1.633	0.769	0.777
Chainat	2.717	1.988	2.212	2.821	2.430	2.283	2.595	2.501	2.401	1.741	1.053	1.698	1.573	0.650
Saraburi	4.989	2.610	1.710	4.047	3.978	3.779	3.229	3.841	4.689	3.675	3.742	4.447	2.473	1.017
Nakhonnayok	3.685	2.552	2.569	1.894	2.594	1.487	1.738	1.061	1.637	1.921	2.111	2.013	3.072	2.582
Suphanburi	2.622	2.378	2.164	2.770	2.258	2.080	2.294	2.123	1.816	1.755	1.965	1.814	2.538	2.587
Zone 03	4.663	4.020	3.012	3.194	3.079	3.268	3.000	2.561	2.226	2.893	2.268	2.500	2.809	1.534
Chonburi	3.434	3.100	2.369	2.196	1.929	2.762	3.509	3.248	2.957	4.828	2.382	2.742	3.107	0.418
Rayong	4.646	4.536	3.532	3.505	2.895	3.575	3.019	3.437	2.582	2.901	2.382	2.845	3.639	2.739
Chanthaburi	8.499	7.358	4.610	5.158	4.214	5.441	5.032	3.599	3.064	4.690	4.738	4.683	4.214	2.045
Trat	5.873	5.131	4.689	6.506	7.003	6.086	5.491	4.474	3.321	3.428	2.740	5.934	3.200	0.797
Chachoengsao	3.547	2.730	2.403	1.558	2.466	1.968	2.084	1.784	2.187	0.961	1.365	0.847	1.768	1.503
Prachinburi	4.602	3.540	2.385	3.790	2.896	2.506	3.262	2.140	1.532	2.916	1.202	0.646	1.525	2.024
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.752	2.368	2.680	1.590
Zone 04	3.308	2.978	2.758	2.665	2.343	2.483	2.495	2.315	2.365	2.625	2.414	2.673	2.581	1.618
Ratchaburi	3.416	3.017	3.149	3.389	1.822	2.340	2.491	2.920	2.004	1.934	2.508	2.214	2.231	1.687
Kanchanaburi	2.063	2.001	1.537	1.690	1.849	1.527	1.251	1.037	1.578	1.946	1.840	1.883	1.767	2.145
Nakhon Pathom	5.296	4.586	4.356	4.158	3.802	3.700	4.452	2.944	3.739	3.460	3.022	3.541	3.266	1.111
Samut Sakhon	4.190	3.088	3.890	2.905	2.630	2.658	3.119	3.562	2.773	2.789	3.009	4.043	3.174	1.341
Samut Songkhram	3.100	1.961	1.871	2.387	1.423	2.308	1.582	1.712	2.947	3.350	2.135	1.642	2.673	2.824
Phetchaburi	3.292	2.701	1.872	1.642	2.103	2.904	1.731	2.371	2.539	3.313	2.325	2.990	2.903	2.375
Phachuap Khiri Kha	2.178	2.941	2.398	1.806	2.325	1.953	2.080	1.653	1.270	2.369	1.849	2.211	2.381	0.664
North-Eastern Reg	3.481	3.657	3.110	3.415	2.846	2.545	2.302	2.288	2.134	1.972	1.852	1.780	1.742	1.144
Zone 05	2.625	2.812	2.392	2.384	1.947	1.801	1.700	1.761	1.678	1.617	1.517	1.565	1.811	0.909
Nakhon Ratvhasima	2.883	3.403	3.120	2.900	2.657	2.603	2.593	2.500	2.178	2.355	2.116	2.127	2.430	0.319
Buriram	3.342	3.506	2.668	2.898	2.134	1.542	1.535	1.547	1.727	1.541	1.511	1.595	1.662	1.627
Surin	3.225	2.459	1.534	1.446	1.034	1.471	1.178	1.401	1.252	0.950	0.955	1.513	1.630	1.504
Chaiyaphum	1.480	1.662	1.708	2.079	1.422	1.094	1.019	1.057	1.135	1.081	0.762	0.594	1.248	0.756
Maharakham	1.426	1.946	1.934	1.842	1.624	1.333	1.112	1.449	1.494	1.351	1.592	1.152	1.283	0.583
Zone 06	3.634	4.199	3.272	4.175	3.379	3.210	2.725	2.737	2.353	1.947	1.956	1.939	1.553	1.636
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.127	1.537	1.245	1.290	0.912
Khon Kaen	4.221	3.419	2.077	2.701	2.374	2.295	2.296	2.876	2.882	2.410	2.170	2.135	2.243	4.496
Udon Thani	3.048	3.102	2.939	3.434	2.856	2.804	2.192	2.517	2.054	1.760	1.192	1.858	1.280	0.666
Loei	2.968	4.216	3.463	3.755	3.985	3.865	3.418	3.276	2.310	3.258	3.202	3.733	2.349	0.853
Nong Khai	3.840	4.525	3.842	5.629	3.696	3.358	2.949	2.777	2.419	1.360	1.877	1.564	0.858	0.865
Kalasin	3.294	4.354	3.101	4.093	3.553	3.671	3.455	2.717	2.364	2.011	1.909	1.394	1.375	0.486
Sakonkakhon	4.069	6.288	4.926	6.329	4.849	4.326	4.143	3.671	2.872	2.037	2.329	1.898	1.297	0.753
Zone 07	4.334	4.081	3.802	3.837	3.364	2.727	2.536	2.402	2.427	2.424	2.131	1.855	1.877	0.860
Srisaket	3.478	3.584	2.706	2.721	2.695	1.675	1.531	1.376	1.792	1.313	1.579	1.675	1.910	0.994
Ubon Ratchathani	4.550	4.001	5.171	4.290	4.185	3.313	3.310	3.367	3.093	3.079	2.540	1.915	1.873	0.923
Yasothon	3.505	2.601	3.204	3.186	2.532	2.185	2.449	2.591	3.300	2.113	2.408	2.565	2.178	0.397
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.163	1.971	1.597	1.821	0.948
Roi Et	3.593	2.804	2.395	2.880	2.268	1.610	1.664	2.012	1.952	1.495	1.885	1.718	1.785	0.926
Nakhomphanom	7.113	7.722	5.114	6.502	4.723	5.134	4.719	3.239	3.190	5.722	2.171	2.069	1.448	0.631
Mukdahan	5.328	6.714	4.958	5.408	4.695	4.227	4.416	3.748	2.952	3.163	2.910	1.361	2.659	0.896

Table 6 Children under five death rates classified by province, 1984-1997 (male only)

0-4 years : Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
North Region	4.338	4.509	3.459	3.436	2.887	2.537	2.525	2.718	2.487	2.569	2.809	3.053	2.761	1.214
Zone 08	4.844	5.242	3.869	4.034	2.931	2.903	2.755	2.549	2.278	2.404	2.615	2.301	2.824	1.296
Nakhon Sawan	5.129	5.527	3.674	3.985	2.742	2.646	2.630	2.383	2.340	2.638	3.166	2.657	3.478	1.005
Uthai Thani	4.948	3.416	3.847	3.480	2.172	2.893	1.806	1.765	2.422	2.098	1.752	1.707	2.642	0.671
Kam Phaeng Phet	5.378	6.470	5.219	5.558	3.038	3.325	3.153	2.990	3.008	2.857	3.454	2.776	3.195	1.361
Tak	4.902	5.796	3.878	4.660	4.368	4.714	3.687	3.587	2.144	2.423	2.017	2.348	2.323	0.786
Sukhothai	3.607	3.820	2.642	2.147	2.539	1.581	2.317	1.970	1.270	1.546	1.416	1.316	1.595	2.452
Zone 09	4.399	4.177	3.299	3.415	2.676	2.553	2.678	2.688	2.548	2.501	2.655	2.901	2.845	1.224
Uttaradit	5.251	5.364	4.169	4.619	2.829	3.375	3.680	3.248	3.803	3.325	2.973	3.421	2.467	0.969
Phrae	5.196	3.698	3.860	3.292	2.993	2.272	2.614	2.896	2.243	1.650	2.046	2.034	1.429	1.773
Nan	4.387	4.403	3.488	2.754	2.389	2.256	2.264	1.823	1.625	1.464	2.841	4.422	2.457	1.030
Phitsanulok	4.830	4.399	4.081	4.113	3.467	3.648	3.968	4.770	4.729	4.331	4.870	4.723	5.367	0.831
Phichit	4.841	3.598	1.622	2.946	1.818	1.703	2.395	1.949	1.347	1.974	1.212	1.895	2.885	2.124
Phetchabun	2.862	3.930	2.916	2.920	2.447	2.048	1.543	1.455	1.471	1.819	1.739	1.447	1.748	0.952
Zone 10	3.900	4.266	3.297	3.001	3.051	2.241	2.205	2.877	2.590	2.759	3.101	3.772	2.633	1.143
Chiang Mai	5.141	5.181	2.301	2.773	2.713	2.079	2.034	3.019	2.348	2.542	2.323	3.350	2.462	0.351
Lamphun	3.614	5.528	5.053	3.420	2.951	2.137	1.845	2.873	1.987	1.913	2.147	1.930	2.807	0.928
Lampang	3.897	4.940	4.802	4.164	4.392	2.850	3.516	3.314	3.169	3.452	3.460	3.632	2.925	1.283
Phayao	2.942	1.914	3.313	3.178	2.202	1.426	1.353	1.971	3.295	2.703	2.913	7.497	1.174	1.400
Chiang Rai	1.772	2.334	2.352	1.835	2.348	1.822	1.583	2.146	1.962	2.418	3.931	3.677	2.989	1.894
Mae Hong Son	10.458	9.969	5.671	5.119	6.202	5.249	4.511	6.194	4.570	4.985	4.431	1.975	3.886	1.350
South Region	4.475	4.103	3.405	2.874	2.367	2.506	2.644	2.125	1.984	2.316	1.820	1.623	1.799	0.981
Zone 11	3.348	2.970	2.543	2.437	2.313	2.474	2.101	1.502	1.731	2.151	1.410	1.272	1.438	1.058
Nakhon Sri Thammarat	4.238	3.480	2.372	2.247	2.887	2.639	2.339	1.437	1.755	1.362	1.318	1.221	1.215	0.996
Krabi	4.364	2.986	3.074	3.279	2.249	3.750	1.977	1.659	2.434	8.537	1.927	1.803	1.928	0.609
Phangnga	5.189	2.769	2.421	1.634	2.213	2.245	1.347	1.155	1.453	1.426	1.324	0.617	1.976	0.457
Phuket	2.362	3.221	2.657	3.230	3.049	3.473	2.822	1.611	2.252	4.858	1.735	2.360	2.428	2.006
Surat Thani	1.435	2.715	3.400	3.186	1.818	2.035	1.975	1.767	1.169	1.262	1.308	1.250	1.233	1.522
Ranong	2.082	2.015	1.137	1.415	2.129	0.589	1.282	0.976	1.229	0.804	1.581	0.782	0.643	0.257
Chumphon	2.298	1.543	1.571	1.492	0.681	1.906	1.874	1.438	2.282	1.429	1.404	1.158	1.917	1.006
Zone 12	5.491	5.120	4.177	3.262	2.414	2.535	3.120	2.673	2.207	2.460	2.179	1.930	2.115	0.914
Songkhla	8.110	8.025	6.207	3.576	2.261	2.479	3.236	3.510	1.996	3.492	2.445	2.252	2.532	1.140
Satun	6.086	4.464	4.408	5.857	2.916	2.431	2.658	2.889	2.239	1.976	1.796	1.567	2.006	0.667
Trang	5.099	4.522	5.443	3.328	2.230	2.948	2.861	1.555	1.673	2.172	2.108	2.318	2.597	1.132
Phatthalung	2.849	2.588	2.038	1.588	1.809	1.214	2.031	1.093	1.416	1.165	0.998	1.062	1.156	1.195
Pattani	5.151	4.828	3.098	2.559	2.802	2.754	3.568	2.619	2.533	2.281	2.892	1.627	2.375	0.857
Yala	4.274	4.494	2.896	4.517	3.256	3.418	4.352	3.393	3.549	2.698	2.153	2.658	2.310	0.654
Narathiwat	4.205	3.500	2.794	2.884	2.249	2.521	2.980	2.942	2.519	2.092	2.131	1.638	1.330	0.435

Table 7 Male death rates classified by province, 1984-1997 (age group 25-29 years)

25-29 yrs : Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	2.912	2.646	2.330	2.300	2.372	2.634	2.647	2.677	2.976	3.747	4.355	5.303	6.246	5.470
Central Region	3.003	2.726	2.451	2.575	2.789	3.368	3.468	3.623	3.897	4.594	4.997	5.429	4.844	5.227
Bangkok Metropolis	2.226	2.471	2.207	2.497	2.561	2.899	3.124	3.486	3.756	3.891	4.297	4.148	2.350	3.781
Zone 01	2.740	2.211	1.993	2.070	2.493	3.146	3.312	3.831	3.965	4.361	5.828	5.983	4.950	4.800
Samut Prakan	2.597	2.584	2.419	2.405	3.056	3.473	3.848	3.847	4.490	4.249	5.803	5.721	3.320	3.200
Nonthaburi	4.200	1.530	2.225	2.394	2.477	3.657	3.388	4.381	4.427	5.068	8.334	8.466	5.058	5.493
Pathum Thani	2.016	1.825	0.912	1.068	1.171	2.495	3.258	4.372	3.448	4.815	3.676	4.794	6.876	5.411
Ayutthaya	2.154	2.461	1.911	1.547	2.177	2.479	2.442	3.125	3.378	4.074	4.853	5.083	5.481	6.333
Ang Thong	2.544	2.816	2.238	3.514	4.036	3.464	3.031	2.606	2.683	2.149	5.906	4.514	6.709	5.210
Zone 02	3.530	2.935	2.546	2.544	2.783	3.142	3.780	3.437	3.942	4.793	5.273	5.709	6.289	5.654
Lopburi	2.334	2.546	2.487	2.081	2.470	2.088	3.185	2.881	3.007	2.953	3.308	3.483	7.013	5.853
Singburi	4.742	2.709	1.842	2.045	4.344	3.135	4.215	5.579	3.805	4.762	3.486	5.356	4.790	6.841
Chainat	3.563	3.071	2.374	2.755	2.027	2.605	2.807	1.631	2.697	3.315	2.236	4.567	5.605	4.727
Saraburi	5.439	3.406	2.773	3.860	4.431	5.892	6.388	6.045	7.514	10.926	12.807	9.940	6.600	6.485
Nakhonnayok	3.799	3.011	3.860	2.330	2.519	2.327	2.621	2.664	3.829	4.161	4.821	5.800	7.965	4.608
Suphanburi	2.925	2.936	2.370	2.137	1.913	2.604	3.061	2.520	2.859	2.931	3.588	5.336	5.610	5.261
Zone 03	4.430	3.320	3.576	3.384	3.345	4.853	4.051	4.056	4.270	5.953	4.704	6.351	6.902	7.529
Chonburi	4.657	2.773	2.701	2.399	2.810	4.732	4.758	5.314	4.589	9.319	4.807	5.726	5.832	8.020
Rayong	3.312	2.860	3.152	3.562	3.653	5.438	5.004	3.562	4.804	4.864	5.914	8.782	8.832	8.554
Chanthaburi	5.810	5.232	6.162	4.812	5.441	6.154	5.334	5.233	6.143	6.419	7.893	10.002	8.700	9.331
Trat	7.739	5.382	5.133	5.036	3.336	6.491	6.555	5.331	5.832	4.832	4.728	7.590	7.946	8.043
Chachoengsao	2.216	2.901	2.681	2.516	2.272	3.705	3.397	3.242	2.527	2.266	1.809	2.360	6.093	5.003
Prachinburi	5.516	2.995	4.188	4.657	3.517	3.847	3.144	4.328	6.136	8.896	5.031	7.355	5.606	4.957
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.673	4.332	7.172	8.801
Zone 04	3.633	3.141	2.394	2.514	3.084	3.452	3.516	3.425	3.717	4.783	5.860	6.561	7.041	6.127
Ratchaburi	3.903	4.148	2.594	2.853	2.763	3.502	3.692	3.672	4.153	5.019	5.952	6.831	7.528	5.695
Kanchanaburi	3.849	3.439	2.398	2.671	3.022	3.155	3.131	2.523	4.123	3.578	5.717	4.322	6.726	5.199
Nakhon Pathom	2.932	2.409	2.256	2.105	3.400	2.955	2.990	2.770	3.105	4.728	5.649	5.919	5.190	5.827
Samut Sakhon	3.279	3.024	2.558	2.438	3.274	5.249	4.262	5.471	3.887	5.713	6.111	7.924	5.018	4.210
Samut Songkhram	2.428	2.982	2.490	2.446	2.828	2.917	3.548	2.153	3.447	3.657	5.019	2.538	7.125	5.420
Phetchaburi	4.835	2.426	1.601	2.001	3.357	3.219	3.899	4.359	3.560	6.289	6.852	10.158	11.546	9.488
Phachuap Khiri Khe	3.946	3.216	2.821	3.016	2.811	3.203	3.568	3.008	3.518	4.407	5.464	7.506	8.344	8.224
Northeast Reg.	2.445	2.342	2.180	1.942	1.846	1.882	1.805	1.776	2.018	2.501	2.985	3.981	5.983	4.701
Zone 05	2.090	2.208	1.794	1.774	1.643	1.722	1.768	1.770	1.931	2.331	2.765	3.614	5.501	4.502
Nakhon Ratvhasima	2.448	2.286	2.099	2.088	2.032	2.189	2.272	2.238	2.230	2.966	3.434	3.804	5.174	3.405
Buriram	2.203	2.813	2.066	2.063	1.642	1.707	1.542	1.466	1.929	2.273	2.504	4.163	5.983	5.223
Surin	1.867	2.661	2.166	1.676	1.389	1.580	1.880	1.631	1.686	1.423	2.354	4.194	5.831	5.600
Chaiyaphum	1.747	1.704	1.035	1.410	1.327	1.176	0.990	1.202	1.763	2.216	1.899	1.740	4.624	4.049
Maharakham	1.592	1.269	1.032	1.027	1.232	1.248	1.457	1.767	1.603	1.951	2.840	3.698	6.321	5.635
Zone 06	2.684	2.565	2.450	2.236	2.173	2.103	1.878	1.802	2.138	2.373	3.124	4.173	6.062	4.071
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.147	2.416	3.136	5.270	4.304
Khon Kaen	3.061	2.744	2.725	2.552	2.307	2.702	2.384	2.377	2.882	3.395	4.323	5.840	6.472	1.199
Udon Thani	2.436	2.545	2.500	2.264	2.042	1.958	1.725	1.700	1.804	1.855	2.015	3.666	6.307	4.268
Loei	3.200	2.912	2.871	2.872	2.535	2.142	2.311	2.016	1.727	2.747	3.272	3.184	4.949	4.256
Nong Khai	2.678	2.323	1.782	2.373	1.934	1.779	1.633	1.407	2.173	2.106	2.887	3.371	5.559	6.713
Kalasin	2.259	2.042	2.377	1.464	1.995	2.061	1.847	1.955	1.899	2.465	3.397	4.374	6.443	4.705
Sakonnakon	2.574	2.788	2.304	1.880	2.280	1.589	2.094	1.887	2.846	2.336	2.872	3.671	6.188	5.712
Zone 07	2.607	2.249	2.347	1.808	1.715	1.821	1.761	1.752	1.978	2.867	3.087	4.197	6.482	5.716
Srisaket	2.712	1.881	1.936	1.460	1.648	1.477	1.279	1.186	1.242	1.587	2.459	3.533	6.139	5.706
Ubon Ratchathani	2.722	2.526	2.773	1.721	1.613	2.020	2.373	2.292	3.139	3.702	3.996	4.945	5.822	5.452
Yasothon	1.773	2.514	2.319	1.601	1.805	1.944	1.686	1.994	1.776	2.805	2.625	4.186	6.210	6.533
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.209	3.420	4.440	7.462	6.226
Roi Et	2.713	1.755	2.124	2.026	1.555	1.820	1.603	2.141	2.191	2.509	3.290	4.648	8.171	7.206
Nakhomphanom	2.690	2.820	3.074	2.231	1.924	2.048	2.355	1.469	1.521	5.947	2.354	3.147	6.176	3.833
Mukdahan	2.457	2.678	1.171	2.437	2.616	1.571	2.116	2.086	1.796	1.935	2.152	3.338	4.956	3.376

Table 7 Male death rates classified by province, 1984-1997 (age group 25-29 years)

25-29 yrs : Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
North Region	3.030	2.741	2.256	2.250	2.347	2.368	2.465	2.496	3.046	4.502	6.439	8.654	10.925	8.877
Zone 08	3.400	2.570	2.380	2.181	2.520	2.685	2.691	2.369	2.430	3.314	3.966	4.238	6.220	5.478
Nakhon Sawan	3.115	2.199	1.816	1.959	2.424	2.548	2.646	2.289	2.524	3.580	3.516	4.407	5.793	5.597
Uthai Thani	3.400	3.861	3.012	2.035	2.744	2.328	3.062	1.793	2.307	3.664	4.954	4.906	6.388	5.032
Kam Phaeng Phet	3.991	2.764	2.593	2.250	2.523	3.046	2.908	2.409	2.432	3.058	6.023	4.729	6.644	4.764
Tak	3.338	3.150	3.663	3.002	3.027	3.606	3.301	3.393	2.567	4.500	3.599	4.241	6.338	5.712
Sukhothai	3.326	2.117	2.116	2.074	2.272	2.110	1.953	2.089	2.226	2.207	2.143	3.033	6.350	6.156
Zone 09	2.891	2.854	2.060	2.299	2.127	2.191	2.275	2.040	2.356	2.901	3.538	5.239	7.073	6.596
Uttaradit	3.439	2.445	3.494	2.272	3.324	2.676	2.660	1.980	2.412	3.628	3.972	5.369	6.154	5.954
Phrae	2.244	3.177	2.652	3.088	1.839	3.385	2.810	2.753	3.677	4.961	5.908	9.131	9.672	9.634
Nan	3.174	2.517	1.226	1.693	1.310	0.993	1.612	1.768	1.784	2.084	3.576	6.232	8.056	8.496
Phitsanulok	3.279	3.530	2.281	2.999	2.360	2.691	2.764	2.846	2.731	3.351	3.831	4.627	5.956	4.570
Phichit	2.388	1.898	0.733	1.585	1.478	1.727	1.577	0.664	0.759	1.397	1.680	3.379	6.711	5.982
Phetchabun	2.791	2.989	2.028	1.929	2.314	1.694	2.081	1.851	2.423	2.215	2.692	3.944	6.668	6.258
Zone 10	2.919	2.757	2.325	2.255	2.405	2.312	2.469	2.897	3.897	6.336	9.946	13.653	16.400	12.473
Chiang Mai	3.917	3.411	2.325	2.269	2.393	2.469	2.879	3.563	4.391	6.876	10.165	12.856	13.996	7.803
Lamphun	3.058	2.916	1.871	1.816	2.525	1.989	1.751	1.905	2.700	6.093	8.133	10.701	13.732	11.011
Lampang	2.706	2.427	2.382	2.640	2.455	1.801	2.157	2.439	3.202	4.963	6.901	9.473	12.109	11.053
Phayao	2.789	2.493	1.879	2.289	2.724	2.329	2.481	3.160	4.006	7.924	10.308	20.253	22.021	16.356
Chiang Rai	1.832	2.177	2.637	2.180	2.172	2.602	2.377	2.678	4.213	6.429	13.071	17.054	22.362	19.543
Mae Hong Son	2.521	2.870	2.499	1.880	2.599	2.012	2.676	2.202	3.198	2.719	3.966	3.849	6.480	4.726
South Region	3.578	3.000	2.485	2.446	2.472	2.806	2.746	2.519	2.616	3.263	2.816	3.393	4.412	3.753
Zone 11	4.472	3.476	3.063	3.054	3.099	3.290	3.090	2.639	3.084	3.731	2.957	4.086	5.010	4.553
Nakhon Sri Tham.	3.851	3.269	2.297	2.440	2.399	3.118	2.436	1.563	2.454	1.963	2.576	3.015	4.907	4.406
Krabi	2.009	2.649	1.752	2.503	2.878	2.184	1.805	2.677	4.126	11.544	3.431	4.613	4.479	4.502
Phangnga	5.697	4.989	1.915	1.692	1.487	2.600	2.974	4.201	1.964	1.648	1.340	2.459	4.480	4.899
Phuket	4.798	2.574	4.091	4.031	4.713	7.569	7.444	5.388	5.608	9.149	2.624	4.249	4.494	4.747
Surat Thani	5.804	4.145	4.901	4.978	4.560	3.682	3.078	3.286	2.614	2.635	3.496	4.901	4.733	3.300
Ranong	2.694	2.953	1.585	1.862	2.274	1.643	3.550	2.259	6.800	4.670	3.458	5.552	6.183	4.036
Chumphon	5.297	3.235	3.497	2.379	3.073	2.703	3.877	2.740	3.281	4.034	3.667	5.848	6.383	7.382
Zone 12	2.760	2.566	1.961	1.897	1.909	2.372	2.439	2.413	2.199	2.847	2.690	2.778	3.882	3.046
Songkhla	3.260	2.774	2.950	2.254	2.180	3.350	3.254	3.736	3.454	4.631	3.325	3.649	4.919	2.971
Satun	1.989	3.599	2.302	2.293	2.277	2.819	1.591	2.371	2.116	2.774	3.507	4.697	4.052	3.067
Trang	4.093	2.793	2.058	1.865	1.594	2.820	2.935	2.099	2.221	2.782	3.563	4.367	4.277	3.827
Phatthalung	2.758	2.706	1.565	1.366	1.864	1.722	2.326	1.607	1.796	1.721	2.126	1.944	4.828	5.557
Pattani	1.941	2.606	0.940	1.426	0.605	1.251	2.114	1.299	1.362	1.647	1.710	1.266	3.246	2.594
Yala	2.478	1.638	1.695	2.227	2.169	1.863	1.701	1.884	1.062	2.038	1.628	1.284	2.583	1.772
Narathiwat	1.669	2.043	1.163	1.655	2.530	1.614	1.532	1.989	1.499	1.772	2.256	1.722	2.192	1.992

Table 8 Male death rates classified by province, 1984-1997 (age group 15-49 years)

15-49 yrs: Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	3.176	3.016	2.741	2.775	2.786	2.991	3.057	3.190	3.340	3.927	4.193	4.819	5.403	4.607
Central Region	3.147	2.937	2.611	2.823	3.005	3.474	3.657	3.937	4.106	4.848	5.002	5.283	4.724	4.585
Bangkok Metropolis	2.611	2.933	2.488	2.840	2.821	3.206	3.396	3.844	3.891	4.088	4.410	4.364	2.879	3.671
Zone 01	2.681	2.287	2.209	2.263	2.568	3.074	3.440	3.732	4.236	4.783	5.545	5.813	5.342	4.673
Samut Prakan	2.493	2.358	2.390	2.681	2.887	3.224	3.935	4.067	4.305	4.768	5.810	5.744	3.930	3.587
Nonthaburi	3.905	2.383	2.663	2.706	2.849	3.468	3.967	4.228	4.847	5.405	7.196	7.488	5.191	4.897
Pathum Thani	2.127	1.857	1.411	1.334	1.672	2.823	3.154	3.790	4.183	5.241	4.180	4.738	7.332	5.397
Ayutthaya	2.162	2.088	1.997	1.785	2.386	2.471	2.562	2.838	3.642	4.093	4.492	4.863	5.497	5.406
Ang Thong	2.870	3.270	2.596	2.783	2.939	3.590	2.923	3.217	3.856	3.796	5.201	5.860	7.104	5.145
Zone 02	3.487	2.876	2.612	2.737	3.050	3.311	3.717	3.973	4.238	5.362	5.768	5.709	5.665	4.894
Lopburi	2.541	2.513	2.358	2.202	2.557	2.638	2.817	3.133	2.943	3.360	3.496	3.366	5.800	4.926
Singburi	3.773	3.271	2.407	2.239	3.462	3.616	5.016	4.737	4.937	4.666	4.303	5.888	5.753	5.276
Chainat	3.172	2.816	2.489	2.342	2.287	2.625	2.475	2.764	2.736	3.456	3.285	4.404	5.130	4.975
Saraburi	5.198	3.224	2.762	4.123	4.639	5.893	6.589	7.023	8.419	12.273	14.281	10.177	6.404	5.654
Nakhonnayok	4.135	3.094	3.233	2.481	2.899	2.829	3.062	3.142	3.333	4.735	4.762	4.903	6.318	3.817
Suphanburi	3.107	2.846	2.695	2.683	2.706	2.538	2.993	3.248	3.353	3.753	3.902	5.682	5.058	4.517
Zone 03	4.219	3.523	3.339	3.405	3.577	4.631	4.266	4.449	4.328	6.175	4.752	5.705	6.111	6.108
Chonburi	4.178	3.039	2.566	2.339	2.973	4.805	5.062	5.726	4.911	10.409	4.751	5.577	5.925	6.733
Rayong	3.264	3.102	3.348	3.609	3.486	4.915	4.625	4.373	4.782	4.775	5.890	6.741	6.608	6.509
Chanthaburi	5.780	5.621	5.462	4.759	5.041	5.701	5.892	5.952	5.994	6.501	7.464	8.805	7.124	6.370
Trat	6.321	5.035	4.875	5.442	5.509	6.102	7.014	5.145	5.377	5.116	5.438	8.390	7.029	6.520
Chachoengsao	2.942	2.606	2.489	2.557	2.738	2.871	3.176	3.317	2.726	2.301	2.238	2.790	5.255	4.977
Prachinburi	4.879	3.760	3.578	4.593	3.930	4.534	4.450	5.177	6.156	8.650	5.006	5.262	5.141	4.950
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.149	4.516	6.688	6.449
Zone 04	3.413	3.020	2.556	2.811	3.204	3.454	3.710	3.756	4.104	4.735	5.404	5.979	5.934	4.664
Ratchaburi	3.715	3.429	3.121	3.240	3.250	3.701	4.014	3.982	4.516	4.911	5.628	6.587	6.244	4.562
Kanchanaburi	3.387	3.331	2.607	2.975	3.221	2.967	3.365	2.937	4.246	3.881	5.053	4.699	5.160	4.545
Nakhon Pathom	3.094	2.445	2.262	2.665	3.013	3.519	3.618	3.506	3.651	4.991	5.554	5.655	5.495	4.716
Samut Sakhon	2.981	2.732	2.547	2.720	3.621	4.119	4.469	5.592	4.463	5.891	6.873	7.739	5.437	4.670
Samut Songkhram	2.758	3.113	3.071	3.050	3.161	2.809	2.894	2.397	3.154	3.708	4.158	3.383	5.339	2.892
Phetchaburi	3.884	2.624	1.849	1.936	3.067	3.339	3.864	3.958	4.112	5.044	5.221	7.284	7.735	6.191
Phachuap Khiri Kha	3.694	3.466	2.456	2.889	3.193	3.449	3.396	3.765	4.002	4.390	4.612	5.681	6.439	5.981
Northeast Reg.	2.928	2.770	2.715	2.670	2.543	2.561	2.505	2.549	2.872	2.932	3.268	3.857	4.818	3.924
Zone 05	2.507	2.343	2.171	2.279	2.202	2.250	2.263	2.281	2.438	2.714	3.083	3.491	4.527	3.900
Nakhon Ratvhasima	2.436	2.398	2.302	2.357	2.588	2.497	2.712	2.645	2.862	3.289	3.742	3.988	4.466	3.189
Buriram	2.784	2.604	2.516	2.579	2.123	2.264	2.201	2.129	2.479	2.477	2.824	3.629	4.639	4.334
Surin	2.565	2.480	2.139	2.121	1.659	1.919	2.008	2.084	2.073	1.964	2.859	3.940	4.939	4.978
Chaiyaphum	2.230	1.863	1.480	1.932	2.023	1.936	1.575	1.914	1.988	2.533	2.052	1.669	3.973	3.314
Maharakham	2.586	2.255	2.179	2.237	2.150	2.344	2.276	2.209	2.232	2.704	3.184	3.478	4.634	4.446
Zone 06	3.382	3.216	3.303	3.127	2.906	2.889	2.706	2.825	2.889	3.038	3.306	4.000	4.948	3.465
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.165	2.548	2.740	4.722	4.396
Khon Kaen	3.617	2.934	3.072	2.937	2.783	2.949	2.869	3.229	3.527	3.980	4.211	5.080	4.846	1.860
Udon Thani	3.475	3.565	3.900	3.464	3.001	2.967	3.079	2.993	2.847	2.990	2.460	3.653	4.872	3.571
Loei	3.238	3.252	3.111	3.171	2.870	2.967	2.728	2.646	2.606	2.976	2.957	3.647	4.625	3.594
Nong Khai	2.973	2.860	2.815	2.903	2.410	2.528	2.439	2.607	2.566	2.744	3.230	3.593	4.761	4.554
Kalasin	3.308	3.112	3.056	2.874	2.949	2.903	2.907	2.975	3.069	3.209	3.520	4.049	5.207	4.010
Sakonkakhon	3.388	3.500	3.542	3.334	3.362	2.912	3.188	3.368	3.473	2.934	3.370	3.710	5.459	4.202
Zone 07	2.926	2.784	2.712	2.630	2.547	2.569	2.556	2.542	3.375	3.067	3.446	4.128	5.012	4.570
Srisaket	2.900	2.217	2.294	2.216	2.053	2.080	2.098	1.991	2.186	2.383	2.550	3.127	5.380	4.548
Ubon Ratchathani	2.640	2.842	2.761	2.334	2.419	2.784	2.878	3.172	3.772	4.106	4.094	4.766	4.655	4.015
Yasothon	2.638	2.478	2.537	2.632	2.454	2.376	2.673	2.222	2.452	2.757	3.046	3.616	4.628	4.917
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.234	3.612	3.882	6.688	5.236
Roi Et	2.889	2.975	3.014	3.220	2.847	2.725	3.006	2.848	3.008	3.302	3.460	4.192	5.719	5.147
Nakhomphanom	3.637	3.936	3.530	3.141	3.114	3.180	3.021	2.982	3.121	8.108	3.422	4.064	5.246	3.324
Mukdahan	3.044	3.090	2.368	2.501	2.955	2.244	2.745	2.487	2.921	2.442	2.970	3.527	4.997	3.882

Table 8 Male death rates classified by province, 1984-1997 (age group 15-49 years)

15-49 yrs: Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
North Region	3.322	3.202	2.758	2.698	2.807	2.812	2.962	3.090	3.491	4.226	5.459	6.660	8.265	6.415
Zone 08	3.572	3.170	2.782	2.731	2.827	2.926	3.062	2.785	3.028	3.341	3.990	4.071	5.355	4.446
Nakhon Sawan	3.208	2.885	2.343	2.546	2.601	2.814	3.095	2.643	3.116	3.720	4.124	4.357	5.069	4.365
Uthai Thani	3.619	3.254	2.833	2.691	3.060	2.847	2.754	2.351	3.207	3.567	3.812	4.539	5.360	4.474
Kam Phaeng Phet	4.165	3.159	3.013	2.852	2.909	2.781	3.188	3.017	3.106	3.166	5.297	4.309	5.129	3.809
Tak	3.973	3.863	3.730	3.589	3.439	4.475	3.997	3.851	3.234	3.761	3.515	4.566	6.231	4.773
Sukhothai	3.366	3.270	2.762	2.450	2.670	2.391	2.427	2.337	2.558	2.464	2.612	2.719	5.600	5.116
Zone 09	3.187	3.185	2.562	2.585	2.636	2.608	2.686	2.761	2.950	3.303	3.854	4.566	5.697	4.971
Uttaradit	4.013	3.601	3.352	3.075	3.456	3.165	3.133	3.100	3.243	4.103	4.127	4.901	4.787	4.693
Phrae	2.350	3.300	3.408	3.397	3.413	3.810	3.461	3.970	4.482	4.873	6.095	6.601	7.531	6.673
Nan	4.392	3.416	1.902	2.151	1.864	1.646	1.683	1.916	1.929	2.220	2.829	4.948	6.091	6.088
Phitsanulok	3.470	3.525	2.858	2.903	2.837	3.139	3.234	3.453	3.750	4.072	4.746	5.090	5.171	4.337
Phichit	2.973	2.092	1.334	1.739	1.632	1.597	1.596	1.494	1.334	1.372	2.055	2.595	5.399	5.135
Phetchabun	2.488	3.157	2.472	2.293	2.568	2.223	2.658	2.433	2.654	2.972	3.183	3.714	5.524	4.773
Zone 10	3.273	3.235	2.899	2.767	2.929	2.903	3.117	3.545	4.214	5.519	7.663	9.960	12.147	8.955
Chiang Mai	3.985	3.819	2.815	2.603	2.974	3.149	3.515	4.268	4.915	6.288	8.287	10.474	12.549	7.055
Lamphun	3.457	3.373	2.852	2.627	2.692	2.247	2.403	2.699	3.650	4.914	6.356	8.270	10.660	8.361
Lampang	3.315	3.087	3.152	2.958	3.105	2.494	2.800	2.975	3.762	4.503	6.063	7.058	8.776	8.194
Phayao	2.969	2.838	2.635	2.904	2.929	3.042	2.722	3.250	3.649	6.105	7.270	12.693	14.327	10.364
Chiang Rai	2.306	2.761	2.920	2.854	2.839	3.134	3.281	3.430	4.177	5.502	9.238	11.657	14.296	12.149
Mae Hong Son	4.275	3.083	3.274	2.601	2.952	2.271	3.027	3.732	3.597	3.272	3.315	3.090	6.591	4.489
South Region	3.431	2.886	2.548	2.469	2.486	2.785	2.844	2.778	2.594	3.313	2.787	3.177	4.051	3.538
Zone 11	4.003	3.051	2.767	2.903	2.887	3.252	3.146	2.868	2.888	3.806	2.886	3.514	4.475	3.959
Nakhon Sri Thammarat	3.236	2.661	2.247	2.324	2.435	2.989	2.458	1.764	2.192	2.013	2.323	2.739	4.034	3.598
Krabi	3.086	2.226	1.997	2.790	2.429	2.581	2.302	2.702	3.104	12.299	3.376	4.094	4.092	4.488
Phangnga	5.044	3.893	2.696	2.356	1.999	2.513	2.800	3.903	1.761	2.094	1.591	2.255	4.438	3.889
Phuket	4.622	2.806	3.526	3.642	4.000	6.205	6.402	6.100	5.796	8.993	3.576	4.077	4.963	5.306
Surat Thani	5.371	3.804	4.027	4.224	3.762	3.375	3.468	3.360	2.659	2.781	3.108	3.769	4.231	3.235
Ranong	3.556	2.912	1.906	2.511	2.469	3.322	4.013	3.515	5.803	4.673	3.476	5.426	5.421	4.760
Chumphon	3.950	3.212	2.593	2.496	3.152	3.372	3.852	3.510	3.860	4.117	4.227	5.066	6.211	5.355
Zone 12	2.903	2.734	2.348	2.074	2.123	2.364	2.574	2.696	2.331	2.871	2.700	2.875	3.673	3.164
Songkhla	3.074	2.894	3.154	2.396	2.478	2.952	3.439	3.945	3.056	4.451	3.575	3.363	4.121	3.656
Satun	2.464	3.019	2.879	2.465	2.463	2.475	1.861	2.325	2.466	2.835	2.635	3.327	4.529	3.211
Trang	3.676	2.942	2.325	2.097	1.751	2.640	2.678	2.605	2.709	3.150	3.720	4.632	4.411	3.379
Phatthalung	2.431	2.404	1.497	1.507	1.666	1.944	2.526	2.106	2.090	2.074	1.799	2.163	3.765	3.565
Pattani	3.013	2.363	1.916	1.298	1.631	1.581	1.798	1.547	1.592	1.698	1.816	1.944	3.050	2.809
Yala	2.733	2.659	2.082	2.261	2.423	2.022	1.988	2.262	1.413	1.678	1.802	1.752	3.063	2.131
Narathiwat	2.382	2.775	1.829	2.318	2.258	2.145	2.115	2.190	1.914	1.904	2.104	2.226	2.662	2.639

Table 9 Male death rates classified by province, 1984-1997 (all ages)

Total : Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	5.086	5.105	4.768	5.015	4.953	5.222	5.196	5.392	5.580	6.145	6.230	6.600	6.946	5.864
Central Region	5.287	5.159	4.786	5.208	5.286	5.767	5.792	6.141	6.277	7.051	7.024	7.152	6.569	6.007
Bangkok Metropolis	4.830	5.422	4.730	5.372	5.216	5.651	5.674	6.261	6.082	6.278	6.482	6.330	4.761	5.052
Zone 01	5.350	4.760	4.832	5.047	4.820	5.548	5.572	5.963	6.423	6.905	7.387	7.420	7.727	6.364
Samut Prakan	4.481	4.209	4.621	4.646	4.667	5.062	5.481	5.670	6.050	6.392	7.091	6.892	5.886	4.982
Nonthaburi	7.689	5.053	5.732	6.407	5.527	6.632	6.683	6.663	7.316	7.864	9.221	9.114	7.372	6.302
Pathum Thani	4.200	3.964	3.599	3.133	3.669	5.224	4.949	5.960	6.065	6.803	5.932	6.117	10.147	7.414
Ayutthaya	5.099	4.680	4.728	4.844	4.734	4.926	4.820	5.226	6.016	6.473	6.640	6.679	7.840	7.237
Ang Thong	5.502	7.210	5.845	7.018	5.872	6.806	6.349	7.085	7.201	7.567	8.417	9.298	10.209	7.101
Zone 02	5.424	4.857	4.654	5.197	5.524	5.686	6.133	6.294	6.634	7.591	8.229	8.043	7.555	6.820
Lopburi	4.273	4.167	4.138	4.159	4.606	4.819	4.842	4.857	4.895	5.347	5.629	5.115	7.258	6.606
Singburi	6.722	5.984	4.940	5.429	6.980	7.338	8.771	8.719	7.998	7.772	7.648	9.387	0.416	7.836
Chainat	5.247	5.161	4.724	5.198	4.864	5.281	5.262	5.594	5.698	6.061	6.493	7.301	7.778	7.955
Saraburi	7.339	4.639	4.489	6.474	7.216	8.009	8.662	8.873	10.574	13.812	16.170	12.608	1.220	7.165
Nakhonnayok	5.919	5.376	5.288	5.135	5.214	5.289	5.919	5.608	5.990	7.400	7.235	7.054	7.867	5.350
Suphanburi	4.805	5.008	4.929	5.273	5.244	4.805	5.385	5.886	5.906	6.317	6.717	8.039	7.058	6.459
Zone 03	6.000	5.362	5.137	5.305	5.554	6.537	5.923	6.155	6.113	8.341	6.346	7.170	7.361	6.938
Chonburi	5.807	4.760	4.374	4.320	4.819	6.602	7.106	7.482	7.178	13.518	6.469	7.400	7.630	7.696
Rayong	4.796	4.841	4.902	4.966	5.231	6.306	5.661	5.925	5.837	6.017	6.652	7.297	6.591	6.446
Chanthaburi	8.266	7.775	7.346	7.066	7.236	7.594	7.977	8.235	8.144	8.658	9.492	10.802	8.218	6.984
Trat	7.912	7.084	6.749	7.291	7.440	7.669	8.294	6.885	7.000	6.728	6.543	11.082	8.932	7.127
Chachoengsao	5.048	4.569	4.468	4.455	4.920	5.001	5.347	5.425	5.054	4.378	4.390	4.549	6.888	6.711
Prachinburi	6.287	5.440	5.254	6.461	5.963	7.234	6.870	7.744	8.618	12.914	6.648	5.781	6.336	5.788
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.714	6.163	7.899	7.299
Zone 04	5.294	5.094	4.655	4.970	5.350	5.546	5.771	5.924	6.382	6.875	7.413	7.711	7.386	5.928
Ratchaburi	6.098	6.132	5.931	5.914	5.868	6.306	6.585	6.491	7.270	7.694	8.340	8.981	7.810	5.947
Kanchanaburi	3.967	4.211	3.483	3.953	4.423	4.087	4.566	4.311	5.832	5.154	6.475	6.195	6.067	5.205
Nakhon Pathom	5.347	4.907	4.756	5.373	5.618	6.008	6.123	5.862	6.299	7.204	7.712	7.652	7.172	5.747
Samut Sakhon	5.492	5.133	5.170	5.001	5.430	6.007	6.414	8.035	6.883	7.872	8.365	9.130	7.673	6.156
Samut Songkhram	5.895	6.121	5.677	6.492	5.865	5.534	5.498	5.881	5.979	7.096	7.238	5.865	7.532	4.816
Phetchaburi	5.888	4.706	3.792	3.934	5.522	6.034	6.247	6.604	6.694	7.524	7.146	8.787	8.528	6.947
Phachuap Khiri Khar	4.531	4.614	3.836	4.397	4.922	4.864	4.822	5.190	5.291	6.011	6.262	6.508	7.658	6.816
Northeast Reg.	4.595	4.737	4.616	4.887	4.668	4.766	4.564	4.700	4.860	5.257	5.276	5.702	6.385	5.207
Zone 05	3.933	4.077	3.870	4.270	4.064	4.197	4.113	4.268	4.375	4.617	4.898	5.209	5.818	4.953
Nakhon Ratvhasima	3.753	4.094	4.055	4.256	4.406	4.447	4.625	4.599	4.842	5.240	5.520	5.779	5.640	4.027
Buriram	4.158	4.443	4.348	4.554	4.124	4.233	3.870	4.138	4.357	4.314	4.554	5.312	5.493	5.268
Surin	4.150	4.259	3.413	4.060	3.185	3.712	3.667	3.793	3.515	3.276	4.438	5.702	6.202	5.847
Chaiyaphum	3.664	3.345	3.065	4.091	4.083	3.984	3.619	4.171	4.168	4.726	3.966	2.885	5.886	4.637
Maharakham	4.154	4.132	4.168	4.364	4.185	4.364	4.288	4.341	4.565	5.135	5.449	5.483	6.203	6.125
Zone 06	5.260	5.344	5.263	5.510	5.209	5.232	4.871	5.000	5.072	5.160	5.496	5.972	6.592	5.026
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.280	4.593	4.984	6.478	5.644
Khon Kaen	5.649	5.154	4.989	5.095	5.117	5.169	5.058	5.479	5.821	6.003	6.286	6.915	6.488	4.321
Udon Thani	5.491	5.718	5.946	6.035	5.553	5.558	5.560	5.592	5.431	5.562	4.561	5.546	6.422	4.577
Loei	4.709	5.169	5.185	5.152	4.868	5.005	5.080	4.633	4.524	5.142	5.406	5.705	6.508	4.873
Nong Khai	4.822	4.943	4.831	5.463	4.652	4.919	4.746	4.818	4.736	4.782	5.229	5.438	6.095	5.898
Kalasin	5.224	5.156	4.779	5.108	5.137	5.321	5.274	5.472	5.609	5.715	6.084	6.237	7.194	5.450
Sakonkakhon	5.078	5.686	5.547	6.016	5.592	5.192	5.475	5.626	5.776	5.258	5.635	5.788	7.000	5.554
Zone 07	4.666	4.871	4.815	4.958	4.815	4.956	4.751	4.872	5.199	6.136	5.477	5.982	6.827	5.722
Srisaket	4.115	3.878	3.788	4.044	3.833	4.033	3.951	4.042	4.364	4.298	4.540	4.965	6.860	5.808
Ubon Ratchathani	4.258	4.874	5.034	4.669	4.960	5.411	5.446	5.941	6.374	6.510	5.865	6.459	6.054	5.210
Yasothon	4.644	4.590	4.771	4.825	4.685	4.677	5.008	4.847	5.139	5.201	5.327	5.723	6.173	6.093
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.379	6.203	6.728	8.759	6.720
Roi Et	4.900	4.999	5.192	5.744	5.241	5.132	5.434	5.485	5.727	5.879	5.869	6.269	7.574	6.705
Nakhomphanom	6.235	6.739	5.782	6.170	5.845	5.717	5.582	5.409	5.763	13.803	5.717	6.444	6.830	4.523
Mukdahan	5.021	5.264	4.658	5.076	4.721	4.757	5.053	4.803	5.295	4.876	4.891	5.358	6.930	4.967

Table 9 Male death rates classified by province, 1984-1997 (all ages)

Total : Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
North Region	5.546	5.774	5.192	5.342	5.361	5.426	5.541	5.855	6.333	6.603	7.708	8.566	9.669	7.717
Zone 08	5.375	5.291	4.669	4.903	4.891	4.938	5.091	5.021	5.336	5.490	6.533	6.261	7.130	5.982
Nakhon Sawan	5.303	5.145	4.156	4.725	4.778	4.974	5.230	5.031	5.573	5.995	6.455	6.634	6.951	6.101
Uthai Thani	5.362	5.223	5.312	5.106	5.366	5.302	5.155	4.991	6.188	6.194	6.513	7.488	7.821	6.785
Kam Phaeng Phet	5.511	5.233	4.712	4.887	4.521	4.673	4.828	4.895	5.307	5.174	8.705	6.376	6.754	4.937
Tak	5.582	6.066	5.731	5.774	5.483	6.188	5.965	5.775	4.953	5.410	5.152	6.048	7.415	5.855
Sukhothai	5.251	5.213	4.633	4.632	4.933	4.221	4.561	4.697	4.714	4.592	5.005	4.912	7.367	6.629
Zone 09	5.274	5.437	4.794	5.058	4.831	4.971	5.104	5.260	5.737	5.790	6.373	6.987	7.753	6.839
Uttaradit	6.447	6.570	6.075	6.069	5.893	5.949	6.039	5.856	6.803	7.053	7.185	8.040	7.356	6.942
Phrae	4.747	6.695	6.849	6.919	7.103	7.585	6.756	7.723	8.861	8.801	9.448	9.889	10.346	9.321
Nan	8.062	6.157	4.333	4.459	3.823	3.947	4.111	4.343	4.600	4.649	5.416	7.873	8.393	8.209
Phitsanulok	5.136	5.404	4.865	5.304	4.780	5.157	5.755	6.113	6.570	6.555	7.385	7.440	7.330	5.785
Phichit	5.014	4.080	2.959	4.161	3.483	3.644	3.755	3.540	3.478	3.272	4.181	4.546	7.124	6.578
Phetchabun	3.875	4.711	4.339	4.134	4.410	4.156	4.464	4.355	4.682	4.914	5.183	5.515	6.937	5.800
Zone 10	5.885	6.374	5.870	5.869	6.111	6.125	6.201	6.898	7.484	8.006	9.575	11.376	12.905	9.576
Chiang Mai	7.363	7.452	5.741	5.870	6.507	6.675	6.787	7.690	8.294	8.533	9.687	11.783	13.513	7.646
Lamphun	6.388	6.818	6.418	6.211	6.110	5.637	5.804	6.109	6.747	7.740	8.652	9.970	11.983	9.190
Lampang	6.130	6.385	6.668	6.382	6.632	6.270	6.308	6.789	7.364	7.906	9.128	10.047	10.671	9.930
Phayao	5.446	5.966	5.606	5.617	5.771	5.963	5.809	6.764	7.340	8.576	9.509	13.278	14.465	10.551
Chiang Rai	3.837	5.059	5.369	5.659	5.594	5.836	5.850	6.411	7.101	7.646	10.756	12.535	14.076	12.205
Mae Hong Son	6.299	6.260	6.088	4.805	4.847	4.448	5.231	6.268	5.982	5.328	5.488	4.336	7.962	5.325
South Region	5.167	4.895	4.461	4.362	4.250	4.742	4.863	4.654	4.619	5.526	4.589	4.728	5.494	4.567
Zone 11	5.209	4.618	4.216	4.460	4.373	4.929	4.771	4.112	4.515	5.863	4.349	4.664	5.497	4.730
Nakhon Sri Thammarat	4.798	4.246	3.566	3.839	4.062	4.684	4.285	2.885	3.984	3.366	3.745	3.951	4.997	4.479
Krabi	4.258	3.416	3.324	4.163	3.785	4.108	3.436	3.819	4.496	20.876	4.558	4.713	5.111	5.065
Phangnga	6.481	5.556	4.679	4.184	3.875	4.430	4.651	5.349	3.716	3.330	3.048	3.555	6.158	5.005
Phuket	6.535	5.395	5.908	6.281	6.259	8.085	8.169	7.835	7.392	12.582	5.634	6.588	6.435	6.297
Surat Thani	5.468	5.390	5.610	5.686	5.030	4.886	4.863	4.713	4.131	4.205	4.667	4.856	5.230	3.797
Ranong	4.632	3.832	2.593	3.513	3.295	3.949	6.189	5.088	6.870	5.438	4.622	6.282	5.752	5.701
Chumphon	5.815	4.720	4.044	4.235	4.447	5.733	5.499	5.048	5.669	5.813	5.870	6.124	7.280	6.075
Zone 12	5.129	5.149	4.685	4.273	4.139	4.574	4.945	5.140	4.713	5.222	4.805	4.786	5.492	4.422
Songkhla	5.066	4.903	5.439	4.381	4.252	5.106	5.794	6.615	5.326	6.779	5.453	4.885	5.790	4.541
Satun	4.977	5.256	5.026	5.108	4.592	4.472	4.436	4.462	4.640	4.704	4.638	5.217	5.504	4.241
Trang	5.484	5.182	4.800	3.999	3.324	4.554	4.533	4.531	4.736	5.289	5.458	6.356	5.704	4.432
Phatthalung	3.984	4.599	3.295	2.979	3.744	3.762	4.559	3.760	3.875	4.091	3.560	4.062	5.023	4.350
Pattani	5.670	5.329	4.468	4.106	3.942	4.528	4.467	4.661	4.531	4.638	4.751	4.567	5.685	5.033
Yala	5.152	5.558	4.701	5.023	4.954	4.769	4.668	4.874	4.167	3.935	3.735	3.947	5.451	3.546
Narathiwat	5.374	5.587	4.308	4.756	4.526	4.153	4.783	4.769	4.682	4.533	4.672	4.249	4.914	4.287

Table 10 Children under five rates classified by province, 1984-1997 (female only)

0-4 years : Females	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	3.018	3.053	2.541	2.573	2.182	1.977	1.870	1.929	1.771	1.837	1.770	1.837	1.769	0.934
Central Region	2.656	2.833	2.248	2.519	2.218	2.150	2.155	2.297	2.051	2.158	2.313	2.299	2.049	0.955
Bangkok Metropolis	2.509	3.742	2.556	3.016	2.857	2.793	2.944	3.251	3.016	2.932	3.422	3.277	2.108	0.329
Zone 01	2.681	2.681	2.190	2.172	1.561	1.611	1.812	1.920	1.855	1.830	1.891	1.929	1.980	0.713
Samut Prakan	2.681	2.758	2.866	2.673	2.133	2.140	2.547	2.470	2.294	2.424	2.324	2.817	2.540	0.295
Nonthaburi	3.646	3.842	3.080	3.123	1.603	1.594	1.764	2.083	2.384	1.978	2.189	1.690	1.663	0.819
Pathum Thani	1.994	1.961	1.928	0.977	1.017	1.167	1.531	1.766	1.412	1.167	1.243	1.742	1.857	1.409
Ayutthaya	2.664	2.208	1.666	1.934	1.430	1.460	1.349	1.501	1.279	1.409	1.457	1.568	1.484	0.693
Ang Thong	2.289	2.941	1.078	1.808	1.284	1.393	1.590	1.432	1.722	2.009	2.201	1.056	2.419	0.453
Zone 02	2.393	1.970	1.709	2.155	1.799	1.589	1.507	1.805	1.505	1.231	1.501	1.506	1.791	1.364
Lopburi	2.265	1.839	1.566	2.062	1.169	1.145	1.550	1.460	0.949	0.790	0.934	1.002	1.126	0.462
Singburi	1.801	0.963	1.429	1.094	2.047	1.424	1.745	2.245	1.597	1.419	0.920	1.839	0.416	0.526
Chainat	2.410	2.398	1.848	3.037	2.105	1.577	1.286	1.619	1.656	1.210	0.949	1.017	1.382	0.559
Saraburi	4.157	2.171	1.455	3.123	2.955	2.652	2.074	3.105	2.582	1.927	3.002	3.135	1.220	0.569
Nakhonnayok	2.305	2.898	2.030	1.638	1.456	1.007	0.784	1.296	1.033	0.773	1.108	1.449	1.356	2.634
Suphanburi	1.764	1.773	1.867	1.780	1.533	1.537	1.375	1.408	1.367	1.271	1.567	1.049	2.142	2.710
Zone 03	3.522	2.825	2.796	2.784	2.446	2.501	1.972	2.101	1.411	2.503	1.973	2.046	2.405	1.367
Chonburi	2.405	2.569	2.254	1.743	2.097	2.533	2.280	2.198	2.189	3.624	2.041	2.160	2.933	0.212
Rayong	3.179	2.718	3.101	3.594	2.633	2.233	2.492	3.052	1.399	2.451	2.478	2.856	3.500	2.890
Chanthaburi	6.791	5.842	5.190	4.552	3.591	3.869	3.691	3.662	1.525	4.183	4.098	3.288	3.591	1.450
Trat	4.908	3.127	3.660	4.920	4.199	5.283	3.523	3.525	2.108	1.635	3.942	3.595	2.076	1.041
Chachoengsao	2.052	1.643	1.358	1.450	1.758	1.430	1.415	1.352	1.154	1.418	1.064	0.797	1.207	1.511
Prachinburi	4.370	2.216	2.880	3.038	1.967	1.827	1.295	1.808	1.374	3.211	0.937	0.421	1.350	1.725
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.709	2.615	2.113	1.140
Zone 04	2.385	2.169	1.782	2.022	1.783	1.665	1.839	1.644	1.721	1.636	1.948	2.034	1.881	1.326
Ratchaburi	2.963	2.561	2.295	1.998	1.866	1.688	1.302	1.744	1.981	1.683	2.122	2.313	1.674	1.391
Kanchanaburi	1.156	1.406	0.668	1.289	1.150	1.153	1.156	0.722	1.426	1.152	1.232	1.478	1.191	1.403
Nakhon Pathom	3.731	3.215	2.811	3.738	2.813	2.107	3.056	2.727	2.405	2.561	2.578	2.513	2.233	1.131
Samut Sakhon	2.675	2.785	2.241	2.853	2.462	1.874	2.054	2.149	1.380	1.214	2.197	1.592	1.446	1.128
Samut Songkhram	1.640	1.641	1.364	1.916	1.110	0.850	1.792	1.125	1.249	1.377	1.394	1.648	3.440	2.034
Phetchaburi	1.821	1.617	1.303	1.274	1.716	2.396	2.144	1.890	1.484	1.552	2.330	2.415	2.543	1.729
Phachuap Khiri Khan	2.528	1.914	1.784	1.295	1.213	1.356	1.606	0.978	1.432	1.397	1.465	1.843	1.754	0.937
North-East Reg.	2.854	2.875	2.581	2.549	2.192	1.860	1.645	1.670	1.589	1.523	1.312	1.367	1.474	0.857
Zone 05	2.094	2.132	1.766	1.756	1.488	1.337	1.233	1.293	1.287	1.153	1.153	1.308	1.234	0.624
Nakhon Ratvhasima	2.159	2.452	2.329	1.875	1.985	1.830	1.803	1.808	1.838	1.725	1.654	1.843	1.634	0.173
Buriram	2.439	2.629	1.920	2.198	1.819	1.445	0.916	1.577	1.219	0.982	1.119	1.219	1.140	1.288
Surin	2.770	2.034	1.310	1.376	0.811	0.944	1.191	0.924	0.939	0.913	1.017	1.308	1.197	0.966
Chaiyaphum	1.131	1.502	1.203	1.877	1.092	1.015	0.725	0.648	0.800	0.592	0.556	0.521	0.714	0.585
Maharakham	1.469	1.337	1.301	1.161	1.057	0.759	0.794	0.686	0.943	0.837	0.690	0.846	0.913	0.330
Zone 06	3.292	3.261	2.913	3.382	2.815	2.308	2.049	2.179	1.790	1.661	1.428	1.503	1.618	1.227
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.084	1.227	0.766	1.278	0.689
Khon Kaen	3.356	2.394	1.910	2.109	1.955	2.075	1.855	2.451	2.633	1.977	1.606	1.973	2.333	3.294
Udon Thani	2.734	2.753	2.423	2.805	2.268	2.136	1.913	2.261	1.444	1.504	1.056	1.475	1.433	0.373
Loei	3.220	2.912	3.419	3.555	3.066	2.568	2.450	2.626	1.419	1.919	1.857	1.868	2.305	0.838
Nong Khai	3.426	3.359	3.333	4.239	2.875	2.161	1.720	1.781	1.500	1.650	1.569	1.361	0.864	0.785
Kalasin	2.783	3.034	3.055	3.279	3.490	2.458	2.226	1.922	1.707	1.451	1.153	1.139	1.404	0.466
Sakonkakhon	4.319	5.585	4.354	5.370	4.074	2.750	3.364	2.964	2.264	2.135	1.612	1.393	1.394	0.637
Zone 07	3.326	3.387	3.240	2.642	2.400	2.032	1.691	1.557	1.725	1.809	1.372	1.288	1.601	0.725
Srisaket	2.459	2.928	2.216	2.075	1.711	1.281	0.890	1.075	1.383	0.958	0.896	1.118	1.294	0.750
Ubon Ratchathani	3.868	4.611	4.595	3.237	3.195	2.969	2.689	2.169	2.476	2.060	2.032	1.596	1.973	0.770
Yasothon	2.604	2.200	2.485	1.968	1.654	1.166	1.549	2.010	1.713	1.519	1.393	1.068	1.572	0.508
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.111	1.619	1.011	1.575	0.910
Roi Et	2.233	1.998	1.995	1.913	1.891	1.655	1.077	1.241	1.571	1.539	1.113	1.270	1.355	0.693
Nakhomphanom	5.223	5.076	4.541	3.526	3.328	2.861	2.302	1.872	1.630	4.416	1.021	1.406	1.380	0.410
Mukdahan	6.723	3.346	4.909	4.726	2.980	1.998	3.733	2.152	2.367	1.940	1.804	1.017	2.837	1.545

Table 10 Children under five rates classified by province, 1984-1997 (female only)

0-4 years : Females	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
North Region	3.527	3.568	2.650	2.858	2.307	1.953	1.826	2.049	1.954	2.123	2.287	2.598	2.345	1.096
Zone 08	3.841	4.348	2.947	3.454	2.410	2.258	2.017	2.036	1.706	2.036	2.391	1.953	1.990	1.191
Nakhon Sawan	3.842	4.464	3.099	3.476	2.525	2.323	1.874	1.795	1.743	2.639	2.505	2.549	2.511	0.836
Uthai Thani	3.674	3.431	2.735	3.481	2.337	1.878	1.721	2.135	1.951	1.680	2.700	1.752	1.440	1.197
Kam Phaeng Phet	4.427	5.183	3.881	4.075	2.793	2.563	2.579	2.346	2.113	2.195	3.099	1.946	2.111	1.340
Tak	4.246	4.465	3.233	4.287	2.947	3.110	2.441	3.046	1.498	1.710	2.648	1.898	1.801	0.940
Sukhothai	2.953	3.502	1.441	2.063	1.385	1.356	1.405	1.310	1.136	1.163	0.934	1.037	1.315	1.815
Zone 09	3.499	3.305	2.648	2.786	2.206	1.981	1.730	1.929	1.947	2.101	2.010	2.263	2.270	1.034
Uttaradit	3.198	4.049	3.189	3.507	3.179	2.604	1.678	2.931	2.949	2.510	2.201	3.044	2.387	0.877
Phrae	4.900	3.415	3.071	3.048	2.742	2.430	1.393	1.807	2.247	2.606	1.722	2.072	1.455	1.305
Nan	3.658	4.148	2.908	3.163	1.568	1.769	2.021	1.224	1.801	1.075	1.881	3.723	2.482	0.871
Phitsanulok	3.990	3.811	2.930	2.956	2.708	2.925	2.588	3.453	3.065	3.727	3.685	3.043	3.771	0.660
Phichit	3.695	2.248	1.555	1.979	1.449	1.017	1.680	1.398	0.913	1.422	1.163	1.479	2.274	2.165
Phetchabun	2.254	2.671	2.484	2.466	1.813	1.356	1.091	0.897	1.085	1.209	1.235	1.103	1.249	0.683
Zone 10	3.318	3.225	2.427	2.475	2.325	1.693	1.771	2.171	2.148	2.209	2.468	3.402	2.685	1.082
Chiang Mai	4.278	4.387	1.825	2.258	1.970	1.773	1.687	2.115	1.869	1.513	1.911	2.833	2.538	0.296
Lamphun	2.390	2.501	2.776	2.288	2.508	1.583	1.038	1.778	1.419	1.452	1.839	1.690	2.634	0.742
Lampang	3.526	3.775	4.028	4.036	3.348	2.073	2.543	2.291	2.541	3.077	2.653	2.663	2.917	1.235
Phayao	3.475	2.155	2.050	1.609	1.250	1.466	1.440	2.171	2.218	2.639	2.695	7.900	1.280	0.898
Chiang Rai	1.576	1.751	1.437	1.634	1.584	1.197	1.185	1.550	2.134	2.296	2.897	3.276	2.968	1.725
Mae Hong Son	8.564	6.796	6.336	5.510	7.425	3.424	5.197	6.489	3.988	3.557	3.747	3.406	4.639	3.068
South Region	3.708	3.398	2.952	2.386	1.924	1.958	1.945	1.743	1.498	1.711	1.365	1.367	1.407	0.917
Zone 11	2.690	2.729	2.113	2.263	2.101	1.911	1.722	1.320	1.275	1.388	1.041	1.062	1.329	1.068
Nakhon Sri Thammar:	3.269	2.953	2.224	2.237	2.287	2.121	2.246	1.167	1.207	0.760	1.205	0.882	1.332	1.014
Krabi	4.397	2.474	2.198	2.387	2.876	2.423	1.350	2.192	2.320	5.168	1.421	1.623	1.497	0.749
Phangnga	2.627	2.764	1.737	2.168	1.935	1.531	0.616	1.990	1.104	0.751	0.082	0.488	0.885	0.242
Phuket	3.732	3.507	2.106	2.441	2.257	2.081	1.433	2.230	1.382	3.053	0.667	1.871	2.500	1.849
Surat Thani	0.708	2.665	2.423	2.815	2.000	1.637	1.516	1.296	1.224	1.038	0.929	0.989	1.228	1.551
Ranong	2.639	1.707	0.497	1.926	1.713	0.906	1.172	0.576	1.131	1.390	1.232	1.761	1.608	0.806
Chumphon	2.327	2.134	1.735	1.296	1.073	1.663	1.292	0.733	0.863	1.036	0.927	1.193	1.044	0.818
Zone 12	4.578	3.969	3.667	2.491	1.773	1.999	2.136	2.104	1.688	1.986	1.639	1.626	1.472	0.790
Songkhla	7.001	6.999	6.525	2.779	1.569	1.999	2.577	2.499	2.010	2.872	1.879	1.609	2.069	0.958
Satun	4.798	5.189	3.731	3.449	2.121	2.610	1.764	2.179	2.424	2.157	1.551	1.668	1.164	0.752
Trang	4.479	3.093	3.509	2.849	1.529	1.981	1.913	1.544	1.184	1.672	1.412	2.887	1.790	0.811
Phatthalung	2.543	1.558	1.186	1.135	0.968	1.035	0.987	1.009	0.844	1.263	0.569	0.564	0.768	1.225
Pattani	3.922	2.710	2.759	2.506	2.489	2.506	2.423	1.931	1.515	1.456	1.860	1.719	1.311	0.806
Yala	4.351	2.822	3.063	3.134	2.449	2.529	2.934	3.111	1.820	1.918	2.192	1.949	1.625	0.428
Narathiwat	2.947	3.082	2.151	1.980	1.785	1.748	1.859	2.288	2.044	1.754	1.751	1.000	0.854	0.374

Table 11 Female death rates classified by province, 1984-1997 (age groups 25-29 years)

25-29 years : Femal	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	1.175	1.117	0.990	0.913	0.884	0.919	0.884	0.896	0.899	0.991	1.033	1.261	1.567	1.614
Central Region	0.928	0.927	0.774	0.836	0.873	0.969	0.941	0.967	0.953	1.014	1.017	1.085	0.974	1.219
Bangkok Metropolis	0.667	0.871	0.638	0.751	0.803	0.926	0.826	0.934	0.690	0.697	0.770	0.746	0.484	0.861
Zone 01	0.745	0.701	0.674	0.753	0.622	0.762	0.914	0.830	0.921	0.868	1.002	1.273	1.035	1.063
Samut Prakan	0.367	0.641	0.392	0.537	0.652	0.338	0.820	0.801	0.765	0.893	0.925	1.180	0.665	0.640
Nonthaburi	1.090	0.563	0.868	0.941	0.773	1.295	1.248	0.919	1.101	0.566	1.236	1.371	1.019	0.954
Pathum Thani	0.656	0.507	0.725	0.490	0.263	0.860	1.057	0.883	0.954	0.982	1.042	0.941	1.308	1.481
Ayutthaya	0.822	0.763	0.669	0.870	0.530	0.724	0.605	0.576	0.965	1.086	0.678	1.439	1.392	1.245
Ang Thong	1.503	1.688	1.314	1.492	1.141	1.010	0.885	1.289	0.907	0.923	1.356	1.999	1.605	2.460
Zone 02	1.399	1.045	1.052	0.856	0.891	0.965	1.161	0.995	1.140	1.437	1.473	1.347	1.424	1.525
Lopburi	0.934	1.042	1.140	0.897	0.862	0.860	0.679	0.714	0.846	0.922	0.937	0.850	1.441	1.344
Singburi	1.553	1.639	1.352	0.359	1.750	1.933	1.551	1.117	2.273	1.157	1.060	1.545	1.209	2.175
Chainat	2.067	1.342	0.726	0.777	0.413	1.005	0.783	0.658	1.071	0.953	1.040	0.770	1.638	1.781
Saraburi	2.126	0.883	1.189	1.106	1.072	1.385	1.593	1.647	1.415	3.310	3.762	3.032	1.632	2.220
Nakhonnayok	1.901	1.513	2.290	0.955	0.774	0.753	1.759	1.151	1.414	3.074	2.210	1.366	2.431	1.612
Suphanburi	0.939	0.798	0.722	0.796	0.810	0.567	1.279	0.911	0.932	0.657	0.653	0.925	1.053	1.012
Zone 03	1.453	1.128	1.122	1.108	1.225	1.265	1.090	1.031	1.300	1.339	1.116	1.271	1.357	1.893
Chonburi	1.147	0.692	0.767	0.882	0.833	1.135	1.057	1.307	1.425	2.473	1.092	1.354	1.299	1.984
Rayong	1.697	0.732	1.354	0.937	1.303	1.205	1.344	0.819	1.071	0.881	1.567	1.548	1.402	1.942
Chanthaburi	1.842	2.270	1.874	1.797	1.778	1.811	2.043	1.505	1.675	1.363	2.022	1.714	1.317	2.105
Trat	2.526	1.728	1.820	0.158	2.123	1.307	1.390	1.156	1.767	1.497	0.740	2.318	0.724	2.280
Chachoengsao	0.763	0.885	0.773	0.932	1.171	1.058	0.868	0.785	0.730	0.360	0.356	0.352	1.042	1.688
Prachinburi	2.185	1.686	1.226	1.791	1.300	1.357	0.974	1.221	2.502	1.287	1.170	1.106	1.143	1.630
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.711	1.172	2.547	1.727
Zone 04	0.952	1.004	0.690	0.860	0.942	1.002	0.901	1.087	1.106	1.268	1.195	1.360	1.438	1.406
Ratchaburi	0.756	1.118	0.617	0.748	0.800	1.033	1.096	1.088	1.380	1.379	1.547	1.606	1.476	0.873
Kanchanaburi	1.140	1.089	0.801	1.148	0.805	1.119	0.902	1.327	1.153	1.054	1.242	1.177	1.233	1.280
Nakhon Pathom	1.018	0.791	0.692	0.657	0.840	1.021	0.831	0.790	0.919	1.729	0.891	1.109	1.032	1.490
Samut Sakhon	0.798	0.450	0.555	0.328	0.702	0.799	0.473	1.049	1.143	0.864	1.132	1.265	0.985	1.131
Samut Songkhram	0.503	1.478	0.805	0.789	1.547	1.214	0.149	0.738	0.879	1.318	0.873	0.436	1.588	2.135
Phetchaburi	1.132	0.714	0.759	0.740	1.263	0.821	1.086	1.362	1.183	1.351	1.285	2.233	2.659	2.458
Phachuap Khiri Khar	1.214	1.732	0.718	1.737	1.345	1.030	1.207	1.146	0.879	0.879	1.232	1.386	1.937	1.458
North-Eastern Regi	1.359	1.275	1.231	0.991	0.835	0.822	0.787	0.820	0.831	0.864	0.912	1.062	1.489	1.396
Zone 05	0.968	1.030	0.826	0.865	0.704	0.720	0.706	0.807	0.773	0.823	0.808	0.994	1.211	1.256
Nakhon Ratvhasima	0.800	1.054	0.907	0.914	0.770	0.911	0.873	0.984	0.987	1.156	0.821	1.010	1.070	0.788
Buriram	1.049	1.212	1.053	1.073	0.868	0.852	0.836	0.787	0.684	0.744	0.996	1.244	1.503	1.527
Surin	1.318	1.056	0.765	0.921	0.543	0.584	0.580	0.879	0.604	0.436	0.862	1.027	1.151	1.716
Chaiyaphum	0.666	0.613	0.506	0.678	0.523	0.554	0.388	0.502	0.588	0.509	0.525	0.677	1.027	1.175
Maharakham	1.212	1.137	0.711	0.562	0.693	0.349	0.562	0.582	0.736	0.859	0.741	0.890	1.476	1.673
Zone 06	1.535	1.274	1.149	1.071	0.947	0.909	0.868	0.811	0.787	0.863	0.955	1.089	1.698	1.377
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.055	0.864	0.801	1.742	1.679
Khon Kaen	1.485	1.021	0.946	0.908	0.855	0.851	0.888	0.988	0.888	1.039	1.321	1.187	1.358	0.576
Udon Thani	1.339	1.050	0.906	1.324	0.873	0.766	0.875	0.483	0.814	1.069	0.791	1.026	1.787	1.648
Loei	1.535	1.634	1.774	0.900	1.197	0.779	0.791	0.779	0.937	0.797	0.952	1.187	1.702	1.692
Nong Khai	1.695	1.453	1.499	1.134	0.871	0.796	0.916	0.995	0.489	1.112	0.711	1.024	1.704	1.892
Kalasin	1.540	1.287	1.017	0.984	1.076	1.161	1.037	0.938	0.923	0.689	1.060	1.318	2.049	1.429
Sakonkakhon	1.794	1.720	1.363	1.124	1.020	1.173	1.071	1.108	0.959	0.587	0.680	0.921	1.845	1.637
Zone 07	1.670	1.602	1.871	1.062	0.878	0.855	0.791	0.847	0.960	0.919	0.992	1.116	1.587	1.598
Srisaket	1.570	1.305	1.282	0.998	0.900	0.747	0.682	0.615	0.870	0.522	0.699	0.983	1.494	1.663
Ubon Ratchathani	1.913	1.971	2.041	0.895	0.770	1.072	1.107	1.075	1.244	1.133	1.178	1.136	1.478	1.425
Yasothon	1.439	1.138	1.589	0.827	1.657	0.608	0.962	0.948	1.140	0.664	0.957	1.445	1.578	2.207
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.077	1.219	1.130	2.459	2.148
Roi Et	1.308	0.978	2.617	1.095	0.725	0.797	0.705	0.918	0.660	0.845	1.196	1.204	1.754	1.743
Nakhomphanom	2.144	2.267	1.516	1.599	0.790	0.668	0.726	1.094	1.241	1.915	0.563	0.993	1.375	1.054
Mukdahan	1.755	3.349	1.863	1.524	0.848	1.271	0.551	0.543	1.176	1.158	1.246	0.925	1.423	1.111

Table 11 Female death rates classified by province, 1984-1997 (age groups 25-29 years)

25-29 years : Female	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
North Region	1.245	1.188	1.013	0.992	0.953	0.895	0.876	0.873	0.932	1.131	1.449	2.300	3.356	3.426
Zone 08	1.381	1.149	1.182	1.238	0.863	0.992	0.894	0.772	0.875	1.123	1.126	1.302	1.528	1.668
Nakhon Sawan	1.189	1.260	1.309	1.038	0.711	0.805	1.100	0.780	0.791	1.160	1.093	1.519	1.262	1.550
Uthai Thani	1.637	1.489	1.733	1.681	0.362	1.142	0.426	1.548	1.136	1.242	1.084	1.467	1.593	1.713
Kam Phaeng Phet Tak	1.342	1.221	1.220	1.292	1.179	1.003	1.139	0.810	1.130	1.320	1.553	1.394	1.680	1.668
Sukhothai	1.368	1.798	0.759	1.033	1.505	1.462	0.947	0.954	1.036	1.121	0.997	1.297	1.986	1.344
Sukhothai	1.690	0.373	0.895	1.478	0.666	1.000	0.415	0.266	0.540	0.783	0.796	0.726	1.565	2.050
Zone 09	1.289	1.200	0.912	0.847	0.940	0.972	0.933	0.840	0.877	0.974	0.905	1.328	2.048	2.045
Uttaradit	1.239	1.556	0.987	0.758	1.175	2.161	1.144	0.735	1.013	1.028	1.047	1.509	1.543	1.917
Phrae	1.379	1.203	0.935	0.918	0.996	1.024	0.868	1.013	1.167	1.137	0.770	1.219	2.988	2.983
Nan	1.357	1.551	0.922	0.691	0.885	0.766	0.750	0.453	0.664	0.777	0.948	1.866	3.376	3.095
Phitsanulok	1.051	1.336	0.716	0.792	0.864	0.934	1.140	1.317	1.335	1.325	1.171	1.393	1.725	1.474
Phichit	1.711	0.756	0.571	0.738	0.815	0.466	0.461	0.549	0.471	0.521	0.442	0.805	1.965	1.532
Phetchabun	1.173	0.984	1.267	1.057	0.968	0.805	1.054	0.733	0.590	0.910	0.925	1.284	1.448	1.887
Zone 10	1.126	1.204	0.984	0.949	1.020	0.775	0.822	0.963	1.010	1.257	2.071	3.674	5.507	5.589
Chiang Mai	1.171	1.254	0.788	0.711	0.913	0.694	0.970	0.950	0.849	1.119	1.575	2.952	4.490	3.440
Lamphun	0.992	1.250	0.941	0.862	1.208	0.563	0.349	1.004	0.814	0.826	1.574	1.966	3.146	3.194
Lampang	1.265	1.336	1.222	1.141	1.004	0.638	0.685	0.891	1.048	1.033	1.500	2.186	3.348	4.435
Phayao	0.815	1.139	1.080	1.300	1.195	0.682	1.169	1.088	1.195	1.818	2.368	5.996	8.621	8.304
Chiang Rai	1.111	0.944	0.989	1.072	0.993	1.033	0.785	1.003	1.173	1.507	3.428	5.636	8.217	9.507
Mae Hong Son	1.496	2.082	1.544	0.595	1.291	1.244	0.533	0.669	1.216	1.364	0.553	1.672	3.690	2.874
South Region	1.461	1.246	1.070	0.836	0.918	1.042	0.967	0.906	0.846	1.027	0.777	0.829	1.173	0.986
Zone 11	1.437	1.064	0.951	0.910	0.987	1.085	0.931	0.816	0.884	1.116	0.787	0.822	1.305	1.144
Nakhon Sri Thammasak	1.333	0.894	0.694	0.588	1.018	1.340	0.874	0.554	0.851	0.720	0.610	0.721	1.232	1.075
Krabi	0.745	0.603	0.854	0.628	1.016	1.119	0.151	1.036	1.244	4.057	1.147	0.776	1.107	1.151
Phangnga	1.792	1.316	0.879	0.719	0.801	1.091	1.250	0.613	0.405	0.301	0.099	0.684	2.112	1.316
Phuket	1.417	0.901	1.289	1.639	1.824	1.118	2.488	1.625	1.149	1.933	0.901	0.886	1.412	1.380
Surat Thani	1.374	1.456	1.381	1.343	0.751	0.619	0.822	0.921	0.684	0.593	1.007	0.772	1.055	0.822
Ranong	1.177	1.678	0.531	1.263	1.440	2.052	1.083	1.062	1.684	0.625	0.413	1.627	2.795	1.173
Chumphon	2.323	1.001	1.037	0.997	0.891	0.856	0.950	0.932	1.046	1.340	1.086	1.128	1.282	1.826
Zone 12	1.481	1.401	1.172	0.773	0.859	1.006	0.998	0.984	0.814	0.952	0.769	0.836	1.060	0.851
Songkhla	1.565	1.935	1.723	0.741	0.704	0.995	1.236	1.249	1.011	1.390	1.027	0.722	0.974	1.057
Satun	1.889	2.192	0.646	1.096	0.804	1.299	0.408	0.897	0.787	0.776	0.574	0.751	1.468	0.716
Trang	1.493	0.953	0.964	0.583	0.465	1.204	1.025	1.174	0.831	0.742	0.776	1.450	1.188	0.776
Phatthalung	1.531	1.332	0.786	0.690	0.934	1.031	0.623	0.856	0.606	0.901	0.417	0.998	1.557	1.017
Pattani	1.796	1.416	1.321	0.718	1.094	0.724	1.357	0.825	0.681	0.718	0.800	0.612	1.287	0.797
Yala	1.446	0.970	0.460	0.802	1.038	0.920	0.874	0.794	0.483	0.716	0.531	0.986	0.682	0.555
Narathiwat	0.865	0.778	1.021	0.976	1.186	1.011	0.734	0.643	0.860	0.702	0.658	0.539	0.704	0.688

Table 12 Female death rates classified by province, 1984-1997 (age group 15-49 years)

15-49 yrs: Female	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Zone 10	1.768	1.934	1.588	1.623	1.505	1.513	1.475	1.592	1.544	1.659	2.227	3.081	4.219	3.576
Chiang Mai	1.993	2.134	1.263	1.401	1.370	1.410	1.449	1.647	1.449	1.506	1.892	2.667	3.853	2.600
Lamphun	1.629	1.899	1.505	1.632	1.520	1.440	1.101	1.327	1.382	1.356	1.686	2.341	2.885	2.398
Lampang	1.773	1.767	1.819	1.655	1.559	1.381	1.452	1.449	1.394	1.502	1.871	2.184	2.913	3.060
Phayao	1.701	1.882	1.697	1.866	1.840	1.751	1.733	1.820	1.944	2.110	2.645	4.536	5.570	4.590
Chiang Rai	1.497	1.755	1.719	1.744	1.435	1.644	1.551	1.586	1.620	1.907	3.023	4.180	5.680	5.421
Mae Hong Son	2.220	2.469	2.474	1.876	1.892	1.625	1.496	1.816	1.793	1.510	1.631	1.013	3.108	2.291
South Region	1.610	1.466	1.301	1.056	1.043	1.127	1.151	1.096	1.007	1.153	0.979	0.991	1.254	1.116
Zone 11	1.550	1.293	1.124	1.110	1.124	1.203	1.163	1.019	1.021	1.214	0.914	0.982	1.284	1.113
Nakhon Sri Thamma	1.393	1.055	0.874	0.889	1.141	1.248	1.058	0.682	0.902	0.690	0.707	0.837	1.116	1.062
Krabi	1.039	1.030	1.036	1.235	1.098	1.289	0.890	1.250	1.229	4.394	1.114	0.999	1.393	1.361
Phangnga	1.652	1.601	1.074	0.964	0.896	0.994	1.242	1.063	0.674	0.663	0.635	0.529	1.516	1.011
Phuket	1.666	1.661	1.631	1.601	1.657	1.707	2.296	1.756	1.861	2.361	0.916	0.976	1.322	1.855
Surat Thani	1.811	1.669	1.562	1.412	1.202	1.011	1.080	1.149	0.896	0.757	1.057	0.996	1.127	0.664
Ranong	1.432	0.906	0.683	1.022	0.738	1.149	1.334	1.372	1.853	1.484	1.095	1.919	1.774	1.458
Chumphon	1.908	1.390	1.160	1.101	0.906	1.255	1.256	1.290	1.074	1.303	1.317	1.435	1.821	1.614
Zone 12	1.662	1.620	1.458	1.007	0.972	1.060	1.141	1.165	0.996	1.099	1.036	1.000	1.229	1.120
Songkhla	2.164	2.243	2.074	1.023	0.887	1.140	1.318	1.537	1.153	1.537	1.125	1.000	1.142	1.401
Satun	1.947	1.673	1.311	1.503	1.131	1.310	1.024	1.159	1.187	0.894	1.058	1.330	1.513	1.001
Trang	1.271	1.221	1.077	0.878	0.779	1.136	1.097	1.028	0.978	1.219	1.189	1.535	1.354	0.884
Phatthalung	1.316	1.051	0.994	0.678	0.765	0.786	0.946	0.800	0.762	0.699	0.663	0.774	1.136	1.041
Pattani	1.524	1.289	1.380	0.899	1.060	0.791	1.058	0.958	0.964	0.871	1.130	0.856	1.435	1.112
Yala	1.464	1.399	1.052	1.061	1.206	1.106	1.268	1.126	0.880	0.633	0.759	0.746	1.162	0.843
Narathiwat	1.471	1.650	1.323	1.254	1.208	1.164	1.006	1.018	0.895	0.968	1.076	0.835	1.107	1.047

Table 13 Female death rates classified by province, 1984-1997 (all ages)

Total : Females	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	3.658	3.818	3.597	3.781	3.628	3.783	3.683	3.806	3.878	4.143	4.083	4.200	4.303	3.732
Central Region	3.554	3.618	3.367	3.697	3.621	3.895	3.803	3.993	3.997	4.342	4.205	4.198	3.924	3.616
Bangkok Metropolis	3.356	3.831	3.276	3.746	3.626	3.884	3.642	3.897	3.654	3.749	3.794	3.589	2.908	3.043
Zone 01	3.611	3.437	3.512	3.674	3.266	3.772	3.758	3.863	4.104	4.144	4.250	4.243	4.823	3.903
Samut Prakan	2.668	2.724	2.790	2.793	2.824	2.888	3.277	3.189	3.283	3.489	3.512	3.509	3.524	2.851
Nonthaburi	4.774	3.480	4.006	4.164	3.497	4.278	4.407	4.161	4.247	4.282	4.843	4.584	4.167	3.653
Pathum Thani	3.186	2.975	2.958	2.870	2.427	3.621	3.437	3.695	3.985	3.755	3.428	3.601	5.989	4.400
Ayutthaya	3.825	3.551	3.690	4.044	3.508	3.843	3.377	3.677	4.372	4.457	4.574	4.301	5.281	4.754
Ang Thong	3.915	5.521	4.798	5.306	4.657	5.215	5.152	5.992	5.745	5.739	5.755	6.811	7.600	5.066
Zone 02	3.737	3.464	3.427	3.936	3.992	4.187	4.357	4.484	4.589	4.872	5.189	5.197	4.836	4.562
Lopburi	2.863	2.734	2.953	3.259	3.189	3.368	3.494	3.762	3.500	3.729	3.710	3.215	4.531	4.306
Singburi	4.515	4.029	3.927	3.666	5.210	5.891	6.136	6.288	6.222	5.291	5.893	6.480	0.416	4.999
Chainat	3.899	3.981	3.557	4.405	4.359	4.555	4.294	4.577	4.621	4.524	4.866	5.214	5.566	5.626
Saraburi	4.725	3.247	3.360	4.312	4.554	4.919	5.112	5.118	5.550	7.364	8.501	7.142	1.220	5.014
Nakhonnayok	4.055	4.178	3.800	4.123	3.641	4.059	4.231	4.544	4.699	4.837	4.696	4.894	4.527	3.411
Suphanburi	3.465	3.608	3.558	4.097	3.905	3.811	4.184	4.134	4.419	4.371	4.516	5.422	4.464	4.253
Zone 03	3.818	3.524	3.487	3.609	3.534	4.002	3.622	3.854	3.841	5.179	3.868	4.073	4.089	3.806
Chonburi	3.738	3.275	3.206	2.958	3.151	3.987	4.125	4.475	4.460	7.978	3.889	4.237	4.297	4.294
Rayong	3.186	3.073	3.202	3.157	3.111	3.264	3.473	3.466	3.540	3.483	3.207	3.501	2.898	2.791
Chanthaburi	4.828	5.456	4.644	4.823	4.551	4.848	5.046	4.944	4.951	5.408	5.590	5.644	4.358	3.535
Trat	4.475	4.069	4.590	4.677	4.446	4.850	3.950	4.111	4.020	3.743	4.030	6.337	4.562	3.795
Chachoengsao	3.296	2.939	3.087	3.317	3.410	3.363	3.622	3.916	3.419	3.104	3.453	3.211	4.405	4.255
Prachinburi	4.275	3.405	3.474	4.332	3.665	4.586	4.360	5.047	5.568	8.712	4.138	3.082	3.658	3.346
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.008	4.141	4.610	4.073
Zone 04	3.478	3.597	3.261	3.494	3.659	3.680	3.841	4.000	4.209	4.414	4.465	4.634	4.233	3.553
Ratchaburi	3.856	4.086	4.005	3.947	4.151	4.465	4.401	4.735	4.909	5.179	5.197	5.535	4.503	3.561
Kanchanaburi	2.182	2.931	2.251	2.525	2.728	2.415	2.817	2.704	3.623	3.110	3.397	3.754	3.263	2.591
Nakhon Pathom	3.661	3.788	3.483	3.957	4.223	3.703	4.105	4.135	4.218	4.976	4.594	4.650	4.369	3.786
Samut Sakhon	3.202	3.239	3.128	3.501	3.191	3.704	3.950	4.641	4.016	4.155	4.469	4.854	4.101	3.801
Samut Songkhram	4.329	4.679	4.121	4.623	4.063	4.093	4.276	4.600	4.623	5.074	5.272	3.970	5.208	4.285
Phetchaburi	3.964	3.368	3.213	3.224	4.082	4.387	4.702	4.587	4.671	4.834	4.869	5.066	4.655	4.045
Phachuap Khiri Kha	3.345	3.027	2.465	2.809	2.755	2.968	2.818	3.023	3.319	3.548	3.747	3.996	4.207	3.505
North-Eastern Regi	3.593	3.781	3.672	3.841	3.593	3.670	3.477	3.552	3.657	3.877	3.801	3.981	4.194	3.526
Zone 05	2.913	3.104	3.028	3.343	3.011	3.132	3.056	3.144	3.233	3.274	3.489	3.721	3.734	3.281
Nakhon Ratvhasima	2.671	3.058	3.132	3.244	3.105	3.129	3.219	3.245	3.392	3.533	3.671	3.926	3.323	2.670
Buriram	2.916	3.179	3.221	3.479	3.004	3.066	2.936	3.032	3.167	3.136	3.443	3.737	3.410	3.334
Surin	3.134	3.169	2.559	3.311	2.445	2.908	2.796	2.886	2.655	2.203	3.387	4.128	4.207	3.922
Chaiyaphum	2.493	2.535	2.443	3.096	2.940	2.995	2.755	3.027	3.063	3.478	2.778	2.267	4.149	3.092
Maharakham	3.703	3.652	3.744	3.720	3.617	3.697	3.498	3.531	3.896	4.028	4.006	4.227	4.216	4.174
Zone 06	4.076	4.150	3.930	4.112	3.946	3.962	3.588	3.673	3.779	3.783	3.968	4.020	4.327	3.474
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.253	3.451	3.529	3.873	3.804
Khon Kaen	3.874	3.777	3.419	3.583	3.542	3.741	3.709	3.920	4.075	4.264	4.354	4.489	4.269	3.459
Udon Thani	4.155	4.334	4.333	4.502	4.288	4.269	4.025	4.099	4.207	4.181	3.412	3.692	4.230	3.038
Loei	3.364	3.661	3.838	3.576	3.593	3.777	3.669	3.325	3.528	3.316	3.581	3.562	4.302	3.214
Nong Khai	3.967	3.732	3.732	4.005	3.450	3.593	3.529	3.556	3.597	3.516	3.898	3.724	3.810	3.816
Kalasin	4.507	4.363	3.918	4.212	4.253	4.105	4.049	4.057	4.280	4.103	4.408	4.312	4.832	3.542
Sakonnakhon	4.389	4.943	4.464	4.763	4.485	4.190	4.018	4.293	4.257	4.218	4.202	4.138	4.773	3.755
Zone 07	3.907	4.220	4.194	4.167	3.936	4.027	3.856	3.905	4.028	4.709	3.985	4.249	4.596	3.882
Srisaket	3.092	3.176	2.924	3.485	3.144	3.172	3.151	3.104	3.378	3.235	3.212	3.551	4.367	3.748
Ubon Ratchathani	3.622	4.530	4.510	4.061	4.107	4.493	4.494	4.687	4.648	4.749	4.083	4.208	4.035	3.459
Yasothon	3.993	3.966	4.441	4.074	3.956	3.968	4.100	4.169	4.260	4.181	4.177	4.325	4.567	4.304
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.337	4.586	4.686	5.128	4.621
Roi Et	4.460	4.649	4.705	4.620	4.340	4.278	4.681	4.621	4.879	4.831	4.412	4.850	5.283	4.673
Nakhomphanom	4.919	5.074	4.988	5.133	4.553	4.340	4.165	4.286	4.312	10.456	4.130	4.564	4.896	3.200
Mukdahan	4.628	4.307	4.093	4.103	3.624	3.839	3.660	3.653	3.831	4.030	3.917	3.896	4.706	3.493

Table 13 Female death rates classified by province, 1984-1997 (all ages)

Total : Female	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
North Region	4.081	4.442	4.129	4.361	4.223	4.306	4.213	4.484	4.643	4.607	5.125	5.496	5.965	5.030
Zone 08	3.705	3.859	3.601	3.824	3.656	3.732	3.595	3.645	3.876	3.963	4.759	4.493	4.693	4.105
Nakhon Sawan	3.709	3.692	3.552	3.646	3.577	3.802	3.626	3.589	4.159	4.340	4.633	4.827	4.592	4.158
Uthai Thani	4.206	4.218	4.196	4.163	3.885	4.179	3.771	4.248	4.492	4.591	4.757	5.507	5.600	4.734
Kam Phaeng Phet	3.411	3.841	3.281	3.651	3.211	3.274	3.211	3.479	3.619	3.471	6.099	4.206	4.442	3.541
Tak	4.338	4.516	4.109	4.572	4.159	4.503	4.378	4.047	3.425	3.833	3.963	4.095	4.942	3.882
Sukhothai	3.411	3.653	3.454	3.754	3.892	3.441	3.429	3.389	3.581	3.567	3.945	3.895	4.545	4.436
Zone 09	3.833	3.950	3.768	4.002	3.734	3.838	3.843	4.165	4.405	4.311	4.481	4.824	5.075	4.581
Uttaradit	4.010	4.208	4.158	4.572	4.403	4.696	4.710	4.802	5.345	5.013	5.332	6.108	5.516	4.925
Phrae	4.311	5.744	5.449	6.179	5.833	5.931	5.701	6.604	7.249	6.717	6.502	6.299	7.167	6.435
Nan	6.062	5.364	3.990	4.555	3.748	4.035	4.031	4.359	4.491	4.195	4.757	6.185	6.271	5.825
Phitsanulok	3.499	3.679	3.421	3.734	3.375	3.675	3.838	4.355	4.707	4.789	4.721	4.725	4.380	3.760
Phichit	3.930	2.752	2.724	3.117	2.838	2.833	2.971	3.009	2.658	2.875	2.840	3.275	4.657	4.316
Phetchabun	2.552	3.150	3.522	3.025	3.109	2.932	2.851	2.979	3.175	3.180	3.647	3.796	3.993	3.666
Zone 10	4.561	5.275	4.812	5.048	5.043	5.112	4.967	5.348	5.386	5.312	5.933	6.772	7.617	6.061
Chiang Mai	5.735	6.300	4.847	5.178	5.562	5.329	5.267	5.450	5.465	5.061	5.509	6.751	7.596	4.616
Lamphun	4.592	5.747	5.207	5.677	5.561	5.129	4.569	5.050	5.185	5.304	5.417	5.942	6.606	5.264
Lampang	4.801	5.354	5.432	5.457	5.285	5.405	5.399	5.696	5.784	5.758	6.245	6.774	6.964	6.911
Phayao	4.266	4.684	4.331	4.755	4.570	5.124	5.119	6.029	5.841	6.137	6.452	8.105	8.694	6.807
Chiang Rai	2.929	4.035	4.354	4.572	4.250	4.780	4.458	4.924	5.014	5.182	6.488	7.111	8.304	7.619
Mae Hong Son	5.335	5.118	5.197	4.473	4.802	3.970	4.310	4.388	4.494	3.826	4.290	2.895	5.747	4.313
South Region	3.447	3.487	3.195	2.971	2.843	3.014	3.140	2.999	3.039	3.647	3.018	2.947	3.265	2.774
Zone 11	3.244	3.114	2.786	2.915	2.905	3.018	3.007	2.523	2.892	3.906	2.717	2.746	3.155	2.721
Nakhon Sri Thammasak	3.035	2.873	2.510	2.623	2.802	3.022	2.984	1.869	2.695	2.386	2.491	2.376	3.029	2.721
Krabi	2.762	2.029	2.462	2.559	2.728	2.829	2.117	2.634	2.913	14.960	2.776	2.667	3.214	3.015
Phangnga	3.303	3.649	2.918	3.036	3.066	2.642	2.740	3.268	2.656	2.458	2.203	2.025	3.385	3.090
Phuket	4.342	4.228	4.038	3.830	4.203	4.277	4.216	4.186	4.271	8.059	3.158	3.791	3.380	3.437
Surat Thani	3.354	3.508	3.325	3.391	3.048	2.731	2.887	2.895	2.593	2.480	2.733	2.842	2.865	1.999
Ranong	2.834	2.169	1.546	2.474	2.151	2.691	3.174	2.612	3.638	3.377	2.511	3.401	3.391	2.903
Chumphon	3.782	3.524	2.774	3.020	2.706	3.450	3.544	2.964	3.499	3.479	3.635	3.724	3.863	3.369
Zone 12	3.629	3.820	3.559	3.021	2.788	3.012	3.258	3.421	3.170	3.416	3.285	3.125	3.362	2.822
Songkhla	4.009	4.409	4.516	3.078	2.733	3.396	3.766	4.256	3.578	4.176	3.585	3.077	3.447	2.805
Satun	3.684	4.249	3.763	3.295	3.194	3.161	2.759	3.127	3.120	3.118	3.278	3.189	3.136	2.646
Trang	3.390	3.411	3.051	3.009	2.279	2.845	3.098	3.044	3.049	3.274	3.383	3.818	3.330	2.353
Phatthalung	2.832	3.016	2.420	2.508	2.317	2.298	2.796	2.715	2.556	2.809	2.656	2.648	2.877	2.697
Pattani	3.627	3.621	3.454	3.040	3.236	3.167	3.287	3.275	3.599	3.307	3.496	3.435	3.939	3.528
Yala	3.732	3.427	3.184	3.229	3.017	2.810	3.163	3.035	2.649	2.628	2.650	2.473	3.449	2.439
Narathiwat	3.737	4.044	3.395	3.110	3.066	2.912	2.987	3.168	2.901	3.220	3.289	3.026	3.098	3.052

Table 14 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (age 0-4 years)

0-4 years : Male	1992	1993	1994	1995	1996	1997	0-4 years : Female	1992	1993	1994	1995	1996	1997
Whole Country	-0.232	-0.204	-0.254	-0.255	-0.299	-0.599	Whole Country	-0.260	-0.232	-0.260	-0.232	-0.261	-0.610
Central Region	-0.103	-0.008	-0.079	-0.057	-0.169	-0.646	Central Region	-0.140	-0.095	-0.030	-0.036	-0.141	-0.599
Zone 01	-0.092	0.127	0.021	-0.023	0.073	-0.742	Zone 01	-0.108	-0.120	-0.090	-0.072	-0.047	-0.657
Samut Prakan	0.031	0.246	-0.027	0.236	0.136	-0.821	Samut Prakan	-0.094	-0.043	-0.083	0.112	0.002	-0.883
Nonthaburi	-0.154	-0.083	-0.014	-0.250	-0.116	-0.769	Nonthaburi	-0.080	-0.237	-0.155	-0.348	-0.359	-0.684
Pathum Thani	-0.321	-0.003	-0.115	-0.217	0.621	-0.556	Pathum Thani	-0.085	-0.244	-0.194	0.129	0.204	-0.087
Ayutthaya	-0.063	0.124	0.147	-0.151	-0.246	-0.746	Ayutthaya	-0.280	-0.207	-0.180	-0.117	-0.165	-0.610
Ang Thong	-0.300	0.196	0.055	-0.089	-0.004	-0.652	Ang Thong	-0.003	0.164	0.275	-0.389	0.401	-0.738
Zone 02	-0.006	-0.185	-0.135	-0.110	-0.150	-0.375	Zone 02	-0.193	-0.340	-0.196	-0.193	-0.040	-0.269
Lopburi	-0.173	-0.404	-0.043	-0.298	-0.242	-0.567	Lopburi	-0.419	-0.516	-0.428	-0.386	-0.310	-0.717
Singburi	0.426	-0.018	-0.479	-0.212	-0.629	-0.625	Singburi	0.003	-0.110	-0.423	0.154	-0.739	-0.670
Chainat	-0.017	-0.288	-0.569	-0.305	-0.356	-0.734	Chainat	-0.186	-0.405	-0.534	-0.500	-0.321	-0.725
Saraburi	0.331	0.043	0.062	0.262	-0.298	-0.711	Saraburi	-0.048	-0.289	0.107	0.156	-0.550	-0.790
Nakhonnayok	-0.255	-0.126	-0.039	-0.084	0.398	0.175	Nakhonnayok	-0.384	-0.539	-0.339	-0.136	-0.191	0.571
Suphanburi	-0.223	-0.249	-0.159	-0.224	0.086	0.107	Suphanburi	-0.161	-0.220	-0.039	-0.356	0.315	0.663
Zone 03	-0.336	-0.136	-0.323	-0.254	-0.161	-0.542	Zone 03	-0.461	-0.044	-0.246	-0.219	-0.081	-0.478
Chonburi	0.049	0.713	-0.155	-0.027	0.102	-0.852	Chonburi	-0.032	0.603	-0.097	-0.044	0.298	-0.906
Rayong	-0.291	-0.204	-0.346	-0.219	-0.001	-0.248	Rayong	-0.514	-0.148	-0.138	-0.007	0.217	0.005
Chanthaburi	-0.451	-0.159	-0.150	-0.160	-0.244	-0.633	Chanthaburi	-0.673	-0.102	-0.120	-0.294	-0.229	-0.689
Trat	-0.413	-0.394	-0.516	0.049	-0.434	-0.859	Trat	-0.491	-0.605	-0.048	-0.132	-0.499	-0.749
Chachoengsao	-0.056	-0.585	-0.411	-0.634	-0.237	-0.352	Chachoengsao	-0.259	-0.090	-0.317	-0.488	-0.225	-0.030
Prachinburi	-0.512	-0.072	-0.617	-0.794	-0.514	-0.356	Prachinburi	-0.433	0.324	-0.614	-0.826	-0.444	-0.289
Sakeaw	-	-	-	-	-	-	Sakeaw	-	-	-	-	-	-
Zone 04	-0.113	-0.016	-0.095	0.002	-0.033	-0.394	Zone 04	-0.099	-0.144	0.019	0.064	-0.016	-0.306
Ratchaburi	-0.289	-0.314	-0.110	-0.214	-0.208	-0.401	Ratchaburi	-0.035	-0.180	0.034	0.127	-0.185	-0.322
Kanchanaburi	-0.026	0.201	0.136	0.163	0.091	0.325	Kanchanaburi	0.311	0.060	0.133	0.359	0.096	0.290
Nakhon Pathom	-0.102	-0.168	-0.274	-0.149	-0.215	-0.733	Nakhon Pathom	-0.205	-0.153	-0.148	-0.169	-0.262	-0.626
Samut Sakhon	-0.148	-0.143	-0.076	0.242	-0.025	-0.588	Samut Sakhon	-0.422	-0.491	-0.080	-0.333	-0.394	-0.527
Samut Songkhram	0.442	0.640	0.045	-0.196	0.308	0.382	Samut Songkhram	-0.126	-0.037	-0.025	0.153	1.406	0.423
Phetchaburi	0.091	0.424	-0.001	0.285	0.247	0.020	Phetchaburi	-0.162	-0.123	0.316	0.364	0.437	-0.023
Phachuap Khiri Kha	-0.414	0.093	-0.147	0.021	0.099	-0.693	Phachuap Khiri Khan	-0.096	-0.118	-0.075	0.163	0.107	-0.408
Zone 05	-0.229	-0.257	-0.304	-0.281	-0.168	-0.582	Zone 05	-0.214	-0.296	-0.296	-0.201	-0.246	-0.619
Nakhon Ratvhasima	-0.231	-0.169	-0.253	-0.249	-0.142	-0.888	Nakhon Ratvhasima	-0.095	-0.150	-0.185	-0.092	-0.195	-0.915
Buriram	-0.279	-0.357	-0.370	-0.334	-0.306	-0.321	Buriram	-0.347	-0.475	-0.401	-0.347	-0.390	-0.310
Surin	-0.271	-0.447	-0.444	-0.119	-0.051	-0.125	Surin	-0.339	-0.357	-0.284	-0.079	-0.157	-0.320
Chaiyaphum	-0.212	-0.249	-0.471	-0.588	-0.134	-0.475	Chaiyaphum	-0.304	-0.485	-0.516	-0.547	-0.379	-0.491
Maharakham	-0.056	-0.147	0.005	-0.272	-0.526	-0.632	Maharakham	-0.119	-0.218	-0.355	-0.209	-0.147	-0.692
North-East Reg.	-0.278	-0.333	-0.373	-0.398	-0.411	-0.613	North-East Reg.	-0.303	-0.332	-0.424	-0.400	-0.353	-0.624
Zone 06	-0.311	-0.430	-0.427	-0.432	-0.546	-0.521	Zone 06	-0.355	-0.402	-0.485	-0.458	-0.417	-0.558
Nongbua Lamphu	-	-	-	-	-	-	Nongbua Lamphu	-	-	-	-	-	-
Khon Kaen	0.036	-0.134	-0.220	-0.232	-0.194	0.616	Khon Kaen	0.163	-0.126	-0.291	-0.128	0.031	0.455
Udon Thani	-0.282	-0.385	-0.583	-0.351	-0.553	-0.767	Udon Thani	-0.401	-0.376	-0.562	-0.388	-0.406	-0.845
Loei	-0.362	-0.100	-0.115	0.032	-0.351	-0.764	Loei	-0.523	-0.355	-0.376	-0.372	-0.226	-0.719
Nong Khai	-0.368	-0.645	-0.509	-0.591	-0.776	-0.774	Nong Khai	-0.476	-0.423	-0.452	-0.524	-0.698	-0.726
Kalasin	-0.330	-0.430	-0.459	-0.605	-0.611	-0.862	Kalasin	-0.386	-0.478	-0.585	-0.590	-0.495	-0.832
Sakonnakon	-0.405	-0.578	-0.517	-0.607	-0.731	-0.844	Sakonnakon	-0.447	-0.479	-0.607	-0.660	-0.660	-0.845
Zone 07	-0.283	-0.284	-0.370	-0.452	-0.445	-0.746	Zone 07	-0.320	-0.286	-0.459	-0.492	-0.368	-0.714
Srisaket	-0.275	-0.469	-0.361	-0.322	-0.227	-0.598	Srisaket	-0.244	-0.476	-0.510	-0.389	-0.292	-0.590
Ubon Ratchathani	-0.231	-0.235	-0.369	-0.524	-0.534	-0.770	Ubon Ratchathani	-0.275	-0.397	-0.405	-0.533	-0.423	-0.775
Yasothon	0.186	-0.240	-0.134	-0.078	-0.217	-0.857	Yasothon	-0.123	-0.223	-0.287	-0.453	-0.196	-0.740
Amnat Cheorn	-	-	-	-	-	-	Amnat Cheorn	-	-	-	-	-	-
Roi Et	-0.188	-0.378	-0.216	-0.285	-0.257	-0.615	Roi Et	-0.102	-0.121	-0.364	-0.275	-0.226	-0.604
Nakhomphanom	-0.424	0.034	-0.608	-0.626	-0.738	-0.886	Nakhomphanom	-0.546	0.230	-0.716	-0.609	-0.616	-0.886
Mukdahan	-0.402	-0.359	-0.411	-0.724	-0.461	-0.819	Mukdahan	-0.381	-0.492	-0.528	-0.734	-0.257	-0.596
North Region	-0.247	-0.222	-0.149	-0.075	-0.164	-0.632	North Region	-0.246	-0.181	-0.118	0.002	-0.095	-0.577
Zone 08	-0.374	-0.340	-0.282	-0.368	-0.224	-0.644	Zone 08	-0.414	-0.301	-0.179	-0.330	-0.317	-0.591
Nakhon Sawan	-0.348	-0.265	-0.118	-0.260	-0.031	-0.720	Nakhon Sawan	-0.404	-0.098	-0.143	-0.129	-0.141	-0.714
Uthai Thani	-0.204	-0.310	-0.424	-0.438	-0.131	-0.779	Uthai Thani	-0.270	-0.372	0.010	-0.345	-0.462	-0.552
Kam Phaeng Phet	-0.315	-0.349	-0.213	-0.368	-0.272	-0.690	Kam Phaeng Phet	-0.393	-0.369	-0.110	-0.441	-0.394	-0.615
Tak	-0.518	-0.455	-0.547	-0.472	-0.478	-0.823	Tak	-0.568	-0.508	-0.237	-0.453	-0.481	-0.729
Sukhothai	-0.507	-0.400	-0.451	-0.489	-0.381	-0.049	Sukhothai	-0.410	-0.396	-0.516	-0.462	-0.317	-0.058
Zone 09	-0.212	-0.227	-0.179	-0.103	-0.121	-0.622	Zone 09	-0.224	-0.163	-0.200	-0.098	-0.096	-0.588
Uttaradit	-0.065	-0.183	-0.269	-0.159	-0.393	-0.762	Uttaradit	-0.030	-0.175	-0.277	0.001	-0.215	-0.712
Phrae	-0.331	-0.508	-0.390	-0.393	-0.574	-0.471	Phrae	-0.212	-0.086	-0.396	-0.273	-0.490	-0.542
Nan	-0.453	-0.507	-0.044	0.489	-0.173	-0.653	Nan	-0.296	-0.580	-0.264	0.456	-0.030	-0.659
Phitsanulok	0.137	0.041	0.171	0.136	0.290	-0.800	Phitsanulok	-0.033	0.176	0.162	-0.040	0.190	-0.792
Phichit	-0.484	-0.243	-0.535	-0.274	0.106	-0.186	Phichit	-0.514	-0.242	-0.381	-0.212	0.211	0.153
Phetchabun	-0.415	-0.277	-0.309	-0.425	-0.305	-0.622	Phetchabun	-0.422	-0.357	-0.343	-0.413	-0.335	-0.637

Table 14 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (age 0-4 years)

0-4 years : Male	1992	1993	1994	1995	1996	1997	0-4 years : Female	1992	1993	1994	1995	1996	1997
South Region	-0.352	-0.244	-0.406	-0.470	-0.412	-0.680	South Region	-0.401	-0.316	-0.454	-0.454	-0.438	-0.633
Zone 10	-0.166	-0.111	-0.001	0.215	-0.152	-0.632	Zone 10	-0.114	-0.089	0.018	0.402	0.107	-0.554
Chiang Mai	-0.256	-0.194	-0.264	0.062	-0.220	-0.889	Chiang Mai	-0.263	-0.403	-0.247	0.117	0.000	-0.883
Lamphun	-0.420	-0.442	-0.374	-0.437	-0.181	-0.729	Lamphun	-0.327	-0.311	-0.128	-0.198	0.249	-0.648
Lampang	-0.205	-0.134	-0.132	-0.088	-0.266	-0.678	Lampang	-0.207	-0.039	-0.172	-0.168	-0.089	-0.614
Phayao	0.441	0.182	0.273	2.278	-0.487	-0.388	Phayao	0.136	0.352	0.381	3.047	-0.344	-0.540
Chiang Rai	-0.031	0.195	0.942	0.817	0.477	-0.064	Chiang Rai	0.433	0.542	0.945	1.200	0.993	0.158
Mae Hong Son	-0.315	-0.253	-0.336	-0.704	-0.417	-0.798	Mac Hong Son	-0.359	-0.428	-0.397	-0.452	-0.254	-0.507
Zone 11	-0.297	-0.126	-0.427	-0.483	-0.416	-0.570	Zone 11	-0.394	-0.341	-0.505	-0.496	-0.369	-0.493
Nakhon Sri Thamm	-0.351	-0.497	-0.513	-0.549	-0.551	-0.632	Nakhon Sri Thammarat	-0.478	-0.671	-0.479	-0.619	-0.424	-0.562
Krabi	-0.166	1.927	-0.339	-0.382	-0.339	-0.791	Krabi	-0.086	1.037	-0.440	-0.361	-0.410	-0.705
Phangnga	-0.387	-0.399	-0.442	-0.740	-0.167	-0.807	Phangnga	-0.425	-0.609	-0.957	-0.746	-0.539	-0.874
Phuket	-0.197	0.733	-0.381	-0.158	-0.134	-0.284	Phuket	-0.441	0.234	-0.730	-0.243	0.011	-0.252
Surat Thani	-0.490	-0.449	-0.429	-0.454	-0.462	-0.336	Surat Thani	-0.350	-0.449	-0.507	-0.475	-0.347	-0.176
Ranong	-0.154	-0.447	0.088	-0.461	-0.558	-0.823	Ranong	-0.187	-0.002	-0.115	0.265	0.155	-0.421
Chumphon	0.426	-0.107	-0.123	-0.276	0.198	-0.372	Chumphon	-0.437	-0.324	-0.395	-0.221	-0.319	-0.466
Zone 12	-0.387	-0.316	-0.394	-0.464	-0.412	-0.746	Zone 12	-0.405	-0.300	-0.423	-0.427	-0.482	-0.722
Songkhla	-0.573	-0.253	-0.477	-0.518	-0.458	-0.756	Songkhla	-0.497	-0.281	-0.530	-0.597	-0.482	-0.760
Satun	-0.435	-0.501	-0.547	-0.605	-0.494	-0.832	Satun	-0.250	-0.332	-0.520	-0.483	-0.640	-0.767
Trang	-0.522	-0.379	-0.398	-0.337	-0.258	-0.676	Trang	-0.547	-0.360	-0.459	0.105	-0.315	-0.690
Phatthalung	-0.255	-0.387	-0.475	-0.441	-0.392	-0.371	Phatthalung	-0.352	-0.030	-0.563	-0.567	-0.411	-0.060
Pattani	-0.260	-0.333	-0.155	-0.525	-0.306	-0.750	Pattani	-0.429	-0.452	-0.300	-0.353	-0.506	-0.697
Yala	-0.072	-0.295	-0.437	-0.305	-0.396	-0.829	Yala	-0.403	-0.371	-0.281	-0.361	-0.467	-0.860
Narathiwat	-0.163	-0.305	-0.292	-0.456	-0.558	-0.856	Narathiwat	-0.084	-0.214	-0.215	-0.551	-0.617	-0.832

Indicate that death rates were lower than the 1984-1991 baseline death rates

Table 15 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (age 25-29)

25-29 yrs : Male	1992	1993	1994	1995	1996	1997	25-29 years : Female	1992	1993	1994	1995	1996	1997
Bangkok Metropoli:	0.400	0.450	0.601	0.546	-0.124	0.409	Bangkok Metropolis	-0.140	-0.131	-0.040	-0.069	-0.397	0.073
Zone 01	0.455	0.601	1.139	1.196	0.817	0.762	Zone 01	0.228	0.158	0.336	0.697	0.380	0.417
Samut Prakan	0.483	0.403	0.916	0.889	0.096	0.057	Samut Prakan	0.346	0.571	0.627	1.077	0.171	0.126
Nonthaburi	0.460	0.672	1.749	1.793	0.669	0.812	Nonthaburi	0.144	-0.412	0.285	0.425	0.059	-0.008
Pathum Thani	0.612	1.250	0.718	1.241	2.214	1.529	Pathum Thani	0.403	0.444	0.533	0.383	0.924	1.177
Ayutthaya	0.477	0.781	1.122	1.223	1.396	1.769	Ayutthaya	0.388	0.563	-0.025	1.071	1.003	0.792
Ang Thong	-0.115	-0.291	0.948	0.489	1.213	0.719	Ang Thong	-0.297	-0.285	0.051	0.550	0.244	0.907
Zone 02	0.277	0.553	0.708	0.849	1.037	0.831	Zone 02	0.090	0.374	0.409	0.289	0.362	0.459
Lopburi	0.198	0.177	0.318	0.388	1.795	1.333	Lopburi	-0.050	0.034	0.051	-0.046	0.617	0.508
Singburi	0.064	0.332	-0.025	0.498	0.339	0.913	Singburi	0.616	-0.178	-0.247	0.098	-0.141	0.546
Chainat	0.036	0.273	-0.142	0.754	1.152	0.815	Chainat	0.103	-0.018	0.071	-0.207	0.687	0.834
Saraburi	0.572	1.286	1.680	1.080	0.381	0.357	Saraburi	0.029	1.407	1.736	1.205	0.187	0.614
Nakhonnayok	0.324	0.439	0.667	1.006	1.755	0.594	Nakhonnayok	0.019	1.216	0.593	-0.015	0.752	0.162
Suphanburi	0.118	0.146	0.403	1.086	1.193	1.056	Suphanburi	0.093	-0.229	-0.234	0.085	0.235	0.187
Zone 03	0.101	0.535	0.213	0.638	0.780	0.942	Zone 03	0.103	0.137	-0.053	0.079	0.152	0.608
Chonburi	0.218	1.473	0.276	0.519	0.548	1.128	Chonburi	0.458	1.530	0.117	0.385	0.328	1.029
Rayong	0.258	0.274	0.549	1.300	1.313	1.240	Rayong	-0.087	-0.249	0.335	0.319	0.194	0.654
Chanthaburi	0.112	0.162	0.429	0.811	0.576	0.690	Chanthaburi	-0.102	-0.269	0.084	-0.081	-0.294	0.129
Trat	0.037	-0.141	-0.160	0.349	0.413	0.430	Trat	0.158	-0.019	-0.515	0.519	-0.526	0.494
Chachoengsao	-0.118	-0.209	-0.369	-0.176	1.126	0.745	Chachoengsao	-0.193	-0.601	-0.606	-0.611	0.152	0.866
Prachinburi	0.525	1.211	0.250	0.828	0.393	0.232	Prachinburi	0.705	-0.123	-0.203	-0.246	-0.221	0.111
Sakeaw	-	-	-	-	-	-	Sakeaw	-	-	-	-	-	-
Zone 04	0.182	0.521	0.863	1.086	1.239	0.948	Zone 04	0.190	0.363	0.285	0.463	0.546	0.512
Ratchaburi	0.225	0.480	0.755	1.014	1.220	0.679	Ratchaburi	0.521	0.521	0.706	0.771	0.628	-0.037
Kanchanaburi	0.364	0.183	0.891	0.429	1.225	0.720	Kanchanaburi	0.107	0.012	0.193	0.130	0.184	0.229
Nakhon Pathom	0.138	0.734	1.071	1.170	0.903	1.137	Nakhon Pathom	0.108	1.083	0.073	0.336	0.244	0.795
Samut Sakhon	0.052	0.546	0.654	1.145	0.358	0.140	Samut Sakhon	0.774	0.341	0.756	0.964	0.529	0.755
Samut Songkhram	0.266	0.342	0.842	-0.068	1.616	0.990	Samut Songkhram	-0.026	0.460	-0.034	-0.517	0.759	1.365
Phetchaburi	0.108	0.958	1.133	2.162	2.595	1.954	Phetchaburi	0.201	0.372	0.304	1.268	1.700	1.496
Phachuap Khiri Kha	0.100	0.378	0.708	1.347	1.608	1.571	Phachuap Khiri Khan	-0.306	-0.306	-0.027	0.095	0.530	0.152
Zone 05	0.046	0.263	0.498	0.957	1.980	1.439	Zone 05	-0.066	-0.007	-0.024	0.200	0.462	0.516
Nakhon Ratvhasima	0.011	0.344	0.556	0.724	1.345	0.543	Nakhon Ratvhasima	0.094	0.283	-0.089	-0.012	0.186	-0.126
Buriram	-0.005	0.173	0.292	1.148	2.088	1.695	Buriram	-0.292	-0.230	0.030	-0.078	0.555	0.581
Surin	-0.092	-0.234	0.268	1.260	2.141	2.017	Surin	-0.273	-0.475	0.037	0.072	0.385	1.066
Chaiyaphum	0.332	0.674	0.435	0.315	2.493	2.059	Chaiyaphum	0.061	-0.080	-0.052	0.608	0.854	1.123
Maharakham	0.207	0.469	1.138	1.785	3.760	3.243	Maharakham	0.013	0.183	0.021	0.227	1.033	1.305
Zone 06	-0.044	0.061	0.397	0.866	1.710	0.820	Zone 06	-0.265	-0.194	-0.107	0.017	0.586	0.286
Nongbua Lamphu	-	-	-	-	-	-	Nongbua Lamphu	-	-	-	-	-	-
Khon Kaen	0.106	0.303	0.658	1.240	1.483	-0.540	Khon Kaen	-0.105	0.047	0.331	0.195	0.368	-0.419
Udon Thani	-0.159	-0.136	-0.061	0.708	1.939	0.989	Udon Thani	-0.145	0.123	-0.169	0.078	0.878	0.731
Loei	-0.338	0.054	0.255	0.221	0.898	0.632	Loei	-0.202	-0.321	-0.189	0.012	0.450	0.442
Nong Khai	0.093	0.059	0.452	0.695	1.796	2.376	Nong Khai	-0.582	-0.050	-0.393	-0.125	0.457	0.617
Kalasin	-0.051	0.233	0.699	1.187	2.221	1.352	Kalasin	-0.184	-0.390	-0.062	0.167	0.814	0.265
Sakonkakhon	0.309	0.074	0.321	0.688	1.846	1.627	Sakonkakhon	-0.260	-0.547	-0.476	-0.290	0.423	0.263
Zone 07	-0.015	0.428	0.538	1.091	2.229	1.848	Zone 07	-0.198	-0.232	-0.171	-0.068	0.325	0.335
Srisaket	-0.268	-0.065	0.449	1.081	2.616	2.361	Srisaket	-0.141	-0.485	-0.310	-0.030	0.475	0.643
Ubon Ratchathani	0.392	0.642	0.772	1.193	1.582	1.418	Ubon Ratchathani	-0.082	-0.164	-0.131	-0.162	0.090	0.051
Yasothon	-0.091	0.435	0.343	1.142	2.178	2.342	Yasothon	-0.005	-0.421	-0.165	0.261	0.377	0.926
Amnat Cheorn	-	-	-	-	-	-	Amnat Cheorn	-	-	-	-	-	-
Roi Et	0.114	0.275	0.672	1.363	3.154	2.663	Roi Et	-0.422	-0.260	0.047	0.053	0.535	0.525
Nakhomphanom	-0.346	1.556	0.012	0.353	1.655	0.648	Nakhomphanom	-0.081	0.418	-0.584	-0.265	0.018	-0.220
Mukdahan	-0.161	-0.096	0.005	0.559	1.314	0.577	Mukdahan	-0.196	-0.208	-0.148	-0.368	-0.028	-0.241
Zone 08	-0.065	0.275	0.526	0.630	1.393	1.107	Zone 08	-0.173	0.061	0.064	0.230	0.443	0.576
Nakhon Sawan	0.063	0.508	0.481	0.856	1.440	1.357	Nakhon Sawan	-0.228	0.133	0.067	0.483	0.233	0.514
Uthai Thani	-0.170	0.318	0.782	0.765	1.298	0.811	Uthai Thani	-0.093	-0.008	-0.134	0.171	0.272	0.368
Kam Phaeng Phet	-0.135	0.088	1.143	0.683	1.364	0.695	Kam Phaeng Phet	-0.018	0.147	0.350	0.212	0.459	0.450
Tak	-0.224	0.360	0.087	0.281	0.915	0.726	Tak	-0.156	-0.088	-0.189	0.056	0.617	0.094
Sukhothai	-0.014	-0.022	-0.051	0.344	1.813	1.727	Sukhothai	-0.363	-0.077	-0.061	-0.144	0.846	1.418
Zone 09	0.006	0.239	0.510	1.237	2.020	1.816	Zone 09	-0.115	-0.018	-0.088	0.339	1.065	1.062
Uttaradit	-0.134	0.302	0.426	0.927	1.209	1.137	Uttaradit	-0.170	-0.157	-0.141	0.237	0.265	0.573
Phrae	0.340	0.808	1.153	2.328	2.525	2.512	Phrae	0.120	0.091	-0.261	0.170	1.868	1.863
Nan	-0.001	0.166	1.001	2.488	3.509	3.756	Nan	-0.280	-0.157	0.028	1.024	2.662	2.358
Phitsanulok	-0.040	0.178	0.347	0.627	1.094	0.607	Phitsanulok	0.310	0.300	0.149	0.367	0.693	0.447
Phichit	-0.496	-0.072	0.115	1.243	3.456	2.972	Phichit	-0.379	-0.313	-0.418	0.062	1.591	1.020
Phetchabun	0.097	0.003	0.218	0.785	2.018	1.832	Phetchabun	-0.414	-0.095	-0.080	0.278	0.441	0.877

Table 15 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (age 25-29)

25-29 years : Male	1992	1993	1994	1995	1996	1997	25-29 years : Female	1992	1993	1994	1995	1996	1997
Zone 10	0.533	1.492	2.912	4.370	5.450	3.906	Zone 10	0.030	0.282	1.113	2.748	4.618	4.702
Chiang Mai	0.512	1.368	2.501	3.428	3.821	1.688	Chiang Mai	-0.088	0.202	0.691	2.169	3.821	2.694
Lamphun	0.211	1.734	2.649	3.801	5.161	3.940	Lamphun	-0.091	-0.078	0.757	1.194	2.512	2.565
Lampang	0.348	1.089	1.905	2.987	4.097	3.652	Lampang	0.025	0.010	0.466	1.138	2.273	3.336
Phayao	0.591	2.147	3.094	7.044	7.746	5.496	Phayao	0.129	0.717	1.238	4.665	7.145	6.846
Chiang Rai	0.807	1.757	4.605	6.313	8.589	7.381	Chiang Rai	0.184	0.521	2.458	4.687	7.291	8.592
Mae Hong Son	0.328	0.129	0.648	0.599	1.692	0.963	Mae Hong Son	0.029	0.155	-0.532	0.415	2.123	1.432
Zone 11	-0.058	0.140	-0.097	0.248	0.531	0.391	Zone 11	-0.135	0.091	-0.231	-0.196	0.277	0.119
Nakhon Sri Thammarat	-0.081	-0.265	-0.036	0.129	0.837	0.649	Nakhon Sri Thammarat	-0.067	-0.210	-0.331	-0.209	0.351	0.179
Krabi	0.788	4.004	0.487	0.999	0.941	0.951	Krabi	0.618	4.276	0.492	0.010	0.440	0.497
Phangnga	-0.385	-0.484	-0.581	-0.230	0.403	0.534	Phangnga	-0.617	-0.716	-0.906	-0.353	0.996	0.244
Phuket	0.105	0.802	-0.483	-0.163	-0.115	-0.065	Phuket	-0.253	0.257	-0.414	-0.424	-0.082	-0.102
Surat Thani	-0.393	-0.388	-0.188	0.139	0.100	-0.233	Surat Thani	-0.368	-0.453	-0.070	-0.288	-0.026	-0.242
Ranong	1.890	0.985	0.470	1.360	1.628	0.715	Ranong	0.309	-0.514	-0.679	0.265	1.174	-0.088
Chumphon	-0.021	0.204	0.095	0.745	0.905	1.203	Chumphon	-0.069	0.193	-0.034	0.004	0.141	0.625
Zone 12	-0.039	0.243	0.175	0.213	0.696	0.330	Zone 12	-0.249	-0.122	-0.291	-0.229	-0.023	-0.215
Songkhla	0.163	0.559	0.119	0.229	0.656	0.000	Songkhla	-0.203	0.096	-0.190	-0.431	-0.232	-0.167
Satun	-0.120	0.153	0.458	0.953	0.685	0.275	Satun	-0.318	-0.328	-0.502	-0.349	0.272	-0.380
Trang	-0.123	0.099	0.407	0.725	0.689	0.511	Trang	-0.154	-0.245	-0.210	0.476	0.208	-0.210
Phatthalung	-0.097	-0.135	0.069	-0.023	1.427	1.793	Phatthalung	-0.377	-0.074	-0.572	0.026	0.600	0.046
Pattani	-0.106	0.081	0.123	-0.169	1.132	0.704	Pattani	-0.411	-0.379	-0.308	-0.470	0.113	-0.310
Yala	-0.457	0.042	-0.168	-0.344	0.320	-0.095	Yala	-0.471	-0.216	-0.418	0.080	-0.253	-0.392
Narathiwat	-0.155	-0.001	0.271	-0.029	0.235	0.122	Narathiwat	-0.046	-0.221	-0.270	-0.402	-0.219	-0.237

Indicate that death rates were lower than the 1984-1991 baseline death rates

Table 16 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (age 15-49 years)

15-49 yrs: Male	1992	1993	1994	1995	1996	1997	15-49 yrs: Female	1992	1993	1994	1995	1996	1997
Whole Country	0.126	0.324	0.414	0.625	0.821	0.553	Whole Country	-0.090	-0.020	-0.020	0.082	0.222	0.107
Central Region	0.284	0.516	0.564	0.652	0.477	0.433	Central Region	0.048	0.160	0.160	0.139	0.038	0.105
Bangkok Metropolis	0.290	0.355	0.461	0.446	-0.046	0.217	Bangkok Metropolis	-0.024	-0.043	-0.043	-0.046	-0.330	-0.037
Zone 01	0.523	0.720	0.993	1.090	0.920	0.680	Zone 01	0.236	0.349	0.349	0.510	0.498	0.329
Samut Prakan	0.433	0.587	0.934	0.912	0.308	0.194	Samut Prakan	0.242	0.522	0.522	0.727	0.285	0.269
Nonthaburi	0.482	0.652	1.200	1.289	0.587	0.497	Nonthaburi	0.132	0.179	0.179	0.367	0.100	-0.020
Pathum Thani	0.842	1.308	0.841	1.086	2.228	1.377	Pathum Thani	0.390	0.438	0.438	0.316	1.396	0.858
Ayutthaya	0.593	0.790	0.965	1.127	1.404	1.365	Ayutthaya	0.370	0.349	0.349	0.572	0.717	0.748
Ang Thong	0.275	0.256	0.720	0.938	1.350	0.702	Ang Thong	0.068	0.272	0.272	0.536	0.570	0.055
Zone 02	0.316	0.665	0.791	0.773	0.759	0.520	Zone 02	0.072	0.261	0.261	0.329	0.187	0.185
Lopburi	0.134	0.295	0.347	0.297	1.235	0.898	Lopburi	0.012	0.016	0.016	-0.130	0.482	0.464
Singburi	0.385	0.309	0.207	0.651	0.613	0.480	Singburi	0.133	-0.156	-0.156	0.386	0.074	0.196
Chainat	0.044	0.318	0.253	0.680	0.957	0.898	Chainat	-0.015	-0.146	-0.146	0.019	0.230	0.347
Saraburi	0.707	1.489	1.896	1.064	0.299	0.146	Saraburi	0.409	1.117	1.117	0.940	0.010	0.113
Nakhonnayok	0.072	0.523	0.531	0.577	1.032	0.228	Nakhonnayok	-0.169	0.039	0.039	0.207	0.195	-0.189
Suphanburi	0.176	0.316	0.368	0.992	0.773	0.584	Suphanburi	-0.096	0.079	0.079	0.321	0.124	0.070
Zone 03	0.102	0.573	0.210	0.453	0.557	0.556	Zone 03	-0.002	0.215	0.215	-0.007	0.102	0.206
Chonburi	0.280	1.714	0.239	0.454	0.545	0.755	Chonburi	0.253	1.363	1.363	0.018	0.100	0.520
Rayong	0.245	0.243	0.534	0.755	0.721	0.695	Rayong	0.153	-0.051	-0.051	0.054	0.023	0.251
Chanthaburi	0.085	0.176	0.351	0.593	0.289	0.153	Chanthaburi	0.010	-0.048	-0.048	0.097	-0.212	-0.219
Trat	-0.054	-0.099	-0.043	0.477	0.237	0.148	Trat	-0.079	-0.304	-0.304	0.146	0.092	0.041
Chachoengsao	-0.039	-0.189	-0.211	-0.017	0.853	0.754	Chachoengsao	-0.231	-0.494	-0.494	-0.234	0.477	0.383
Prachinburi	0.411	0.983	0.148	0.206	0.178	0.135	Prachinburi	0.096	0.189	0.189	-0.429	-0.201	-0.229
Sakeaw	-	-	-	-	-	-	Sakeaw	-	-	-	-	-	-
Zone 04	0.267	0.461	0.668	0.845	0.831	0.439	Zone 04	0.088	0.276	0.276	0.267	0.277	0.071
Ratchaburi	0.270	0.381	0.582	0.852	0.756	0.283	Ratchaburi	0.105	0.165	0.165	0.381	0.140	-0.108
Kanchanaburi	0.370	0.252	0.631	0.517	0.665	0.467	Kanchanaburi	0.143	0.045	0.045	0.130	0.145	-0.053
Nakhon Pathom	0.211	0.655	0.842	0.876	0.822	0.564	Nakhon Pathom	-0.042	0.841	0.841	0.201	0.109	0.171
Samut Sakhon	0.240	0.638	0.910	1.151	0.511	0.298	Samut Sakhon	0.322	0.402	0.402	0.738	0.309	0.244
Samut Songkhram	0.085	0.276	0.431	0.164	0.837	-0.005	Samut Songkhram	0.092	0.108	0.108	-0.160	0.564	0.074
Phetchaburi	0.341	0.646	0.703	1.377	1.523	1.020	Phetchaburi	0.142	0.161	0.161	0.375	0.854	0.577
Phachuap Khiri Kha	0.217	0.335	0.402	0.727	0.958	0.819	Phachuap Khiri Kha	-0.033	0.058	0.058	0.113	0.412	0.263
North-East Reg.	0.082	0.104	0.231	0.453	0.815	0.478	North-East Reg.	-0.104	-0.155	-0.155	-0.029	0.101	-0.066
Zone 05	0.066	0.187	0.348	0.526	0.980	0.706	Zone 05	-0.107	-0.039	-0.039	0.073	0.219	0.107
Nakhon Ratvhasima	0.148	0.320	0.502	0.600	0.792	0.280	Nakhon Ratvhasima	0.009	0.175	0.175	0.154	0.145	-0.088
Buriram	0.033	0.032	0.177	0.512	0.933	0.806	Buriram	-0.183	-0.195	-0.195	0.007	0.141	0.112
Surin	-0.023	-0.074	0.347	0.857	1.328	1.346	Surin	-0.246	-0.286	-0.286	0.308	0.418	0.420
Chaiyaphum	0.063	0.355	0.098	-0.107	1.126	0.773	Chaiyaphum	-0.104	-0.028	-0.028	-0.264	0.428	0.184
Maharakham	-0.021	0.186	0.397	0.526	1.033	0.950	Maharakham	-0.117	-0.041	-0.041	-0.003	0.122	0.150
Zone 06	-0.051	-0.002	0.086	0.314	0.625	0.138	Zone 06	-0.183	-0.224	-0.224	-0.126	0.048	-0.190
Nongbua Lamphu	-	-	-	-	-	-	Nongbua Lamphu	-	-	-	-	-	-
Khon Kaen	0.157	0.305	0.381	0.666	0.590	-0.390	Khon Kaen	-0.013	0.000	0.000	0.100	0.025	-0.308
Udon Thani	-0.139	-0.095	-0.256	0.105	0.474	0.080	Udon Thani	-0.191	-0.209	-0.209	-0.238	0.072	-0.207
Loei	-0.131	-0.007	-0.014	0.216	0.543	0.199	Loei	-0.196	-0.368	-0.368	-0.242	0.084	-0.071
Nong Khai	-0.047	0.019	0.200	0.335	0.769	0.692	Nong Khai	-0.178	-0.157	-0.157	-0.085	0.116	0.060
Kalasin	0.020	0.066	0.169	0.345	0.730	0.332	Kalasin	-0.164	-0.239	-0.239	-0.159	0.041	-0.271
Sakonkakhon	0.045	-0.117	0.014	0.116	0.642	0.264	Sakonkakhon	-0.156	-0.282	-0.282	-0.245	-0.055	-0.275
Zone 07	0.270	0.154	0.296	0.553	0.886	0.719	Zone 07	-0.014	-0.182	-0.119	-0.013	0.050	-0.069
Srisaket	-0.020	0.068	0.143	0.401	1.411	1.039	Srisaket	-0.130	-0.199	-0.263	-0.004	0.345	0.086
Ubon Ratchathani	0.382	0.505	0.500	0.747	0.706	0.471	Ubon Ratchathani	-0.050	-0.032	-0.039	-0.005	-0.079	-0.233
Yasothon	-0.020	0.102	0.218	0.445	0.850	0.966	Yasothon	0.005	-0.218	-0.090	-0.021	0.099	0.184
Amnat Choeon	-	-	-	-	-	-	Amnat Choeon	-	-	-	-	-	-
Roi Et	0.023	0.123	0.177	0.426	0.945	0.750	Roi Et	-0.191	-0.172	-0.230	-0.122	0.053	-0.065
Nakhomphanom	-0.059	1.444	0.032	0.225	0.581	0.002	Nakhomphanom	-0.171	0.832	-0.269	-0.108	-0.019	-0.410
Mukdahan	0.090	-0.089	0.109	0.316	0.865	0.449	Mukdahan	-0.250	-0.183	-0.126	-0.069	0.063	-0.188
North Region	0.181	0.430	0.847	1.253	1.796	1.170	North Region	-0.090	-0.047	0.149	0.421	0.861	0.563
Zone 08	0.016	0.120	0.338	0.365	0.796	0.491	Zone 08	-0.171	-0.095	0.006	0.034	0.239	0.071
Nakhon Sawan	0.126	0.345	0.490	0.575	0.832	0.577	Nakhon Sawan	-0.083	0.032	0.085	0.227	0.244	0.072
Uthai Thani	0.096	0.219	0.303	0.551	0.832	0.529	Uthai Thani	-0.037	-0.055	-0.155	0.146	0.257	0.173
Kam Phaeng Phet	-0.009	0.010	0.689	0.374	0.636	0.215	Kam Phaeng Phet	-0.150	-0.170	0.329	-0.024	0.150	-0.058
Tak	-0.163	-0.027	-0.090	0.181	0.612	0.235	Tak	-0.438	-0.205	-0.323	-0.186	0.038	-0.059
Sukhothai	-0.056	-0.091	-0.036	0.004	1.067	0.889	Sukhothai	-0.255	-0.200	-0.246	-0.191	0.503	0.285
Zone 09	0.063	0.190	0.388	0.645	1.052	0.791	Zone 09	-0.075	-0.097	-0.030	0.106	0.392	0.181
Uttaradit	-0.035	0.220	0.227	0.458	0.424	0.396	Uttaradit	-0.112	-0.048	-0.047	0.190	0.183	0.010
Phrae	0.323	0.438	0.799	0.948	1.222	0.969	Phrae	0.243	-0.031	0.043	0.100	0.673	0.357
Nan	-0.187	-0.064	0.193	1.087	1.569	1.568	Nan	-0.226	-0.324	-0.115	0.197	0.721	0.542
Phitsanulok	0.180	0.281	0.494	0.602	0.628	0.365	Phitsanulok	0.042	0.159	0.109	0.124	0.146	-0.037
Phichit	-0.263	-0.242	0.135	0.434	1.983	1.837	Phichit	-0.330	-0.326	-0.231	-0.049	0.774	0.530
Phetchabun	0.046	0.172	0.255	0.464	1.178	0.882	Phetchabun	-0.211	-0.216	-0.078	0.070	0.220	0.246

Table 16 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (age 15-49 years)

15-49 yrs: Male	1992	1993	1994	1995	1996	1997	15-49 yrs: Female	1992	1993	1994	1995	1996	1997
Whole Country	0.126	0.324	0.414	0.625	0.821	0.553	Whole Country	-0.090	-0.020	-0.020	0.082	0.222	0.107
Central Region	0.284	0.516	0.564	0.652	0.477	0.433	Central Region	0.048	0.160	0.160	0.139	0.038	0.105
Bangkok Metropolis	0.290	0.355	0.461	0.446	-0.046	0.217	Bangkok Metropolis	-0.024	-0.043	-0.043	-0.046	-0.330	-0.037
Zone 01	0.523	0.720	0.993	1.090	0.920	0.680	Zone 01	0.236	0.349	0.349	0.510	0.498	0.329
Samut Prakan	0.433	0.587	0.934	0.912	0.308	0.194	Samut Prakan	0.242	0.522	0.522	0.727	0.285	0.269
Nonthaburi	0.482	0.652	1.200	1.289	0.587	0.497	Nonthaburi	0.132	0.179	0.179	0.367	0.100	-0.020
Pathum Thani	0.842	1.308	0.841	1.086	2.228	1.377	Pathum Thani	0.390	0.438	0.438	0.316	1.396	0.858
Ayutthaya	0.593	0.790	0.965	1.127	1.404	1.365	Ayutthaya	0.370	0.349	0.349	0.572	0.717	0.748
Ang Thong	0.275	0.256	0.720	0.938	1.350	0.702	Ang Thong	0.068	0.272	0.272	0.536	0.570	0.055
Zone 02	0.316	0.665	0.791	0.773	0.759	0.520	Zone 02	0.072	0.261	0.261	0.329	0.187	0.185
Lopburi	0.134	0.295	0.347	0.297	1.235	0.898	Lopburi	0.012	0.016	0.016	-0.130	0.482	0.464
Singburi	0.385	0.309	0.207	0.651	0.613	0.480	Singburi	0.133	-0.156	-0.156	0.386	0.074	0.196
Chainat	0.044	0.318	0.253	0.680	0.957	0.898	Chainat	-0.015	-0.146	-0.146	0.019	0.230	0.347
Saraburi	0.707	1.489	1.896	1.064	0.299	0.146	Saraburi	0.409	1.117	1.117	0.940	0.010	0.113
Nakhonnayok	0.072	0.523	0.531	0.577	1.032	0.228	Nakhonnayok	-0.169	0.039	0.039	0.207	0.195	-0.189
Suphanburi	0.176	0.316	0.368	0.992	0.773	0.584	Suphanburi	-0.096	0.079	0.079	0.321	0.124	0.070
Zone 03	0.102	0.573	0.210	0.453	0.557	0.556	Zone 03	-0.002	0.215	0.215	-0.007	0.102	0.206
Chonburi	0.280	1.714	0.239	0.454	0.545	0.755	Chonburi	0.253	1.363	1.363	0.018	0.100	0.520
Rayong	0.245	0.243	0.534	0.755	0.721	0.695	Rayong	0.153	-0.051	-0.051	0.054	0.023	0.251
Chanthaburi	0.085	0.176	0.351	0.593	0.289	0.153	Chanthaburi	0.010	-0.048	-0.048	0.097	-0.212	-0.219
Trat	-0.054	-0.099	-0.043	0.477	0.237	0.148	Trat	-0.079	-0.304	-0.304	0.146	0.092	0.041
Chachoengsao	-0.039	-0.189	-0.211	-0.017	0.853	0.754	Chachoengsao	-0.231	-0.494	-0.494	-0.234	0.477	0.383
Prachinburi	0.411	0.983	0.148	0.206	0.178	0.135	Prachinburi	0.096	0.189	0.189	-0.429	-0.201	-0.229
Sakeaw	-	-	-	-	-	-	Sakeaw	-	-	-	-	-	-
Zone 04	0.267	0.461	0.668	0.845	0.831	0.439	Zone 04	0.088	0.276	0.276	0.267	0.277	0.071
Ratchaburi	0.270	0.381	0.582	0.852	0.756	0.283	Ratchaburi	0.105	0.165	0.165	0.381	0.140	-0.108
Kanchanaburi	0.370	0.252	0.631	0.517	0.665	0.467	Kanchanaburi	0.143	0.045	0.045	0.130	0.145	-0.053
Nakhon Pathom	0.211	0.655	0.842	0.876	0.822	0.564	Nakhon Pathom	-0.042	0.841	0.841	0.201	0.109	0.171
Samut Sakhon	0.240	0.638	0.910	1.151	0.511	0.298	Samut Sakhon	0.322	0.402	0.402	0.738	0.309	0.244
Samut Songkhram	0.085	0.276	0.431	0.164	0.837	-0.005	Samut Songkhram	0.092	0.108	0.108	-0.160	0.564	0.074
Phetchaburi	0.341	0.646	0.703	1.377	1.523	1.020	Phetchaburi	0.142	0.161	0.161	0.375	0.854	0.577
Phachuap Khiri Khar	0.217	0.335	0.402	0.727	0.958	0.819	Phachuap Khiri Kha	-0.033	0.058	0.058	0.113	0.412	0.263
North-East Reg.	0.082	0.104	0.231	0.453	0.815	0.478	North-East Reg.	-0.104	-0.155	-0.155	-0.029	0.101	-0.066
Zone 05	0.066	0.187	0.348	0.526	0.980	0.706	Zone 05	-0.107	-0.039	-0.039	0.073	0.219	0.107
Nakhon Ratvhasima	0.148	0.320	0.502	0.600	0.792	0.280	Nakhon Ratvhasima	0.009	0.175	0.175	0.154	0.145	-0.088
Buriram	0.033	0.032	0.177	0.512	0.933	0.806	Buriram	-0.183	-0.195	-0.195	0.007	0.141	0.112
Surin	-0.023	-0.074	-0.347	0.857	1.328	1.346	Surin	-0.246	-0.286	-0.286	0.308	0.418	0.420
Chaiyaphum	0.063	0.355	0.098	-0.107	1.126	0.773	Chaiyaphum	-0.104	-0.028	-0.028	-0.264	0.428	0.184
Maharakham	-0.021	0.186	0.397	0.526	1.033	0.950	Maharakham	-0.117	-0.041	-0.041	-0.003	0.122	0.150
Zone 06	-0.051	-0.002	0.086	0.314	0.625	0.138	Zone 06	-0.183	-0.224	-0.224	-0.126	0.048	-0.190
Nongbua Lamphu	-	-	-	-	-	-	Nongbua Lamphu	-	-	-	-	-	-
Khon Kaen	0.157	0.305	0.381	0.666	0.590	-0.390	Khon Kaen	-0.013	0.000	0.000	0.100	0.025	-0.308
Udon Thani	-0.139	-0.095	-0.256	0.105	0.474	0.080	Udon Thani	-0.191	-0.209	-0.209	-0.238	0.072	-0.207
Loei	-0.131	-0.007	-0.014	0.216	0.543	0.199	Loei	-0.196	-0.368	-0.368	-0.242	0.084	-0.071
Nong Khai	-0.047	0.019	0.200	0.335	0.769	0.692	Nong Khai	-0.178	-0.157	-0.157	-0.085	0.116	0.060
Kalasin	0.020	0.066	0.169	0.345	0.730	0.332	Kalasin	-0.164	-0.239	-0.239	-0.159	0.041	-0.271
Sakonkakhon	0.045	-0.117	0.014	0.116	0.642	0.264	Sakonkakhon	-0.156	-0.282	-0.282	-0.245	-0.055	-0.275
Zone 07	0.270	0.154	0.296	0.553	0.886	0.719	Zone 07	-0.014	-0.182	-0.119	-0.013	0.050	-0.069
Srisaket	-0.020	0.068	0.143	0.401	1.411	1.039	Srisaket	-0.130	-0.199	-0.263	-0.004	0.345	0.086
Ubon Ratchathani	0.382	0.505	0.500	0.747	0.706	0.471	Ubon Ratchathani	-0.050	-0.032	-0.039	-0.005	-0.079	-0.233
Yasothon	-0.020	0.102	0.218	0.445	0.850	0.966	Yasothon	0.005	-0.218	-0.090	-0.021	0.099	0.184
Amnat Cheorn	-	-	-	-	-	-	Amnat Cheorn	-	-	-	-	-	-
Roi Et	0.023	0.123	0.177	0.426	0.945	0.750	Roi Et	-0.191	-0.172	-0.230	-0.122	0.053	-0.065
Nakhomphanom	-0.059	1.444	0.032	0.225	0.581	0.002	Nakhomphanom	-0.171	0.832	-0.269	-0.108	-0.019	-0.410
Mukdahan	0.090	-0.089	0.109	0.316	0.865	0.449	Mukdahan	-0.250	-0.183	-0.126	-0.069	0.063	-0.188
North Region	0.181	0.430	0.847	1.253	1.796	1.170	North Region	-0.090	-0.047	0.149	0.421	0.861	0.563
Zone 08	0.016	0.120	0.338	0.365	0.796	0.491	Zone 08	-0.171	-0.095	0.006	0.034	0.239	0.071
Nakhon Sawan	0.126	0.345	0.490	0.575	0.832	0.577	Nakhon Sawan	-0.083	0.032	0.085	0.227	0.244	0.072
Uthai Thani	0.096	0.219	0.303	0.551	0.832	0.529	Uthai Thani	-0.037	-0.055	-0.155	0.146	0.257	0.173
Kam Phaeng Phet	-0.009	0.010	0.689	0.374	0.636	0.215	Kam Phaeng Phet	-0.150	-0.170	0.329	-0.024	0.150	-0.058
Tak	-0.163	-0.027	-0.090	0.181	0.612	0.235	Tak	-0.438	-0.205	-0.323	-0.186	0.038	-0.059
Sukhothai	-0.056	-0.091	-0.036	0.004	1.067	0.889	Sukhothai	-0.255	-0.200	-0.246	-0.191	0.503	0.285
Zone 09	0.063	0.190	0.388	0.645	1.052	0.791	Zone 09	-0.075	-0.097	-0.030	0.106	0.392	0.181
Uttaradit	-0.035	0.220	0.227	0.458	0.424	0.396	Uttaradit	-0.112	-0.048	-0.047	0.190	0.183	0.010
Phrae	0.323	0.438	0.799	0.948	1.222	0.969	Phrae	0.243	-0.031	0.043	0.100	0.673	0.357
Nan	-0.187	-0.064	0.193	1.087	1.569	1.568	Nan	-0.226	-0.324	-0.115	0.197	0.721	0.542
Phitsanulok	0.180	0.281	0.494	0.602	0.628	0.365	Phitsanulok	0.042	0.159	0.109	0.124	0.146	-0.037
Phichit	-0.263	-0.242	0.135	0.434	1.983	1.837	Phichit	-0.330	-0.326	-0.231	-0.049	0.774	0.530
Phetchabun	0.046	0.172	0.255	0.464	1.178	0.882	Phetchabun	-0.211	-0.216	-0.078	0.070	0.220	0.246

Table 17 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (all ages)

Total : Male	1992	1993	1994	1995	1996	1997	Total : Female	1992	1993	1994	1995	1996	1997
Bangkok Metropoli:	0.127	0.164	0.202	0.173	-0.118	-0.063	Bangkok Metropolis	-0.001	0.025	0.037	-0.019	-0.205	-0.168
Zone 01	0.227	0.319	0.411	0.417	0.476	0.215	Zone 01	0.136	0.148	0.177	0.175	0.335	0.081
Samut Prakan	0.246	0.317	0.461	0.420	0.212	0.026	Samut Prakan	0.134	0.205	0.213	0.212	0.218	-0.015
Nonthaburi	0.162	0.249	0.464	0.447	0.170	0.001	Nonthaburi	0.037	0.045	0.182	0.119	0.017	-0.108
Pathum Thani	0.398	0.569	0.368	0.410	1.340	0.709	Pathum Thani	0.267	0.194	0.090	0.145	0.903	0.399
Ayutthaya	0.232	0.326	0.360	0.368	0.590	0.482	Ayutthaya	0.185	0.208	0.240	0.166	0.422	0.288
Ang Thong	0.114	0.171	0.303	0.439	0.559	0.099	Ang Thong	0.133	0.132	0.135	0.343	0.480	-0.001
Zone 02	0.213	0.388	0.504	0.470	0.381	0.247	Zone 02	0.162	0.234	0.314	0.316	0.225	0.155
Lopburi	0.092	0.193	0.256	0.141	0.612	0.474	Lopburi	0.093	0.164	0.158	0.004	0.407	0.344
Singburi	0.166	0.133	0.115	0.368	0.164	0.142	Singburi	0.255	0.067	0.189	0.307	0.103	0.008
Chainat	0.103	0.173	0.257	0.413	0.492	0.540	Chainat	0.099	0.076	0.158	0.240	0.309	0.338
Saraburi	0.519	0.984	1.322	0.811	0.170	0.029	Saraburi	0.256	0.667	0.924	0.616	0.140	0.135
Nakhonnayok	0.095	0.353	0.323	0.290	0.431	-0.022	Nakhonnayok	0.152	0.186	0.151	0.200	0.096	-0.164
Suphanburi	0.143	0.223	0.300	0.556	0.350	0.250	Suphanburi	0.149	0.137	0.174	0.410	0.150	0.106
Zone 03	0.064	0.451	0.104	0.248	0.281	0.207	Zone 03	0.043	0.407	0.051	0.106	0.111	0.034
Chonburi	0.268	1.389	0.143	0.308	0.326	0.360	Chonburi	0.234	1.207	0.076	0.172	0.155	0.188
Rayong	0.096	0.129	0.248	0.369	0.202	0.210	Rayong	0.092	0.074	-0.011	0.080	-0.158	-0.139
Chanthaburi	0.059	0.126	0.235	0.405	0.038	-0.091	Chanthaburi	0.012	0.105	0.143	0.154	-0.151	-0.278
Trat	-0.056	-0.093	-0.118	0.494	0.180	-0.039	Trat	-0.086	-0.149	-0.083	0.442	0.021	-0.137
Chachoengsao	0.031	-0.107	-0.105	-0.073	0.393	0.368	Chachoengsao	0.015	-0.079	0.025	-0.047	0.297	0.263
Prachinburi	0.345	1.016	0.038	-0.098	-0.018	-0.096	Prachinburi	0.344	1.103	-0.001	-0.256	-0.129	-0.192
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Zone 04	0.198	0.291	0.392	0.448	0.387	0.113	Zone 04	0.161	0.217	0.231	0.278	0.167	-0.020
Ratchaburi	0.179	0.248	0.353	0.457	0.267	-0.036	Ratchaburi	0.167	0.231	0.236	0.316	0.071	-0.153
Kanchanaburi	0.414	0.249	0.569	0.502	0.471	0.262	Kanchanaburi	0.410	0.210	0.322	0.461	0.270	0.009
Nakhon Pathom	0.145	0.310	0.402	0.391	0.304	0.045	Nakhon Pathom	0.087	0.282	0.183	0.198	0.125	-0.025
Samut Sakhon	0.180	0.349	0.434	0.565	0.315	0.055	Samut Sakhon	0.125	0.164	0.252	0.360	0.149	0.065
Samut Songkhram	0.018	0.209	0.233	-0.001	0.283	-0.180	Samut Songkhram	0.063	0.167	0.213	-0.087	0.198	-0.014
Phetchaburi	0.253	0.409	0.338	0.645	0.597	0.301	Phetchaburi	0.185	0.226	0.235	0.285	0.181	0.026
Phachuap Khiri Kha	0.139	0.293	0.348	0.400	0.648	0.467	Phachuap Khiri Khan	0.144	0.223	0.291	0.377	0.450	0.208
Zone 05	0.067	0.126	0.195	0.271	0.419	0.208	Zone 05	0.046	0.059	0.129	0.204	0.208	0.061
Nakhon Ratvhasima	0.131	0.224	0.290	0.350	0.278	-0.059	Nakhon Ratvhasima	0.094	0.140	0.184	0.266	0.036	-0.139
Buriram	0.029	0.019	0.076	0.255	0.282	0.244	Buriram	0.020	0.010	0.109	0.204	0.084	0.074
Surin	-0.070	-0.133	0.174	0.508	0.626	0.547	Surin	-0.085	-0.241	0.167	0.423	0.434	0.352
Chaiyaphum	0.111	0.259	0.057	-0.231	0.558	0.236	Chaiyaphum	0.100	0.249	-0.002	-0.186	0.485	0.110
Maharakham	0.074	0.208	0.282	0.290	0.450	0.441	Maharakham	0.069	0.105	0.099	0.160	0.147	0.145
Zone 06	-0.027	-0.010	0.055	0.146	0.265	-0.035	Zone 06	-0.038	-0.037	0.010	0.023	0.101	-0.116
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Khon Kaen	0.116	0.151	0.206	0.326	0.215	-0.171	Khon Kaen	0.102	0.154	0.178	0.215	0.114	-0.064
Udon Thani	-0.044	-0.021	-0.197	-0.024	0.126	-0.194	Udon Thani	-0.010	-0.016	-0.197	-0.131	-0.018	-0.285
Loei	-0.091	0.033	0.087	0.147	0.284	-0.020	Loei	-0.020	-0.079	-0.005	-0.011	0.153	-0.107
Nong Khai	-0.033	-0.024	0.067	0.110	0.242	0.204	Nong Khai	-0.027	-0.049	0.055	0.008	0.016	0.033
Kalasin	0.082	0.103	0.174	0.203	0.376	0.051	Kalasin	0.023	-0.019	0.054	0.031	0.138	-0.153
Sakonnakhon	0.045	-0.049	0.020	0.047	0.258	0.005	Sakonnakhon	-0.042	-0.051	-0.054	-0.069	0.059	-0.155
Zone 07	0.075	0.268	0.132	0.236	0.411	0.183	Zone 07	0.000	0.169	-0.010	0.055	0.141	-0.036
Srisaket	0.102	0.085	0.146	0.254	0.712	0.467	Srisaket	0.070	0.025	0.018	0.125	0.364	0.188
Ubon Ratchathani	0.256	0.283	0.156	0.273	0.172	0.027	Ubon Ratchathani	0.078	0.101	-0.053	-0.024	-0.088	-0.198
Yasothon	0.081	0.094	0.120	0.203	0.271	0.281	Yasothon	0.043	0.024	0.023	0.059	0.094	0.054
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Roi Et	0.088	0.116	0.115	0.191	0.424	0.273	Roi Et	0.074	0.063	-0.029	0.067	0.154	0.028
Nakhomphanom	-0.029	1.326	-0.037	0.086	0.140	-0.238	Nakhomphanom	-0.079	1.233	-0.118	-0.025	0.028	-0.316
Mukdahan	0.076	-0.009	-0.006	0.089	0.375	0.010	Mukdahan	-0.039	0.010	-0.018	-0.023	0.138	-0.124
Zone 08	0.062	0.093	0.301	0.247	0.420	0.191	Zone 08	0.047	0.071	0.285	0.214	0.268	0.109
Nakhon Sawan	0.133	0.219	0.313	0.349	0.378	0.241	Nakhon Sawan	0.140	0.189	0.270	0.323	0.227	0.139
Uthai Thani	0.184	0.185	0.246	0.433	0.470	0.298	Uthai Thani	0.093	0.117	0.158	0.341	0.344	0.152
Kam Phaeng Phet	0.082	0.054	0.774	0.299	0.345	0.006	Kam Phaeng Phet	0.058	0.015	0.783	0.230	0.263	0.035
Tak	-0.149	-0.070	-0.115	0.039	0.257	0.006	Tak	-0.209	-0.114	-0.084	-0.054	0.124	-0.103
Sukhothai	-0.011	-0.037	0.050	0.030	0.539	0.390	Sukhothai	0.008	0.004	0.111	0.096	0.269	0.249
Zone 09	0.127	0.137	0.252	0.372	0.523	0.343	Zone 09	0.132	0.108	0.151	0.240	0.304	0.177
Uttaradit	0.113	0.154	0.175	0.315	0.183	0.136	Uttaradit	0.203	0.128	0.200	0.374	0.215	0.108
Phrae	0.304	0.295	0.390	0.455	0.521	0.371	Phrae	0.267	0.175	0.137	0.101	0.244	0.125
Nan	-0.062	-0.052	0.104	0.605	0.686	0.674	Nan	-0.006	-0.071	0.053	0.369	0.355	0.289
Phitsanulok	0.236	0.234	0.390	0.400	0.312	0.089	Phitsanulok	0.273	0.295	0.277	0.278	0.120	0.017
Phichit	-0.092	-0.145	0.092	0.187	0.828	0.718	Phichit	-0.120	-0.048	-0.060	0.084	0.506	0.428
Phetchabun	0.087	0.141	0.204	0.281	0.599	0.347	Phetchabun	0.053	0.055	0.210	0.259	0.313	0.216

Table 17 Relative increases in death rates for 1992-1997 based on the 1984-1991 death rates by sex and province (all ages)

Total : Male	1992	1993	1994	1995	1996	1997	Total : Female	1992	1993	1994	1995	1996	1997
Zone 10	0.214	0.298	0.553	0.845	1.093	0.553	Zone 10	0.073	0.058	0.182	0.349	0.517	0.207
Chiang Mai	0.227	0.262	0.433	0.743	0.998	0.131	Chiang Mai	0.001	-0.073	0.009	0.237	0.380	-0.154
Lamphun	0.090	0.251	0.399	0.611	0.919	0.485	Lamphun	-0.001	0.022	0.043	0.144	0.254	0.014
Lampang	0.143	0.227	0.416	0.559	0.633	0.541	Lampang	0.080	0.076	0.167	0.265	0.272	0.291
Phayao	0.251	0.462	0.621	1.263	1.470	0.798	Phayao	0.202	0.263	0.328	0.668	0.789	0.401
Chiang Rai	0.302	0.402	0.973	1.299	1.569	1.239	Chiang Rai	0.169	0.209	0.513	0.658	0.908	0.777
Mae Hong Son	0.082	-0.037	-0.008	-0.216	0.413	-0.037	Mae Hong Son	-0.044	-0.186	-0.087	-0.384	0.207	-0.082
Zone 11	-0.015	0.279	-0.052	0.017	0.199	0.031	Zone 11	-0.016	0.329	-0.076	-0.066	0.073	-0.074
Nakhon Sri Thamm	-0.015	-0.168	-0.074	-0.023	0.222	0.107	Nakhon Sri Thamma	-0.007	-0.121	-0.083	-0.125	0.099	0.002
Krabi	0.187	4.510	0.203	0.244	0.316	0.337	Krabi	0.158	4.949	0.104	0.060	0.237	0.199
Phangnga	-0.242	-0.320	-0.378	-0.275	0.238	0.021	Phangnga	-0.137	-0.202	-0.284	-0.342	0.081	0.004
Phuket	0.086	0.848	-0.173	-0.032	-0.073	-0.075	Phuket	0.025	0.935	-0.242	-0.090	-0.221	-0.175
Surat Thani	-0.206	-0.192	-0.104	-0.067	-0.004	-0.271	Surat Thani	-0.175	-0.211	-0.130	-0.096	-0.103	-0.364
Ranong	0.661	0.315	0.117	0.519	0.387	0.378	Ranong	0.481	0.375	0.022	0.384	0.355	0.182
Chumphon	0.147	0.176	0.188	0.239	0.457	0.229	Chumphon	0.086	0.080	0.129	0.156	0.200	0.046
Zone 12	-0.009	0.098	0.011	0.007	0.155	-0.070	Zone 12	-0.043	0.031	-0.009	-0.057	0.014	-0.148
Songkhla	0.025	0.305	0.050	-0.060	0.075	-0.126	Songkhla	-0.051	0.107	-0.049	-0.184	-0.127	-0.256
Satun	-0.032	-0.018	-0.032	0.089	0.125	-0.115	Satun	-0.083	-0.084	-0.037	-0.063	-0.098	-0.223
Trang	0.041	0.162	0.199	0.397	0.214	-0.026	Trang	0.011	0.086	0.122	0.266	0.071	-0.220
Phatthalung	0.010	0.067	-0.072	0.059	0.294	0.134	Phatthalung	-0.022	0.075	0.017	0.014	0.083	0.032
Pattani	-0.025	-0.002	0.022	-0.017	0.189	0.083	Pattani	0.078	-0.009	0.047	0.029	0.158	0.057
Yala	-0.160	-0.207	-0.247	-0.205	0.064	-0.285	Yala	-0.172	-0.179	-0.172	-0.227	0.041	-0.238
Narathiwat	-0.021	-0.052	-0.023	-0.111	0.011	-0.104	Narathiwat	-0.122	-0.025	-0.004	-0.084	-0.069	-0.076

Indicate that death rates were lower than the 1984-1991 baseline death rates

Table 18 Probability of death of adult men aged 15-49 years in Thailand from 1984-1997

15-49 yrs: Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	0.120	0.112	0.103	0.103	0.104	0.109	0.111	0.115	0.119	0.139	0.146	0.162	0.178	0.153
Central Region	0.120	0.112	0.100	0.105	0.110	0.123	0.128	0.137	0.141	0.164	0.167	0.175	0.158	0.153
Bangkok Metropolis	0.108	0.117	0.100	0.110	0.107	0.118	0.121	0.136	0.134	0.141	0.150	0.148	0.103	0.124
Zone 01	0.103	0.089	0.085	0.084	0.094	0.109	0.120	0.127	0.144	0.158	0.181	0.188	0.176	0.156
Samut Prakan	0.096	0.093	0.092	0.096	0.103	0.109	0.132	0.137	0.143	0.157	0.189	0.185	0.137	0.125
Nonthaburi	0.146	0.096	0.101	0.102	0.105	0.125	0.139	0.144	0.162	0.176	0.224	0.231	0.167	0.158
Pathum Thani	0.085	0.075	0.058	0.055	0.065	0.107	0.115	0.130	0.142	0.171	0.141	0.159	0.236	0.179
Ayuthaya	0.082	0.078	0.076	0.067	0.089	0.089	0.090	0.098	0.126	0.139	0.153	0.162	0.183	0.181
Ang Thong	0.106	0.120	0.094	0.099	0.104	0.122	0.103	0.114	0.135	0.130	0.172	0.195	0.224	0.169
Zone 02	0.126	0.105	0.095	0.099	0.108	0.116	0.130	0.138	0.145	0.180	0.191	0.188	0.186	0.162
Lopburi	0.094	0.092	0.086	0.080	0.092	0.097	0.102	0.112	0.104	0.117	0.125	0.116	0.189	0.163
Singburi	0.130	0.115	0.086	0.078	0.119	0.123	0.170	0.155	0.162	0.155	0.142	0.190	0.186	0.169
Chainat	0.112	0.100	0.089	0.083	0.082	0.095	0.091	0.099	0.096	0.119	0.114	0.147	0.168	0.165
Saraburi	0.187	0.117	0.101	0.147	0.159	0.194	0.218	0.231	0.272	0.371	0.414	0.315	0.214	0.190
Nakhonnayok	0.154	0.112	0.120	0.092	0.104	0.102	0.111	0.113	0.115	0.162	0.158	0.162	0.205	0.127
Suphanburi	0.113	0.106	0.098	0.098	0.098	0.090	0.104	0.116	0.115	0.130	0.134	0.188	0.167	0.150
Zone 03	0.152	0.128	0.124	0.123	0.130	0.158	0.147	0.154	0.148	0.206	0.160	0.187	0.198	0.196
Chonburi	0.149	0.112	0.095	0.086	0.108	0.161	0.169	0.191	0.166	0.323	0.158	0.183	0.195	0.214
Rayong	0.114	0.115	0.121	0.129	0.126	0.162	0.153	0.151	0.159	0.158	0.194	0.214	0.208	0.204
Chanthaburi	0.204	0.193	0.191	0.162	0.175	0.187	0.198	0.199	0.197	0.216	0.239	0.273	0.225	0.200
Trat	0.221	0.175	0.167	0.191	0.185	0.205	0.227	0.175	0.177	0.175	0.183	0.258	0.225	0.208
Chachoengsao	0.108	0.098	0.096	0.094	0.104	0.103	0.115	0.117	0.098	0.083	0.081	0.099	0.174	0.166
Prachinburi	0.180	0.139	0.140	0.169	0.149	0.168	0.165	0.188	0.209	0.280	0.165	0.172	0.168	0.164
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.008	0.117	0.155	0.217	0.206
Zone 04	0.127	0.113	0.096	0.106	0.116	0.121	0.130	0.131	0.143	0.161	0.179	0.196	0.194	0.160
Ratchaburi	0.134	0.124	0.111	0.119	0.117	0.129	0.138	0.138	0.155	0.166	0.185	0.215	0.204	0.153
Kanchanaburi	0.123	0.122	0.096	0.108	0.116	0.104	0.121	0.104	0.146	0.139	0.171	0.158	0.168	0.154
Nakhon Pathom	0.119	0.095	0.089	0.102	0.108	0.125	0.129	0.126	0.128	0.168	0.181	0.184	0.183	0.155
Samut Sakhon	0.113	0.109	0.105	0.107	0.131	0.144	0.156	0.183	0.162	0.194	0.221	0.244	0.186	0.163
Samut Songkhram	0.096	0.115	0.109	0.110	0.112	0.098	0.101	0.090	0.112	0.129	0.144	0.119	0.175	0.132
Phetchaburi	0.145	0.097	0.069	0.074	0.113	0.118	0.135	0.137	0.144	0.167	0.175	0.235	0.245	0.200
Phachuap Khiri Khai	0.140	0.132	0.094	0.110	0.120	0.122	0.120	0.133	0.140	0.157	0.158	0.190	0.211	0.198
North-Eastern Regi	0.114	0.108	0.107	0.106	0.100	0.100	0.098	0.099	0.103	0.116	0.119	0.136	0.166	0.136
Zone 05	0.097	0.090	0.084	0.089	0.085	0.087	0.086	0.087	0.091	0.100	0.111	0.123	0.153	0.134
Nakhon Ratvhasima	0.093	0.092	0.087	0.090	0.097	0.094	0.100	0.098	0.103	0.117	0.130	0.138	0.151	0.111
Buriram	0.111	0.103	0.101	0.101	0.084	0.089	0.086	0.084	0.096	0.093	0.105	0.128	0.156	0.148
Surin	0.098	0.091	0.080	0.082	0.064	0.072	0.075	0.079	0.077	0.075	0.105	0.138	0.166	0.166
Chaiyaphum	0.086	0.073	0.058	0.076	0.079	0.077	0.062	0.073	0.076	0.095	0.077	0.062	0.137	0.115
Maharakham	0.100	0.089	0.086	0.090	0.084	0.093	0.090	0.085	0.084	0.101	0.117	0.125	0.156	0.151
Zone 06	0.133	0.126	0.132	0.125	0.116	0.115	0.108	0.111	0.112	0.117	0.123	0.143	0.169	0.123
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.008	0.101	0.106	0.167	0.158
Khon Kaen	0.136	0.111	0.118	0.112	0.106	0.110	0.106	0.117	0.127	0.141	0.146	0.171	0.163	0.070
Udon Thani	0.142	0.143	0.159	0.144	0.124	0.124	0.127	0.124	0.116	0.121	0.096	0.133	0.168	0.128
Loei	0.118	0.121	0.119	0.119	0.105	0.110	0.103	0.100	0.101	0.113	0.107	0.129	0.157	0.123
Nong Khai	0.122	0.115	0.116	0.118	0.099	0.104	0.101	0.104	0.102	0.106	0.122	0.130	0.164	0.156
Kalasin	0.131	0.122	0.125	0.117	0.118	0.116	0.116	0.116	0.119	0.122	0.133	0.147	0.179	0.140
Sakonkakhon	0.137	0.137	0.142	0.135	0.138	0.119	0.130	0.134	0.138	0.120	0.129	0.138	0.188	0.148
Zone 07	0.112	0.110	0.107	0.104	0.102	0.102	0.100	0.099	0.108	0.134	0.124	0.143	0.177	0.153
Srisaket	0.111	0.085	0.090	0.087	0.082	0.081	0.084	0.080	0.086	0.091	0.095	0.114	0.181	0.155
Ubon Ratchathani	0.101	0.109	0.104	0.096	0.097	0.109	0.110	0.123	0.141	0.149	0.148	0.167	0.158	0.139
Yasothon	0.106	0.098	0.099	0.103	0.096	0.092	0.104	0.084	0.094	0.103	0.113	0.129	0.159	0.167
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.010	0.131	0.138	0.218	0.177
Roi Et	0.109	0.116	0.116	0.123	0.113	0.106	0.115	0.110	0.114	0.123	0.126	0.148	0.192	0.174
Nakhomphanom	0.142	0.155	0.139	0.123	0.128	0.126	0.119	0.118	0.123	0.288	0.129	0.150	0.178	0.120
Mukdahan	0.125	0.122	0.101	0.102	0.125	0.096	0.109	0.098	0.117	0.098	0.116	0.132	0.170	0.139
North Region	0.127	0.121	0.105	0.102	0.104	0.104	0.108	0.112	0.123	0.145	0.179	0.212	0.254	0.207
Zone 08	0.135	0.120	0.106	0.104	0.104	0.106	0.111	0.101	0.109	0.119	0.137	0.139	0.177	0.149
Nakhon Sawan	0.121	0.110	0.089	0.096	0.095	0.100	0.111	0.095	0.110	0.129	0.140	0.147	0.167	0.145
Uthai Thani	0.136	0.117	0.104	0.102	0.109	0.105	0.098	0.086	0.112	0.125	0.131	0.151	0.177	0.149
Kam Phaeng Phet	0.163	0.121	0.115	0.110	0.107	0.104	0.115	0.110	0.115	0.117	0.181	0.147	0.170	0.130
Tak	0.150	0.146	0.143	0.134	0.122	0.159	0.147	0.139	0.121	0.133	0.124	0.157	0.203	0.160
Sukhothai	0.126	0.127	0.106	0.094	0.102	0.089	0.091	0.087	0.093	0.090	0.093	0.096	0.184	0.169
Zone 09	0.121	0.120	0.099	0.099	0.099	0.098	0.098	0.102	0.106	0.117	0.134	0.154	0.185	0.170
Uttaradit	0.146	0.137	0.126	0.116	0.123	0.113	0.110	0.112	0.116	0.142	0.140	0.163	0.159	0.156
Phrae	0.089	0.119	0.126	0.124	0.125	0.136	0.124	0.140	0.153	0.164	0.200	0.209	0.234	0.210
Nan	0.169	0.133	0.074	0.084	0.075	0.066	0.065	0.074	0.073	0.081	0.097	0.165	0.195	0.192
Phitsanulok	0.132	0.131	0.111	0.109	0.107	0.118	0.116	0.125	0.133	0.143	0.164	0.173	0.173	0.147
Phichit	0.113	0.078	0.053	0.066	0.060	0.059	0.059	0.058	0.048	0.051	0.073	0.091	0.176	0.168
Phetchabun	0.097	0.124	0.100	0.092	0.096	0.086	0.100	0.089	0.097	0.109	0.114	0.129	0.179	0.160

Table 18 Probability of death of adult men aged 15-49 years in Thailand from 1984-1997

15-49 yrs: Male	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	0.120	0.112	0.103	0.103	0.104	0.109	0.111	0.115	0.119	0.139	0.146	0.162	0.178	0.153
Central Region	0.120	0.112	0.100	0.105	0.110	0.123	0.128	0.137	0.141	0.164	0.167	0.175	0.158	0.153
Bangkok Metropolis	0.108	0.117	0.100	0.110	0.107	0.118	0.121	0.136	0.134	0.141	0.150	0.148	0.103	0.124
Zone 01	0.103	0.089	0.085	0.084	0.094	0.109	0.120	0.127	0.144	0.158	0.181	0.188	0.176	0.156
Samut Prakan	0.096	0.093	0.092	0.096	0.103	0.109	0.132	0.137	0.143	0.157	0.189	0.185	0.137	0.125
Nonthaburi	0.146	0.096	0.101	0.102	0.105	0.125	0.139	0.144	0.162	0.176	0.224	0.231	0.167	0.158
Pathum Thani	0.085	0.075	0.058	0.055	0.065	0.107	0.115	0.130	0.142	0.171	0.141	0.159	0.236	0.179
Ayutthaya	0.082	0.078	0.076	0.067	0.089	0.089	0.090	0.098	0.126	0.139	0.153	0.162	0.183	0.181
Ang Thong	0.106	0.120	0.094	0.099	0.104	0.122	0.103	0.114	0.135	0.130	0.172	0.195	0.224	0.169
Zone 02	0.126	0.105	0.095	0.099	0.108	0.116	0.130	0.138	0.145	0.180	0.191	0.188	0.186	0.162
Lopburi	0.094	0.092	0.086	0.080	0.092	0.097	0.102	0.112	0.104	0.117	0.125	0.116	0.189	0.163
Singburi	0.130	0.115	0.086	0.078	0.119	0.123	0.170	0.155	0.162	0.155	0.142	0.190	0.186	0.169
Chainat	0.112	0.100	0.089	0.083	0.082	0.095	0.091	0.099	0.096	0.119	0.114	0.147	0.168	0.165
Saraburi	0.187	0.117	0.101	0.147	0.159	0.194	0.218	0.231	0.272	0.371	0.414	0.315	0.214	0.190
Nakhonnayok	0.154	0.112	0.120	0.092	0.104	0.102	0.111	0.113	0.115	0.162	0.158	0.162	0.205	0.127
Suphanburi	0.113	0.106	0.098	0.098	0.098	0.090	0.104	0.116	0.115	0.130	0.134	0.188	0.167	0.150
Zone 03	0.152	0.128	0.124	0.123	0.130	0.158	0.147	0.154	0.148	0.206	0.160	0.187	0.198	0.196
Chonburi	0.149	0.112	0.095	0.086	0.108	0.161	0.169	0.191	0.166	0.323	0.158	0.183	0.195	0.214
Rayong	0.114	0.115	0.121	0.129	0.126	0.162	0.153	0.151	0.159	0.158	0.194	0.214	0.208	0.204
Chanthaburi	0.204	0.193	0.191	0.162	0.175	0.187	0.198	0.199	0.197	0.216	0.239	0.273	0.225	0.200
Trat	0.221	0.175	0.167	0.191	0.185	0.205	0.227	0.175	0.177	0.175	0.183	0.258	0.225	0.208
Chachoengsao	0.108	0.098	0.096	0.094	0.104	0.103	0.115	0.117	0.098	0.083	0.081	0.099	0.174	0.166
Prachinburi	0.180	0.139	0.140	0.169	0.149	0.168	0.165	0.188	0.209	0.280	0.165	0.172	0.168	0.164
Sakeaw	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.008	0.117	0.155	0.217	0.206
Zone 04	0.127	0.113	0.096	0.106	0.116	0.121	0.130	0.131	0.143	0.161	0.179	0.196	0.194	0.160
Ratchaburi	0.134	0.124	0.111	0.119	0.117	0.129	0.138	0.138	0.155	0.166	0.185	0.215	0.204	0.153
Kanchanaburi	0.123	0.122	0.096	0.108	0.116	0.104	0.121	0.104	0.146	0.139	0.171	0.158	0.168	0.154
Nakhon Pathom	0.119	0.095	0.089	0.102	0.108	0.125	0.129	0.126	0.128	0.168	0.181	0.184	0.183	0.155
Samut Sakhon	0.113	0.109	0.105	0.107	0.131	0.144	0.156	0.183	0.162	0.194	0.221	0.244	0.186	0.163
Samut Songkhram	0.096	0.115	0.109	0.110	0.112	0.098	0.101	0.090	0.112	0.129	0.144	0.119	0.175	0.132
Phetchaburi	0.145	0.097	0.069	0.074	0.113	0.118	0.135	0.137	0.144	0.167	0.175	0.235	0.245	0.200
Phachuap Khiri Khar	0.140	0.132	0.094	0.110	0.120	0.122	0.120	0.133	0.140	0.157	0.158	0.190	0.211	0.198
North-Eastern Regi	0.114	0.108	0.107	0.106	0.100	0.100	0.098	0.099	0.103	0.116	0.119	0.136	0.166	0.136
Zone 05	0.097	0.090	0.084	0.089	0.085	0.087	0.086	0.087	0.091	0.100	0.111	0.123	0.153	0.134
Nakhon Ratvhasima	0.093	0.092	0.087	0.090	0.097	0.094	0.100	0.098	0.103	0.117	0.130	0.138	0.151	0.111
Buriram	0.111	0.103	0.101	0.101	0.084	0.089	0.086	0.084	0.096	0.093	0.105	0.128	0.156	0.148
Surin	0.098	0.091	0.080	0.082	0.064	0.072	0.075	0.079	0.077	0.075	0.105	0.138	0.166	0.166
Chaiyaphum	0.086	0.073	0.058	0.076	0.079	0.077	0.062	0.073	0.076	0.095	0.077	0.062	0.137	0.115
Maharakham	0.100	0.089	0.086	0.090	0.084	0.093	0.090	0.085	0.084	0.101	0.117	0.125	0.156	0.151
Zone 06	0.133	0.126	0.132	0.125	0.116	0.115	0.108	0.111	0.112	0.117	0.123	0.143	0.169	0.123
Nongbua Lamphu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.008	0.101	0.106	0.167	0.158
Khon Kaen	0.136	0.111	0.118	0.112	0.106	0.110	0.106	0.117	0.127	0.141	0.146	0.171	0.163	0.070
Udon Thani	0.142	0.143	0.159	0.144	0.124	0.124	0.127	0.124	0.116	0.121	0.096	0.133	0.168	0.128
Loei	0.118	0.121	0.119	0.119	0.105	0.110	0.103	0.100	0.101	0.113	0.107	0.129	0.157	0.123
Nong Khai	0.122	0.115	0.116	0.118	0.099	0.104	0.101	0.104	0.102	0.106	0.122	0.130	0.164	0.156
Kalasin	0.131	0.122	0.125	0.117	0.118	0.116	0.116	0.116	0.119	0.122	0.133	0.147	0.179	0.140
Sakonnakhon	0.137	0.137	0.142	0.135	0.138	0.119	0.130	0.134	0.138	0.120	0.129	0.138	0.188	0.148
Zone 07	0.112	0.110	0.107	0.104	0.102	0.102	0.100	0.099	0.108	0.134	0.124	0.143	0.177	0.153
Srisaket	0.111	0.085	0.090	0.087	0.082	0.081	0.084	0.080	0.086	0.091	0.095	0.114	0.181	0.155
Ubon Ratchathani	0.101	0.109	0.104	0.096	0.097	0.109	0.110	0.123	0.141	0.149	0.148	0.167	0.158	0.139
Yasothon	0.106	0.098	0.099	0.103	0.096	0.092	0.104	0.084	0.094	0.103	0.113	0.129	0.159	0.167
Amnat Cheorn	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.010	0.131	0.138	0.218	0.177
Roi Et	0.109	0.116	0.116	0.123	0.113	0.106	0.115	0.110	0.114	0.123	0.126	0.148	0.192	0.174
Nakhomphanom	0.142	0.155	0.139	0.123	0.128	0.126	0.119	0.118	0.123	0.288	0.129	0.150	0.178	0.120
Mukdahan	0.125	0.122	0.101	0.102	0.125	0.096	0.109	0.098	0.117	0.098	0.116	0.132	0.170	0.139
North Region	0.127	0.121	0.105	0.102	0.104	0.104	0.108	0.112	0.123	0.145	0.179	0.212	0.254	0.207
Zone 08	0.135	0.120	0.106	0.104	0.104	0.106	0.111	0.101	0.109	0.119	0.137	0.139	0.177	0.149
Nakhon Sawan	0.121	0.110	0.089	0.096	0.095	0.100	0.111	0.095	0.110	0.129	0.140	0.147	0.167	0.145
Uthai Thani	0.136	0.117	0.104	0.102	0.109	0.105	0.098	0.086	0.112	0.125	0.131	0.151	0.177	0.149
Kam Phaeng Phet	0.163	0.121	0.115	0.110	0.107	0.104	0.115	0.110	0.115	0.117	0.181	0.147	0.170	0.130
Tak	0.150	0.146	0.143	0.134	0.122	0.159	0.147	0.139	0.121	0.133	0.124	0.157	0.203	0.160
Sukhothai	0.126	0.127	0.106	0.094	0.102	0.089	0.091	0.087	0.093	0.090	0.093	0.096	0.184	0.169
Zone 09	0.121	0.120	0.099	0.099	0.099	0.098	0.098	0.102	0.106	0.117	0.134	0.154	0.185	0.170
Uttaradit	0.146	0.137	0.126	0.116	0.123	0.113	0.110	0.112	0.116	0.142	0.140	0.163	0.159	0.156
Phrae	0.089	0.119	0.126	0.124	0.125	0.136	0.124	0.140	0.153	0.164	0.200	0.209	0.234	0.210
Nan	0.169	0.133	0.074	0.084	0.075	0.066	0.065	0.074	0.073	0.081	0.097	0.165	0.195	0.192
Phitsanulok	0.132	0.131	0.111	0.109	0.107	0.118	0.116	0.125	0.133	0.143	0.164	0.173	0.173	0.147
Phichit	0.113	0.078	0.053	0.066	0.060	0.059	0.059	0.058	0.048	0.051	0.073	0.091	0.176	0.168
Phetchabun	0.097	0.124	0.100	0.092	0.096	0.086	0.100	0.089	0.097	0.109	0.114	0.129	0.179	0.160

Table 19 Probability of death of adult women aged 15-49 years in Thailand from 1984-1997

15-49 yrs: Female	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	0.063	0.063	0.056	0.054	0.051	0.054	0.051	0.052	0.051	0.054	0.054	0.058	0.064	0.057
Central Region	0.053	0.052	0.045	0.048	0.047	0.053	0.051	0.051	0.051	0.056	0.054	0.054	0.049	0.051
Bangkok Metropolis	0.050	0.060	0.046	0.050	0.048	0.055	0.048	0.050	0.047	0.045	0.046	0.044	0.031	0.043
Zone 01	0.043	0.037	0.037	0.038	0.035	0.038	0.042	0.041	0.046	0.050	0.049	0.055	0.055	0.049
Samut Prakan	0.033	0.033	0.035	0.034	0.033	0.030	0.043	0.039	0.040	0.049	0.049	0.053	0.043	0.043
Nonthaburi	0.068	0.035	0.048	0.048	0.044	0.049	0.056	0.047	0.052	0.057	0.061	0.061	0.051	0.044
Pathum Thani	0.040	0.040	0.034	0.033	0.026	0.039	0.045	0.044	0.049	0.048	0.041	0.044	0.081	0.061
Ayutthaya	0.037	0.034	0.030	0.038	0.029	0.033	0.031	0.034	0.044	0.044	0.039	0.050	0.055	0.055
Ang Thong	0.054	0.054	0.054	0.050	0.045	0.050	0.034	0.051	0.054	0.062	0.056	0.075	0.075	0.051
Zone 02	0.058	0.050	0.046	0.047	0.050	0.054	0.056	0.054	0.055	0.065	0.072	0.068	0.060	0.059
Lopburi	0.045	0.042	0.046	0.044	0.046	0.045	0.049	0.047	0.045	0.046	0.046	0.040	0.065	0.063
Singburi	0.062	0.050	0.044	0.030	0.060	0.065	0.072	0.069	0.063	0.048	0.058	0.077	0.059	0.066
Chainat	0.061	0.052	0.042	0.046	0.047	0.046	0.038	0.042	0.045	0.040	0.044	0.047	0.057	0.060
Saraburi	0.087	0.051	0.044	0.061	0.067	0.084	0.084	0.079	0.098	0.144	0.169	0.128	0.070	0.075
Nakhonayok	0.067	0.062	0.059	0.051	0.046	0.047	0.051	0.053	0.046	0.057	0.067	0.065	0.065	0.043
Suphanburi	0.048	0.051	0.048	0.046	0.044	0.044	0.051	0.046	0.042	0.051	0.052	0.061	0.051	0.049
Zone 03	0.070	0.056	0.056	0.055	0.053	0.068	0.057	0.060	0.059	0.072	0.056	0.058	0.064	0.067
Chonburi	0.068	0.049	0.045	0.039	0.039	0.065	0.062	0.068	0.066	0.127	0.053	0.054	0.058	0.076
Rayong	0.063	0.045	0.054	0.047	0.052	0.062	0.054	0.054	0.062	0.051	0.051	0.056	0.052	0.064
Chanthaburi	0.086	0.099	0.086	0.083	0.078	0.098	0.094	0.087	0.093	0.083	0.098	0.096	0.069	0.068
Trat	0.095	0.079	0.091	0.082	0.074	0.073	0.064	0.072	0.075	0.055	0.069	0.086	0.088	0.077
Chachoengsao	0.046	0.034	0.043	0.037	0.042	0.043	0.042	0.043	0.032	0.022	0.029	0.032	0.060	0.054
Prachinburi	0.094	0.064	0.059	0.085	0.065	0.085	0.071	0.085	0.082	0.089	0.059	0.043	0.060	0.055
Sakeaw	-	-	-	-	-	-	-	-	-	-	0.049	0.070	0.086	0.079
Zone 04	0.052	0.054	0.043	0.046	0.048	0.048	0.053	0.054	0.054	0.061	0.058	0.060	0.060	0.052
Ratchaburi	0.057	0.060	0.051	0.054	0.054	0.055	0.057	0.058	0.061	0.062	0.064	0.073	0.061	0.047
Kanchanaburi	0.049	0.057	0.045	0.053	0.048	0.043	0.056	0.048	0.057	0.051	0.054	0.057	0.056	0.045
Nakhon Pathom	0.049	0.053	0.042	0.041	0.047	0.040	0.048	0.054	0.045	0.077	0.055	0.054	0.049	0.051
Samut Sakhon	0.039	0.035	0.037	0.044	0.044	0.048	0.052	0.067	0.057	0.066	0.067	0.070	0.057	0.052
Samut Songkhram	0.054	0.059	0.040	0.041	0.042	0.046	0.034	0.039	0.048	0.049	0.044	0.036	0.065	0.046
Phetchaburi	0.054	0.041	0.033	0.030	0.047	0.048	0.060	0.057	0.051	0.051	0.060	0.060	0.080	0.068
Phachuap Khiri Khai	0.065	0.069	0.041	0.054	0.050	0.060	0.052	0.045	0.054	0.060	0.059	0.060	0.072	0.064
North-Eastern Regi	0.071	0.072	0.067	0.064	0.057	0.058	0.053	0.053	0.053	0.056	0.055	0.059	0.066	0.055
Zone 05	0.054	0.056	0.050	0.050	0.046	0.045	0.044	0.043	0.043	0.046	0.050	0.051	0.057	0.051
Nakhon Ratvhasima	0.048	0.050	0.050	0.049	0.047	0.046	0.045	0.045	0.048	0.056	0.050	0.055	0.054	0.043
Buriram	0.062	0.063	0.060	0.062	0.053	0.050	0.050	0.045	0.046	0.045	0.056	0.056	0.060	0.059
Surin	0.056	0.061	0.047	0.045	0.034	0.039	0.040	0.040	0.035	0.033	0.049	0.059	0.063	0.062
Chaiyaphum	0.042	0.043	0.034	0.041	0.040	0.038	0.036	0.037	0.036	0.038	0.037	0.028	0.054	0.044
Maharakham	0.068	0.065	0.055	0.049	0.052	0.050	0.044	0.044	0.046	0.050	0.053	0.053	0.057	0.058
Zone 06	0.083	0.082	0.076	0.073	0.066	0.067	0.060	0.060	0.058	0.056	0.058	0.062	0.071	0.055
Nongbua Lamphu	-	-	-	-	-	-	-	-	-	0.005	0.056	0.060	0.072	0.069
Khon Kaen	0.074	0.061	0.060	0.059	0.053	0.056	0.053	0.056	0.057	0.059	0.063	0.065	0.059	0.040
Udon Thani	0.089	0.090	0.092	0.088	0.079	0.074	0.069	0.066	0.065	0.063	0.049	0.059	0.080	0.058
Loei	0.065	0.072	0.066	0.057	0.046	0.063	0.055	0.049	0.048	0.039	0.048	0.045	0.065	0.055
Nong Khai	0.080	0.077	0.068	0.070	0.059	0.061	0.061	0.064	0.056	0.058	0.060	0.062	0.072	0.067
Kalasin	0.091	0.085	0.073	0.072	0.071	0.069	0.070	0.066	0.065	0.059	0.063	0.063	0.075	0.053
Sakonkakhon	0.099	0.117	0.099	0.091	0.085	0.084	0.076	0.079	0.078	0.069	0.064	0.069	0.082	0.063
Zone 07	0.078	0.081	0.078	0.070	0.062	0.063	0.056	0.058	0.058	0.067	0.058	0.066	0.072	0.059
Srisaket	0.068	0.065	0.058	0.061	0.052	0.054	0.047	0.045	0.050	0.046	0.042	0.057	0.072	0.058
Ubon Ratchathani	0.068	0.089	0.088	0.061	0.057	0.066	0.063	0.075	0.068	0.069	0.068	0.070	0.064	0.053
Yasothon	0.073	0.070	0.068	0.060	0.059	0.050	0.059	0.054	0.063	0.049	0.057	0.059	0.065	0.070
Amnat Cheorn	-	-	-	-	-	-	-	-	-	0.006	0.071	0.075	0.091	0.122
Roi Et	0.089	0.082	0.086	0.081	0.070	0.067	0.064	0.060	0.063	0.062	0.058	0.065	0.076	0.066
Nakhomphanom	0.105	0.103	0.095	0.099	0.078	0.076	0.068	0.071	0.073	0.157	0.064	0.077	0.083	0.050
Mukdahan	0.085	0.090	0.065	0.069	0.066	0.060	0.048	0.059	0.053	0.058	0.059	0.064	0.067	0.057
North Region	0.068	0.069	0.062	0.058	0.055	0.056	0.054	0.056	0.054	0.055	0.064	0.077	0.098	0.084
Zone 08	0.064	0.066	0.061	0.057	0.054	0.054	0.051	0.048	0.047	0.052	0.055	0.057	0.066	0.057
Nakhon Sawan	0.059	0.064	0.061	0.049	0.052	0.051	0.051	0.045	0.050	0.055	0.056	0.063	0.064	0.055
Uthai Thani	0.074	0.068	0.063	0.057	0.044	0.058	0.049	0.056	0.055	0.055	0.048	0.064	0.069	0.066
Kam Phaeng Phet	0.067	0.073	0.068	0.072	0.059	0.051	0.052	0.052	0.051	0.050	0.077	0.058	0.066	0.054
Tak	0.077	0.087	0.072	0.064	0.074	0.078	0.072	0.064	0.042	0.059	0.048	0.055	0.071	0.064
Sukhothai	0.058	0.051	0.048	0.051	0.048	0.048	0.040	0.037	0.036	0.040	0.035	0.039	0.069	0.058
Zone 09	0.065	0.061	0.061	0.052	0.050	0.052	0.050	0.052	0.051	0.049	0.052	0.058	0.071	0.062
Uttaradit	0.068	0.059	0.064	0.056	0.055	0.064	0.063	0.061	0.055	0.057	0.057	0.070	0.069	0.059
Phrae	0.062	0.072	0.069	0.067	0.067	0.058	0.059	0.074	0.080	0.061	0.066	0.069	0.100	0.082
Nan	0.087	0.080	0.055	0.055	0.044	0.049	0.050	0.049	0.043	0.038	0.048	0.062	0.088	0.078
Phitsanulok	0.064	0.061	0.063	0.061	0.051	0.062	0.053	0.061	0.061	0.067	0.064	0.064	0.064	0.053
Phichit	0.066	0.043	0.039	0.033	0.034	0.027	0.030	0.025	0.025	0.026	0.029	0.035	0.061	0.053
Phetchabun	0.056	0.057	0.070	0.043	0.049	0.051	0.046	0.043	0.042	0.040	0.047	0.054	0.059	0.060

Table 19 Probability of death of adult women aged 15-49 years in Thailand from 1984-1997

15-49 yrs: Female	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Whole Country	0.063	0.063	0.056	0.054	0.051	0.054	0.051	0.052	0.051	0.054	0.054	0.058	0.064	0.057
Central Region	0.053	0.052	0.045	0.048	0.047	0.053	0.051	0.051	0.051	0.056	0.054	0.054	0.049	0.051
Bangkok Metropolis	0.050	0.060	0.046	0.050	0.048	0.055	0.048	0.050	0.047	0.045	0.046	0.044	0.031	0.043
Zone 01	0.043	0.037	0.037	0.038	0.035	0.038	0.042	0.041	0.046	0.050	0.049	0.055	0.055	0.049
Samut Prakan	0.033	0.033	0.035	0.034	0.033	0.030	0.043	0.039	0.040	0.049	0.049	0.053	0.043	0.043
Nonthaburi	0.068	0.035	0.048	0.048	0.044	0.049	0.056	0.047	0.052	0.057	0.061	0.061	0.051	0.044
Pathum Thani	0.040	0.040	0.034	0.033	0.026	0.039	0.045	0.044	0.049	0.048	0.041	0.044	0.081	0.061
Ayutthaya	0.037	0.034	0.030	0.038	0.029	0.033	0.031	0.034	0.044	0.044	0.039	0.050	0.055	0.055
Ang Thong	0.054	0.054	0.054	0.050	0.045	0.050	0.034	0.051	0.054	0.062	0.056	0.075	0.075	0.051
Zone 02	0.058	0.050	0.046	0.047	0.050	0.054	0.056	0.054	0.055	0.065	0.072	0.068	0.060	0.059
Lopburi	0.045	0.042	0.046	0.044	0.046	0.045	0.049	0.047	0.045	0.046	0.046	0.040	0.065	0.063
Singburi	0.062	0.050	0.044	0.030	0.060	0.065	0.072	0.069	0.063	0.048	0.058	0.077	0.059	0.066
Chainat	0.061	0.052	0.042	0.046	0.047	0.046	0.038	0.042	0.045	0.040	0.044	0.047	0.057	0.060
Saraburi	0.087	0.051	0.044	0.061	0.067	0.084	0.084	0.079	0.098	0.144	0.169	0.128	0.070	0.075
Nakhonnayok	0.067	0.062	0.059	0.051	0.046	0.047	0.051	0.053	0.046	0.057	0.067	0.065	0.065	0.043
Suphanburi	0.048	0.051	0.048	0.046	0.044	0.044	0.051	0.046	0.042	0.051	0.052	0.061	0.051	0.049
Zone 03	0.070	0.056	0.056	0.055	0.053	0.068	0.057	0.060	0.059	0.072	0.056	0.058	0.064	0.067
Chonburi	0.068	0.049	0.045	0.039	0.039	0.065	0.062	0.068	0.066	0.127	0.053	0.054	0.058	0.076
Rayong	0.063	0.045	0.054	0.047	0.052	0.062	0.054	0.054	0.062	0.051	0.051	0.056	0.052	0.064
Chanthaburi	0.086	0.099	0.086	0.083	0.078	0.098	0.094	0.087	0.093	0.083	0.098	0.096	0.069	0.068
Trat	0.095	0.079	0.091	0.082	0.074	0.073	0.064	0.072	0.075	0.055	0.069	0.086	0.088	0.077
Chachoengsao	0.046	0.034	0.043	0.037	0.042	0.043	0.042	0.043	0.032	0.022	0.029	0.032	0.060	0.054
Prachinburi	0.094	0.064	0.059	0.085	0.065	0.085	0.071	0.085	0.082	0.089	0.059	0.043	0.060	0.055
Sakeaw	-	-	-	-	-	-	-	-	-	-	0.049	0.070	0.086	0.079
Zone 04	0.052	0.054	0.043	0.046	0.048	0.048	0.053	0.054	0.054	0.061	0.058	0.060	0.060	0.052
Ratchaburi	0.057	0.060	0.051	0.054	0.054	0.055	0.057	0.058	0.061	0.062	0.064	0.073	0.061	0.047
Kanchanaburi	0.049	0.057	0.045	0.053	0.048	0.043	0.056	0.048	0.057	0.051	0.054	0.057	0.056	0.045
Nakhon Pathom	0.049	0.053	0.042	0.041	0.047	0.040	0.048	0.054	0.045	0.077	0.055	0.054	0.049	0.051
Samut Sakhon	0.039	0.035	0.037	0.044	0.044	0.048	0.052	0.067	0.057	0.066	0.067	0.070	0.057	0.052
Samut Songkhram	0.054	0.059	0.040	0.041	0.042	0.046	0.034	0.039	0.048	0.049	0.044	0.036	0.065	0.046
Phetchaburi	0.054	0.041	0.033	0.030	0.047	0.048	0.060	0.057	0.051	0.051	0.060	0.060	0.080	0.068
Phachuap Khiri Khar	0.065	0.069	0.041	0.054	0.050	0.060	0.052	0.045	0.054	0.060	0.059	0.060	0.072	0.064
North-Eastern Regi	0.071	0.072	0.067	0.064	0.057	0.058	0.053	0.053	0.053	0.056	0.055	0.059	0.066	0.055
Zone 05	0.054	0.056	0.050	0.050	0.046	0.045	0.044	0.043	0.043	0.046	0.050	0.051	0.057	0.051
Nakhon Ratvhasima	0.048	0.050	0.050	0.049	0.047	0.046	0.045	0.045	0.048	0.056	0.050	0.055	0.054	0.043
Buriram	0.062	0.063	0.060	0.062	0.053	0.050	0.050	0.045	0.046	0.045	0.056	0.056	0.060	0.059
Surin	0.056	0.061	0.047	0.045	0.034	0.039	0.040	0.040	0.035	0.033	0.049	0.059	0.063	0.062
Chaiyaphum	0.042	0.043	0.034	0.041	0.040	0.038	0.036	0.037	0.036	0.038	0.037	0.028	0.054	0.044
Maharakham	0.068	0.065	0.055	0.049	0.052	0.050	0.044	0.044	0.046	0.050	0.053	0.053	0.057	0.058
Zone 06	0.083	0.082	0.076	0.073	0.066	0.067	0.060	0.060	0.058	0.056	0.058	0.062	0.071	0.055
Nongbua Lamphu	-	-	-	-	-	-	-	-	-	0.005	0.056	0.060	0.072	0.069
Khon Kaen	0.074	0.061	0.060	0.059	0.053	0.056	0.053	0.056	0.057	0.059	0.063	0.065	0.059	0.040
Udon Thani	0.089	0.090	0.092	0.088	0.079	0.074	0.069	0.066	0.065	0.063	0.049	0.059	0.080	0.058
Loei	0.065	0.072	0.066	0.057	0.046	0.063	0.055	0.049	0.048	0.039	0.048	0.045	0.065	0.055
Nong Khai	0.080	0.077	0.068	0.070	0.059	0.061	0.061	0.064	0.056	0.058	0.060	0.062	0.072	0.067
Kalasin	0.091	0.085	0.073	0.072	0.071	0.069	0.070	0.066	0.065	0.059	0.063	0.063	0.075	0.053
Sakonnakhon	0.099	0.117	0.099	0.091	0.085	0.084	0.076	0.079	0.078	0.069	0.064	0.069	0.082	0.063
Zone 07	0.078	0.081	0.078	0.070	0.062	0.063	0.056	0.058	0.058	0.067	0.058	0.066	0.072	0.059
Srisaket	0.068	0.065	0.058	0.061	0.052	0.054	0.047	0.045	0.050	0.046	0.042	0.057	0.072	0.058
Ubon Ratchathani	0.068	0.089	0.088	0.061	0.057	0.066	0.063	0.075	0.068	0.069	0.068	0.070	0.064	0.053
Yasothon	0.073	0.070	0.068	0.060	0.059	0.050	0.059	0.054	0.063	0.049	0.057	0.059	0.065	0.070
Amnat Chhorn	-	-	-	-	-	-	-	-	-	0.006	0.071	0.075	0.091	0.122
Roi Et	0.089	0.082	0.086	0.081	0.070	0.067	0.064	0.060	0.063	0.062	0.058	0.065	0.076	0.066
Nakhomphanom	0.105	0.103	0.095	0.099	0.078	0.076	0.068	0.071	0.073	0.157	0.064	0.077	0.083	0.050
Mukdahan	0.085	0.090	0.065	0.069	0.066	0.060	0.048	0.059	0.053	0.058	0.059	0.064	0.067	0.057
North Region	0.068	0.069	0.062	0.058	0.055	0.056	0.054	0.056	0.054	0.055	0.064	0.077	0.098	0.084
Zone 08	0.064	0.066	0.061	0.057	0.054	0.054	0.051	0.048	0.047	0.052	0.055	0.057	0.066	0.057
Nakhon Sawan	0.059	0.064	0.061	0.049	0.052	0.051	0.051	0.045	0.050	0.055	0.056	0.063	0.064	0.055
Uthai Thani	0.074	0.068	0.063	0.057	0.044	0.058	0.049	0.056	0.055	0.055	0.048	0.064	0.069	0.066
Kam Phaeng Phet	0.067	0.073	0.068	0.072	0.059	0.051	0.052	0.052	0.051	0.050	0.077	0.058	0.066	0.054
Tak	0.077	0.087	0.072	0.064	0.074	0.078	0.072	0.064	0.042	0.059	0.048	0.055	0.071	0.064
Sukhothai	0.058	0.051	0.048	0.051	0.048	0.048	0.040	0.037	0.036	0.040	0.035	0.039	0.069	0.058
Zone 09	0.065	0.061	0.061	0.052	0.050	0.052	0.050	0.052	0.051	0.049	0.052	0.058	0.071	0.062
Uttaradit	0.068	0.059	0.064	0.056	0.055	0.064	0.063	0.061	0.055	0.057	0.057	0.070	0.069	0.059
Phrae	0.062	0.072	0.069	0.067	0.067	0.058	0.059	0.074	0.080	0.061	0.066	0.069	0.100	0.082
Nan	0.087	0.080	0.055	0.055	0.044	0.049	0.050	0.049	0.043	0.038	0.048	0.062	0.088	0.078
Phitsnulok	0.064	0.061	0.063	0.061	0.051	0.062	0.053	0.061	0.061	0.067	0.064	0.064	0.064	0.053
Phichit	0.066	0.043	0.039	0.033	0.034	0.027	0.030	0.025	0.025	0.026	0.029	0.035	0.061	0.053
Phetchabun	0.056	0.057	0.070	0.043	0.049	0.051	0.046	0.043	0.042	0.040	0.047	0.054	0.059	0.060

Table 20 Reported male AIDS deaths in numbers and rates per 100,000 male population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000	
1 Chiang Mai	0	0	0	0	0	2	11	59	93	225	475	500	410	1,775	3,550	Lampang	669.1
2 Chiang Rai	0	0	0	0	0	2	4	27	132	301	375	452	454	1,747	3,494	Phayao	631.1
3 Bangkok Metropolis	1	1	0	6	1	10	16	17	53	166	293	453	527	1,544	3,088	Chiang Rai	611.7
4 Lampang	0	0	0	0	0	0	3	14	73	253	195	338	450	1,326	2,652	Lamphun	478.4
5 Phayao	0	0	0	0	0	0	2	6	30	80	160	307	232	817	1,634	Chiang Mai	477.5
6 Lamphun	0	0	0	0	0	0	0	3	13	60	129	180	147	532	1,064	Mae Hong Son	429.2
7 Rayong	0	0	0	0	0	0	1	3	16	61	110	138	146	475	950	Rayong	369.6
8 Nan	0	0	0	0	0	0	0	6	9	32	49	101	102	299	598	Ranong	355.4
9 Ratchaburi	0	0	0	0	0	1	1	0	10	30	70	73	73	258	516	Phuket	281.5
10 Phetchaburi	0	0	0	0	0	1	1	1	7	23	60	84	73	250	500	Nan	267.7
11 Kanchanaburi	0	0	0	0	0	0	0	0	2	19	49	87	91	248	496	Phetchaburi	238.1
12 Khon Kaen	0	0	0	0	0	0	0	0	7	24	53	69	91	244	488	Samut Songkhram	175.8
13 Nonthaburi	0	0	0	0	1	0	1	5	7	28	45	72	84	243	486	Chanthaburi	168.3
14 Saraburi	0	0	0	0	0	0	0	1	7	21	46	72	75	222	444	Saraburi	168.1
15 Chonburi	0	0	0	0	0	1	0	1	3	34	66	61	47	213	426	Trat	167.6
16 Songkhla	0	0	0	0	1	1	0	2	2	17	68	64	53	208	416	Phrae	154.1
17 Ayutthaya	0	0	0	0	0	0	0	1	9	14	36	55	88	203	406	Kanchanaburi	145.4
18 Phrae	0	0	0	1	0	0	1	1	4	16	23	64	90	200	400	Ratchaburi	134.1
19 Samut Prakan	0	0	0	0	0	3	1	1	7	11	56	50	69	198	396	Nonthaburi	133.2
20 Mae Hong Son	0	0	0	0	0	0	1	6	6	17	46	63	50	189	378	Nakhonnayok	126.6
21 Chanthaburi	0	0	0	0	0	1	0	0	3	11	30	65	78	188	376	Pathum Thani	117.7
22 Nakhon Pathom	0	0	0	0	0	0	1	2	5	13	29	47	86	183	366	Ayutthaya	114.9
23 Buriram	0	0	0	0	0	1	0	3	3	28	55	59	31	180	360	Phachuap Khiri Khan	111.3
24 Nakhon Ratvhasima	0	0	0	0	0	2	1	3	10	24	57	39	31	167	334	Nakhon Pathom	93.4
25 Phetchabun	0	0	0	0	0	0	1	0	5	7	24	57	73	167	334	Bangkok Metropolis	89.1

Table 20 Reported male AIDS deaths in numbers and rates per 100,000 male population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000	
26 Nakhon Sawan	0	0	0	0	0	2	0	2	4	14	29	68	45	164	328	Chonburi	87.2
27 Pathum Thani	0	0	0	0	0	1	1	1	3	13	33	50	54	155	310	Phangnga	86.0
28 Phitsanulok	0	0	1	0	0	0	0	0	3	16	29	30	61	140	280	Samut Prakan	83.1
29 Ubon Ratchathani	0	0	0	0	0	1	1	1	7	11	37	43	39	139	278	Phichit	79.6
30 Phuket	0	0	0	0	0	0	0	0	1	7	35	44	50	137	274	Phetchabun	72.4
31 Ranong	0	0	0	0	0	0	0	0	1	13	26	34	51	125	250	Phitsanulok	70.1
32 Phachuap Khiri Khan	0	0	0	0	0	0	0	0	5	12	37	30	38	122	244	Kam Phaeng Phet	69.3
33 Srisaket	0	0	0	0	0	0	0	2	5	9	28	37	40	121	242	Tak	67.1
34 Suphanburi	0	0	0	0	0	0	0	0	2	8	10	41	58	119	238	Songkhla	65.5
35 Kam Phaeng Phet	0	0	0	0	0	0	2	1	2	8	26	44	34	117	234	Krabi	64.0
36 Phichit	0	0	0	0	0	1	0	0	6	10	33	30	33	113	226	Sukhothai	61.5
37 Samut Songkhram	0	0	0	0	0	1	1	1	1	7	16	43	44	113	226	Chumphon	61.1
38 Roi Et	0	0	0	0	0	0	1	1	7	23	16	32	29	109	218	Nakhon Sawan	60.1
39 Surin	0	0	0	0	0	0	0	0	8	18	10	37	32	105	210	Samut Sakhon	57.6
40 Surat Thani	0	0	0	0	0	0	0	0	1	11	24	21	46	103	206	Suphanburi	57.5
41 Kalasin	0	0	0	0	0	0	0	0	0	10	17	40	26	93	186	Sakeaw	56.9
42 Sukhothai	0	0	0	0	0	0	0	0	1	12	26	24	26	89	178	Khon Kaen	55.2
43 Trat	0	0	0	0	0	0	0	2	0	3	25	28	25	83	166	Prachinburi	52.0
44 Udon Thani	0	0	0	1	0	0	0	0	2	11	13	21	34	82	164	Chachoengsao	49.3
45 Chaiyaphum	0	0	0	0	0	1	0	0	3	7	18	26	23	78	156	Buriram	48.7
46 Nakhonnayok	0	0	0	0	0	0	1	3	4	5	11	17	37	78	156	Surat Thani	47.8
47 Chachoengsao	0	0	0	0	0	1	0	1	3	6	17	30	17	75	150	Pattani	44.6
48 Chumphon	0	0	0	0	0	0	0	0	0	5	13	28	21	67	134	Loei	43.6
49 Pattani	0	0	0	0	0	0	0	0	5	3	16	18	25	67	134	Uthai Thani	41.9
50 Loei	0	0	0	0	0	0	0	0	2	3	7	14	39	65	130	Satun	41.8

Table 20 Reported male AIDS deaths in numbers and rates per 100,000 male population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000
51 Prachinburi	0	0	0	0	0	0	0	0	1	2	10	16	18	63	126	41.5
52 Tak	0	0	0	0	0	0	0	0	2	9	13	18	18	60	120	41.2
53 Trang	0	0	0	0	0	0	0	0	1	4	7	22	26	60	120	40.4
54 Narathiwat	0	0	0	0	0	0	0	0	4	8	15	11	21	59	118	39.8
55 Sakeaw	0	0	0	0	0	0	0	0	0	1	11	26	21	59	118	39.2
56 Lopburi	0	0	0	0	0	0	0	1	1	9	18	13	15	57	114	36.7
57 Mahasarakham	0	0	0	0	0	0	0	0	1	5	16	20	15	57	114	36.3
58 Samut Sakhon	0	0	0	0	0	0	0	1	0	7	7	21	21	57	114	35.6
59 Phangnga	0	0	0	0	0	0	0	0	2	4	13	18	16	53	106	35.1
60 Krabi	0	0	0	0	0	0	0	0	3	4	12	21	12	52	104	33.0
61 Uttaradit	0	0	0	0	0	0	0	0	5	9	12	8	11	45	90	32.0
62 Yasothon	0	0	0	0	0	0	0	2	0	4	12	14	13	45	90	31.5
63 Chainat	0	0	0	0	0	0	0	0	0	4	7	13	13	37	74	30.4
64 Nakhon Sri Thammarat	0	0	0	0	0	0	0	5	5	3	11	11	0	35	70	30.2
65 Uthai Thani	0	0	0	0	0	0	0	0	0	0	4	9	19	32	64	28.6
66 Nongbua Lamphu	0	0	0	0	0	0	0	0	0	2	4	12	12	30	60	28.5
67 Yala	0	0	0	0	0	0	0	0	2	3	5	11	8	29	58	25.8
68 Ang Thong	0	0	0	0	0	0	0	0	0	0	6	8	13	27	54	25.1
69 Sakonnakhon	0	0	0	0	0	0	1	0	0	2	6	5	13	27	54	24.1
70 Satun	0	0	0	0	0	2	1	0	2	1	7	7	6	26	52	22.6
71 Nakhomphanom	0	0	0	0	0	0	0	0	0	2	7	5	10	24	48	22.6
72 Phatthalung	0	0	0	0	0	0	0	0	1	1	6	11	5	24	48	19.1
73 Mukdahan	0	0	0	1	0	0	0	0	1	2	3	8	7	22	44	14.2
74 Singburi	0	0	0	0	0	0	1	1	1	2	4	5	7	21	42	10.6
75 Amnat Cheorn	0	0	0	0	0	0	0	0	0	2	3	8	7	20	40	8.7

Table 21 Reported female AIDS deaths in numbers and rates per 100,000 female population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000		
1 Chiang Rai	0	0	0	0	0	0	1	1	7	17	73	109	143	169	520	1,040	Phayao	196.5
2 Chiang Mai	0	0	0	0	0	0	4	9	10	54	92	140	118	427	854	854	Chiang Rai	193.8
3 Lampang	0	0	0	0	0	0	0	2	9	28	30	66	113	248	496	496	Lampang	130.3
4 Phayao	0	0	0	0	0	0	0	1	9	20	29	89	90	238	476	476	Chiang Mai	120.1
5 Bangkok Metropolis	0	0	0	0	1	1	2	1	4	12	36	59	92	208	416	416	Ranong	102.5
6 Rayong	0	0	0	0	0	0	0	1	2	12	27	25	34	101	202	202	Mae Hong Son	99.1
7 Lamphun	0	0	0	0	0	0	0	2	0	15	15	27	23	82	164	164	Rayong	80.4
8 Kanchanaburi	0	0	0	0	0	0	0	0	0	3	11	20	25	59	118	118	Lamphun	76.5
9 Nan	0	0	0	0	0	0	0	0	1	3	9	24	20	57	114	114	Phuket	55.7
10 Phrae	0	0	0	0	0	0	0	0	1	1	5	15	33	55	110	110	Nan	53.3
11 Khon Kaen	0	0	0	0	0	0	1	1	0	8	7	18	18	53	106	106	Phrae	43.3
12 Nakhon Sawan	0	0	0	0	0	0	0	0	0	2	5	16	22	45	90	90	Kanchanaburi	34.8
13 Nonthaburi	0	0	0	0	0	0	0	0	5	8	8	11	11	43	86	86	Phetchaburi	34.5
14 Ayutthaya	0	0	0	0	0	0	0	0	2	2	3	10	25	42	84	84	Samut Songkhram	27.9
15 Chonburi	0	0	0	0	0	0	1	0	0	1	12	12	15	41	82	82	Phachuap Khiri Khan	27.7
16 Mae Hong Son	0	0	0	0	0	1	0	0	2	5	7	9	16	40	80	80	Saraburi	25.7
17 Phetchaburi	0	0	0	0	0	0	1	0	1	2	9	10	15	38	76	76	Trat	23.6
18 Buriram	0	0	0	0	0	0	0	0	1	4	4	15	12	36	72	72	Ayutthaya	22.6
19 Nakhon Ratvhasima	0	0	0	0	0	0	0	3	3	2	8	11	8	35	70	70	Nonthaburi	22.4
20 Ratchaburi	0	0	0	0	0	0	0	0	1	3	7	13	11	35	70	70	Nakhonnayok	20.4
21 Saraburi	0	0	0	0	0	0	0	0	2	0	4	11	17	34	68	68	Uttaradit	19.8
22 Ranong	0	0	0	0	0	0	0	1	0	2	6	12	12	33	66	66	Samut Sakhon	17.4
23 Phetchabun	0	0	0	0	0	0	0	0	0	2	5	9	15	31	62	62	Ratchaburi	17.3
24 Songkhla	0	0	0	0	0	0	0	0	0	4	9	13	5	31	62	62	Chonburi	17.2

Table 21 Reported female AIDS deaths in numbers and rates per 100,000 female population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000		
25 Phachuap Khiri Khan	0	0	0	0	0	0	0	0	0	0	3	6	12	9	30	60	Pathum Thani	17.2
26 Phitsanulok	0	0	0	0	0	0	0	0	0	0	4	4	6	15	29	58	Nakhon Sawan	16.2
27 Suphanburi	0	0	0	0	0	0	0	0	0	1	2	8	17	29	58	Phichit	15.5	
28 Phuket	0	0	0	0	0	0	0	0	0	0	4	8	14	27	54	Narathiwat	15.3	
29 Chaiyaphum	0	0	0	0	0	0	0	0	0	0	3	11	12	26	52	Chumphon	14.9	
30 Samut Prakan	0	0	0	0	0	0	0	0	2	1	7	5	10	25	50	Chanthaburi	14.8	
31 Narathiwat	0	0	0	0	0	0	0	0	3	2	5	4	10	24	48	Phitsanulok	14.6	
32 Maharakham	0	0	0	0	0	0	0	1	0	2	1	7	12	23	46	Krabi	14.1	
33 Pathum Thani	0	0	0	0	0	0	0	0	0	2	5	10	6	23	46	Phetchabun	13.8	
34 Phichit	0	0	0	0	0	0	0	0	0	1	6	6	10	23	46	Sukhothai	13.3	
35 Uttaradit	0	0	0	0	0	0	0	0	2	1	2	11	7	23	46	Suphanburi	13.1	
36 Nakhon Pathom	0	0	0	0	0	0	0	0	1	1	0	8	12	22	44	Satun	13.1	
37 Roi Et	0	0	0	0	0	0	0	1	0	2	5	6	7	21	42	Loei	12.8	
38 Sukhothai	0	0	0	0	0	0	0	0	0	3	1	6	10	20	40	Khon Kaen	12.1	
39 Udon Thani	0	0	0	0	0	0	0	0	0	2	1	9	8	20	40	Mukdahan	11.5	
40 Kam Phaeng Phet	0	0	0	0	0	0	0	0	0	2	2	9	6	19	38	Kam Phaeng Phet	11.4	
41 Kalasin	0	0	0	0	0	0	0	0	0	0	2	5	11	18	36	Ang Thong	11.3	
42 Loei	0	0	0	0	0	0	0	0	1	2	2	5	8	18	36	Bangkok Metropolis	11.1	
43 Samut Sakhon	0	0	0	0	0	0	0	0	0	0	3	1	14	18	36	Nakhon Pathom	10.7	
44 Srisaket	0	0	0	0	0	0	0	0	1	3	2	4	8	18	36	Trang	10.5	
45 Chanthaburi	0	0	0	0	0	0	0	0	0	2	3	4	7	16	32	Samut Prakan	10.1	
46 Chumphon	0	0	0	0	0	1	0	0	0	2	1	4	8	16	32	Buriram	9.9	
47 Surat Thani	0	0	0	0	0	0	0	0	0	1	3	5	7	16	32	Songkhla	9.7	
48 Trang	0	0	0	0	0	0	0	0	1	1	0	5	9	16	32	Chaiyaphum	9.7	

Table 21 Reported female AIDS deaths in numbers and rates per 100,000 female population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000	
49 Samut Songkhram	0	0	0	0	0	0	0	0	0	0	4	6	5	15	30	Maharakham	9.6
50 Pattani	0	0	0	0	0	0	0	0	0	0	3	6	5	14	28	Pattani	9.4
51 Surin	0	0	0	0	0	0	0	0	0	1	3	5	5	14	28	Tak	9.3
52 Nakhonnayok	0	0	0	0	0	0	0	1	0	0	1	5	6	13	26	Sakeaw	9.2
53 Ubon Ratchathani	0	0	0	0	1	0	0	0	1	1	3	3	4	13	26	Yala	9.2
54 Krabi	0	0	0	0	0	0	0	0	1	1	2	2	5	11	22	Kalasin	8.0
55 Trat	0	0	0	0	0	0	0	0	0	1	2	2	6	11	22	Surat Thani	7.4
56 Lopburi	0	0	0	0	0	0	0	0	1	0	0	5	4	10	20	Roi Et	6.9
57 Nakhomphanom	0	0	0	0	0	0	0	0	1	0	4	4	1	10	20	Phangnga	6.7
58 Nakhon Sri Thammarat	0	0	0	0	0	0	0	1	1	1	2	3	1	9	18	Nakhomphanom	6.0
59 Sakeaw	0	0	0	0	0	0	0	0	0	0	2	3	4	9	18	Udon Thani	5.7
60 Yala	0	0	0	0	0	0	0	0	1	0	1	5	2	9	18	Nakhon Ratvasima	5.5
61 Ang Thong	0	0	0	0	0	0	0	0	0	1	3	1	3	8	16	Lopburi	5.4
62 Chachoengsao	0	0	0	0	1	0	0	0	1	1	2	1	2	8	16	Chainat	5.2
63 Mukdahan	0	0	0	0	0	0	0	0	0	0	2	1	5	8	16	Srisaket	5.2
64 Satun	0	0	0	0	0	0	0	0	0	0	3	2	3	8	16	Chachoengsao	5.2
65 Tak	0	0	0	0	0	0	0	0	0	0	3	4	1	8	16	Yasothon	4.9
66 Sakonnakhon	0	0	0	0	0	0	1	0	0	1	1	1	3	7	14	Singburi	4.8
67 Yasothon	0	0	0	0	0	0	0	0	0	1	1	1	4	7	14	Nongbua Lamphu	4.3
68 Chainat	0	0	0	0	0	0	0	0	0	0	2	2	1	5	10	Surin	4.3
69 Nongbua Lamphu	0	0	0	0	0	0	0	0	0	0	1	0	4	5	10	Phatthalung	3.9
70 Phatthalung	0	0	0	0	0	0	0	0	0	1	0	1	3	5	10	Amnat Cheorn	3.6
71 Phangnga	0	0	0	0	0	0	0	0	0	0	2	1	1	4	8	Prachinburi	3.4
72 Prachinburi	0	0	0	0	0	0	0	0	0	0	2	1	1	4	8	Ubon Ratchathani	3.2

Table 21 Reported female AIDS deaths in numbers and rates per 100,000 female population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000	
73 Annat Chaborn	0	0	0	0	0	0	0	0	0	0	2	1	0	3	6	Sakonnakhon	2.8
74 Nong Khai	0	0	0	0	0	0	0	0	0	0	1	1	1	3	6	Uthai Thani	2.6
75 Singburi	0	0	0	0	0	0	0	0	0	0	0	2	1	3	6	Nakhon Sri Thammarat	2.2
76 Uthai Thani	0	0	0	0	0	0	0	0	0	0	1	0	1	2	4	Nong Khai	1.4
Public Health Offices																	
1 Zone 10	0	0	0	0	0	2	5	21	47	195	282	474	529	1,555	3,110	Zone 10	143.6
2 Zone 5	0	0	0	0	0	0	2	2	2	20	26	77	94	223	446	Zone 9	23.6
3 Zone 9	0	0	0	0	0	0	0	0	4	12	31	71	100	218	436	Zone 4	22.8
4 Zone 4	0	0	0	0	0	0	1	0	3	12	40	70	91	217	434	Zone 3	21.4
5 Zone 3	0	0	0	0	1	0	1	1	3	17	50	48	69	190	380	Zone 01	17.0
6 Zone 01	0	0	0	0	0	0	0	0	9	14	26	37	55	141	282	Zone 8	12.4
7 Zone 6	0	0	0	0	0	0	2	1	1	13	15	39	53	124	248	Zone 2	12.3
8 Zone 11	0	0	0	0	0	1	0	2	2	8	20	35	48	116	232	Zone 11	12.3
9 Zone 12	0	0	0	0	0	0	0	0	5	8	21	36	37	107	214	Zone 5	12.1
10 Zone 8	0	0	0	0	0	0	0	0	0	7	12	35	40	94	188	Zone 12	10.1
11 Zone 2	0	0	0	0	0	0	0	1	4	1	9	33	46	94	188	Zone 6	7.1
12 Zone 7	0	0	0	0	1	0	0	1	3	7	19	20	29	80	160	Zone 7	5.3
Regions																	
1 North Region	0	0	0	0	0	2	5	21	51	214	325	580	669	1,867	3,734	North Region	67.5
2 Central Region +BKK	0	0	0	0	2	1	4	3	23	56	161	247	353	850	1,700	Central Region + BKK	16.0
3 Northeast Region	0	0	0	0	1	0	4	4	6	40	60	136	176	427	854	Northeast Region	8.4
4 South Region	0	0	0	0	0	1	0	2	7	16	41	71	85	223	446	South Region	11.1
Whole Country	0	0	0	0	3	4	13	30	87	326	587	1,034	1,283	3,367	6,734	Whole Country	22.2

Source: AIDS Epidemiology Working Group, Epidemiology Division, the Ministry of Public Health. Report of AIDS Statistics in Thailand

Table 22 Reported male and female AIDS deaths in numbers and rates per 100,000 population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-199	Rate per 100,000
1 Chiang Rai	0	0	0	0	0	3	5	34	149	374	484	595	623	2,267	4,534 Phayao	421.0
2 Chiang Mai	0	0	0	0	0	2	15	68	103	279	567	640	528	2,202	4,404 Chiang Rai	409.3
3 Bangkok Metropolitan	1	1	0	6	2	11	18	18	57	178	329	512	619	1,752	3,504 Lampang	405.2
4 Lampang	0	0	0	0	0	0	3	16	82	281	225	404	563	1,574	3,148 Chiang Mai	302.7
5 Phayao	0	0	0	0	0	0	2	7	39	100	189	396	322	1,055	2,110 Lamphun	281.2
6 Lamphun	0	0	0	0	0	0	0	5	13	75	144	207	170	614	1,228 Mae Hong Son	271.4
7 Rayong	0	0	0	0	0	0	1	4	18	73	137	163	180	576	1,152 Ranong	234.5
8 Nan	0	0	0	0	0	0	0	6	10	35	58	125	122	356	712 Rayong	226.7
9 Kanchanaburi	0	0	0	0	0	0	0	0	2	22	60	107	116	307	614 Phuket	168.9
10 Khon Kaen	0	0	0	0	0	0	1	1	7	32	60	87	109	297	594 Nan	162.9
11 Ratchaburi	0	0	0	0	0	1	1	0	11	33	77	86	84	293	586 Phetchaburi	133.9
12 Phetchaburi	0	0	0	0	0	1	2	1	8	25	69	94	88	288	576 Samut Songkhram	108.5
13 Nonthaburi	0	0	0	0	1	0	1	5	12	36	53	83	95	286	572 Phrae	99.2
14 Saraburi	0	0	0	0	0	0	0	1	9	21	50	83	92	256	512 Trat	97.7
15 Phrae	0	0	0	1	0	0	1	1	5	17	28	79	123	255	510 Saraburi	96.8
16 Chonburi	0	0	0	0	0	1	1	1	3	35	78	73	62	254	508 Chanthaburi	92.8
17 Ayutthaya	0	0	0	0	0	0	0	1	11	16	39	65	113	245	490 Kanchanaburi	90.3
18 Songkhla	0	0	0	0	1	1	0	2	2	21	77	77	58	239	478 Nonthaburi	76.4
19 Mae Hong Son	0	0	0	0	0	1	1	6	8	22	53	72	66	229	458 Ratchaburi	74.3
20 Samut Prakan	0	0	0	0	0	3	1	1	9	12	63	55	79	223	446 Nakhonnayok	72.6
21 Buriram	0	0	0	0	0	1	0	3	4	32	59	74	43	216	432 Phachuap Khiri Khan	69.8
22 Nakhon Sawan	0	0	0	0	0	2	0	2	4	16	34	84	67	209	418 Ayutthaya	67.5
23 Nakhon Pathom	0	0	0	0	0	0	1	2	6	14	29	55	98	205	410 Pathum Thani	67.0
24 Chanthaburi	0	0	0	0	0	1	0	0	3	13	33	69	85	204	408 Chonburi	52.6
25 Nakhon Ratthasima	0	0	0	0	0	2	1	6	13	26	65	50	39	202	404 Nakhon Pathom	51.1
26 Phetchabun	0	0	0	0	0	0	1	0	5	9	29	66	88	198	396 Bangkok Metropolitan	48.6
27 Pathum Thani	0	0	0	0	0	0	1	1	3	15	38	60	60	178	356 Phangnga	47.0
28 Phitsanulok	0	0	1	0	0	0	0	0	3	20	33	36	76	169	338 Phichit	46.8
29 Phuket	0	0	0	0	0	0	0	0	1	8	39	52	64	164	328 Samut Prakan	46.0
30 Ranong	0	0	0	0	0	0	0	1	1	15	32	46	63	158	316 Phetchabun	43.5
31 Ubon Ratchathani	0	0	0	0	1	0	1	1	8	12	40	46	43	152	304 Phitsanulok	42.4
32 Phachuap Khiri Khan	0	0	0	0	0	0	0	0	5	15	43	42	47	152	304 Kam Phaeng Phet	40.5
33 Suphanburi	0	0	0	0	0	0	0	0	3	9	12	49	75	148	296 Krabi	39.5

Table 22 Reported male and female AIDS deaths in numbers and rates per 100,000 population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-1997	Rate per 100,000
34 Srisaket	0	0	0	0	0	0	0	2	6	12	30	41	48	139	278 Tak	38.8
35 Phichit	0	0	0	0	0	0	1	0	6	11	39	36	43	136	272 Chumphon	38.2
36 Kam Phaeng Phet	0	0	0	0	0	0	2	1	2	10	28	53	40	136	272 Nakhon Sawan	37.9
37 Roi Et	0	0	0	0	0	0	1	2	7	25	21	38	36	130	260 Songkhla	37.5
38 Samut Songkhram	0	0	0	0	0	0	1	1	1	7	20	49	49	128	256 Samut Sakhon	37.0
39 Surin	0	0	0	0	0	0	0	0	8	19	13	42	37	119	238 Sukhothai	37.0
40 Surat Thani	0	0	0	0	0	0	0	0	1	12	27	26	53	119	238 Suphanburi	34.6
41 Kalasin	0	0	0	0	0	0	0	0	0	10	19	45	37	111	222 Sakeaw	33.8
42 Sukhothai	0	0	0	0	0	0	0	0	1	15	27	30	36	109	218 Khon Kaen	33.7
43 Chaiyaphum	0	0	0	0	0	1	0	0	3	7	21	37	35	104	208 Buriram	29.5
44 Udon Thani	0	0	0	1	0	0	0	0	2	13	14	30	42	102	204 Uttaradit	29.5
45 Trat	0	0	0	0	0	0	0	2	0	4	27	30	31	94	188 Loei	28.7
46 Nakhonnayok	0	0	0	0	0	0	1	4	4	5	12	22	43	91	182 Prachinburi	28.0
47 Narathiwat	0	0	0	0	0	0	0	0	7	10	20	15	31	83	166 Surat Thani	27.6
48 Loei	0	0	0	0	0	0	0	0	3	5	9	19	47	83	166 Satun	27.5
49 Chumphon	0	0	0	0	0	1	0	0	0	7	14	32	29	83	166 Pattani	27.1
50 Chachoengsao	0	0	0	0	1	1	0	1	4	7	19	31	19	83	166 Chachoengsao	27.1
51 Pattani	0	0	0	0	0	0	0	0	5	3	19	24	30	81	162 Narathiwat	26.0
52 Maharakham	0	0	0	0	0	0	0	1	1	7	17	27	27	80	160 Ang Thong	25.7
53 Trang	0	0	0	0	0	0	0	0	2	5	7	27	35	76	152 Trang	25.1
54 Samut Sakhon	0	0	0	0	0	0	0	1	0	7	10	22	35	75	150 Kalasin	24.4
55 Uttaradit	0	0	0	0	0	0	0	0	7	10	14	19	18	68	136 Chainat	22.6
56 Tak	0	0	0	0	0	0	0	0	2	9	16	22	19	68	136 Uthai Thani	21.9
57 Sakeaw	0	0	0	0	0	0	0	0	0	1	13	29	25	68	136 Roi Et	21.3
58 Prachinburi	0	0	0	0	0	0	0	1	2	10	18	19	17	67	134 Mukdahan	21.2
59 Lopburi	0	0	0	0	0	0	0	1	2	9	18	18	19	67	134 Srisaket	20.1
60 Krabi	0	0	0	0	0	0	0	0	4	5	14	23	17	63	126 Singburi	19.3
61 Phangnga	0	0	0	0	0	0	0	0	2	4	15	19	17	57	114 Chaiyaphum	19.2
62 Yasothon	0	0	0	0	0	0	0	2	0	5	13	15	17	52	104 Yala	19.0
63 Nakhon Sri Thammarat	0	0	0	0	0	0	0	6	6	4	13	14	1	44	88 Ubon Ratchathani	18.3
64 Chainat	0	0	0	0	0	0	0	0	0	4	9	15	14	42	84 Yasothon	18.2
65 Yala	0	0	0	0	0	0	0	0	3	3	6	16	10	38	76 Surin	18.2
66 Nongbua Lamphu	0	0	0	0	0	0	0	0	0	2	5	12	16	35	70 Lopburi	17.9

Table 22 Reported male and female AIDS deaths in numbers and rates per 100,000 population, 1984-1997

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984-199	Rate per 100,000	
67 Ang Thong	0	0	0	0	0	0	0	0	0	1	9	9	16	35	70	Maharakham	16.8
68 Uthai Thani	0	0	0	0	0	0	0	0	0	0	5	9	20	34	68	Nakhon Ratchasima	15.7
69 Satun	0	0	0	0	0	2	1	0	2	1	10	9	9	34	68	Nongbua Lamphu	14.9
70 Sakonnakhon	0	0	0	0	0	0	2	0	0	3	7	6	16	34	68	Udon Thani	14.2
71 Nakhomphanom	0	0	0	0	0	0	0	0	1	2	11	9	11	34	68	Amnat Cheorn	13.5
72 Mukdahan	0	0	0	1	0	0	0	0	1	2	5	9	12	30	60	Phatthalung	11.5
73 Phatthalung	0	0	0	0	0	0	0	0	1	2	6	12	8	29	58	Nakhomphanom	10.1
74 Singburi	0	0	0	0	0	0	1	1	1	2	4	7	8	24	48	Sakonnakhon	6.7
75 Amnat Cheorn	0	0	0	0	0	0	0	0	0	2	5	9	7	23	46	Nakhon Sri Thammarat	5.5
76 Nong Khai	0	0	0	0	0	0	0	0	1	4	4	4	3	16	32	Nong Khai	3.7
1 Zone 10	0	0	0	0	0	6	26	136	394	1,131	1,662	2,314	2,272	7,941	15,882	Zone 10	357.2
2 Zone 04	0	0	0	0	0	2	5	5	33	123	308	455	517	1,448	2,896	Zone 04	76.7
3 Zone 03	0	0	0	0	1	3	2	9	30	143	325	414	419	1,346	2,692	Zone 03	74.8
4 Zone 09	0	0	1	1	0	0	3	7	36	102	201	361	470	1,182	2,364	Zone 09	74.8
5 Zone 01	0	0	0	0	1	3	3	8	35	80	202	272	363	967	1,934	Zone 01	59.6
6 Zone 05	0	0	0	0	0	4	3	8	27	102	182	258	226	810	1,620	Zone 02	41.9
7 Zone 11	0	0	0	0	0	1	0	7	15	55	154	212	244	688	1,376	Zone 08	36.8
8 Zone 06	0	0	0	1	0	0	3	1	13	69	118	203	270	678	1,356	Zone 11	36.3
9 Zone 02	0	0	0	0	0	0	2	7	19	50	105	194	251	628	1,256	Zone 12	27.2
10 Zone 12	0	0	0	0	1	3	1	2	22	45	145	180	181	580	1,160	Zone 05	21.9
11 Zone 07	0	0	0	1	1	0	2	7	23	60	125	167	174	560	1,120	Zone 06	19.3
12 Zone 08	0	0	0	0	0	2	2	3	9	50	110	198	182	556	1,112	Zone 07	18.3
1 North Region	0	0	1	1	0	8	31	146	439	1,283	1,973	2,873	2,924	9,679	19,358	North Region	173.3
2 Central Region +BKK	1	1	0	6	4	19	30	47	174	574	1,269	1,847	2,169	6,141	12,282	Central Region	59.0
3 North-Eastern Region	0	0	0	2	1	4	8	16	63	231	425	628	670	2,048	4,096	South Region	31.5
4 South Region	0	0	0	0	1	4	1	9	37	100	299	392	425	1,268	2,536	North-Eastern Region	19.9
Whole Country	1	1	1	9	6	35	70	218	713	2,188	3,966	5,740	6,188	19,136	38,272	Whole Country	63.2

Source: AIDS Epidemiology Working Group, Epidemiology Division, the Ministry of Public Health. Report of AIDS Statistics in Thailand

Table 23 HIV Surveillance among pregnant women rounds 1-15

Round Mth/Yr	1 Jun-89	2 Dec-89	3 Jun-90	4 Dec-90	5 Jun-91	6 Dec-91	7 Jun-92	8 Dec-92	9 Jun-93	10 Dec-93	11 Jun-94	12 Dec-94	13 Jun-95	14 Jun-96	15 Average Jun-97	
1 Phayao		0.00	0.00	3.50	2.65	3.45	4.67	5.63	7.44	10.65	10.63	10.70	6.95	5.23	4.86	5.45
2 Rayong		2.91	0.00	2.02	8.06	6.76	7.38	3.14	4.84	10.53	5.50	4.00	7.82	5.45	3.71	4.94
3 Chiang Rai			2.50	4.00	3.50	4.00	6.00	3.00	5.41	8.00	6.12	7.92	8.38	7.88	5.00	4.78
4 Chiang Mai		0.00	1.88	4.50	4.07	1.50	4.85	5.82	4.88	7.96	5.45	5.06	7.98	5.92	4.99	4.32
5 Lamphun	1.00		1.00	0.72	2.15	1.44	3.50	8.33	4.68	6.21	4.55	2.30	9.86	5.26	3.03	4.08
6 Phetchaburi			0.00	1.18	1.00	4.00	7.00	4.00	6.00	3.00	4.65	5.24	4.38	2.96	2.53	3.53
7 Lampang			0.00	1.08	1.99	1.50	2.50	3.50	4.50	3.50	6.33	7.42	4.38	3.65	3.09	3.34
8 Ranong			0.00	0.00	1.00	1.00	3.55	2.94	7.56	4.21	3.77	3.57	2.78	2.34	2.17	2.68
9 Phrae			0.00	0.00	1.55	8.80	6.25	2.27	1.71	1.92	0.76	5.36	2.97	1.87	1.36	2.68
10 Mae Hong Son			0.00	2.96	3.65	4.25	1.47	1.56	6.19	2.50	0.96	1.10	3.70	5.06	0.00	2.57
11 Trat			0.00	0.00	1.00	0.76	2.22	5.00	1.72	4.38	2.79	2.17	4.23	3.60	5.50	2.57
12 Phachuap Khiri Khan			1.20	2.00	2.70	2.00	1.00	3.00	1.00	4.00	4.00	3.00	6.00	3.55	1.29	2.32
13 Prachinburi			0.00	0.00	1.00	1.55	1.23	3.97	2.11	2.63	1.82	0.88	4.14	2.50	3.00	1.91
14 Chachoengsao			0.00	0.68	0.00	0.00	1.09	1.90	4.79	0.72	3.89	5.30	2.30	1.49	1.26	1.80
15 Chanthaburi			0.00	0.00	1.00	0.50	1.00	3.50	2.00	2.00	3.20	0.50	2.50	3.46	3.50	1.78
16 Ayutthaya			0.00	2.78	1.00	1.00	1.74	3.05	3.73	0.00	1.41	5.07	4.00	1.52	1.33	1.78
17 Nakhon Pathom		0.00	0.00	0.00	1.50	1.00	1.00	3.00	0.50	4.00		3.68	3.28	3.66	2.44	1.72
18 Kanchanaburi		2.00	0.00	0.51	0.78	0.49	0.85	2.58	1.39	1.88	4.36	2.25	3.02	2.95	2.59	1.69
19 Samut Prakan			0.00	1.00	1.00	3.00	2.00	2.00	2.00	3.01	2.68	2.39	1.86	1.58	1.41	1.60
20 Sukhothai		0.00	0.00	0.00	0.00	2.35	3.57	0.00	1.23	3.42	3.17	1.63	2.68	2.28	1.76	1.58
21 Samut Songkhram			0.00	0.71	0.54	1.45	0.50	0.60	0.97	3.00	2.50	2.13	4.05	1.97	1.65	1.54
22 Amnat Choeorn																1.54
23 Loei			3.13	0.00	0.00	0.00	0.00	0.00	3.45	0.00	5.00	3.03	1.86	1.81	0.94	1.54
24 Ang Thong			1.19	0.00	2.00	1.00	1.00	1.60	0.79	1.40	2.19	1.96	1.48	1.84	2.00	1.53
25 Udon Thani			0.00	2.00	1.32	0.00	2.10	0.00	1.20	2.12	3.41	1.72	2.76	3.92	2.44	1.48
26 Nakhon Sawan			0.00	0.50	12.12	0.50	1.00	0.00	0.50	1.00	1.34	1.28	3.38	1.43	1.39	1.43
27 Chonburi	0.00	0.50	0.00	0.29	0.60	0.98	1.15	1.87	2.86	1.69	0.73	1.63	1.28	1.94	1.06	1.42
28 Phuket	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.66	2.13	4.52	2.19	3.03	2.76	2.66	3.01	1.42
29 Suphanburi	0.00	0.00	0.00	0.00	0.55	2.60	0.05	0.61	3.21	1.22	1.73	2.03	3.23	2.19	2.09	1.40
30 Uttaradit	0.50	0.00	0.00	0.00	0.00	0.00	3.01	0.99	0.91	0.00	3.95	0.00	1.32	1.71	3.11	1.40
													3.96	1.89	2.34	1.35

Table 23 HIV Surveillance among pregnant women rounds 1-15

Round Mth/Yr	1 Jun-89	2 Dec-89	3 Jun-90	4 Dec-90	5 Jun-91	6 Dec-91	7 Jun-92	8 Dec-92	9 Jun-93	10 Dec-93	11 Jun-94	12 Dec-94	13 Jun-95	14 Jun-96	15 Average Jun-97
31 Samut Sakhon			0.00	2.00	1.00	0.00	2.00	0.00	1.74	0.00	2.20		2.77	3.07	1.34
32 Pathum Thani			1.39	2.35	0.00	0.00	0.00	0.00	1.52	0.00	2.42	1.32	4.28	1.64	1.27
33 Roi Et			0.00	0.00	1.52	0.00	1.00	1.00	2.01	1.90	1.78	0.83	2.38	1.37	1.21
34 Chumphon			0.50	0.50	1.09	0.00	0.69	1.35	1.64	2.72	1.59	1.26	1.59	2.40	2.51
35 Saraburi	0.00	0.50	0.00	1.00	0.00	1.25	0.00	1.50	0.67	0.95	1.99	3.84	2.48	1.95	1.18
36 Songkhla	0.00	0.00	0.00	0.22	0.39	0.72	1.00	1.00	2.00	2.67	1.95	1.00	1.48	2.55	1.17
37 Ratchaburi	0.00	0.00	0.00	0.83	1.17	1.02	0.78	0.34	1.23	1.39	1.94	1.18	3.26	1.86	1.13
38 Pattani			0.00	0.00	3.00	2.00	1.83	0.90	1.69	1.34	0.00	0.35	1.80	0.88	1.11
39 Kam Phaeng Phet			0.00	2.35	2.00	0.00	0.00	2.50	1.77	0.33	0.00	1.20	1.45	0.79	1.09
40 Bangkok Metropolis	0.00	0.00	0.25	0.28	0.57	0.76	1.21	1.14		1.20	1.88	4.00	1.93	1.72	1.28
41 Maharakham			0.00	0.00	0.00	0.00	3.00	1.09	0.00	1.82	5.00	0.00	2.83	1.59	0.82
42 Nong Khai		4.00	0.00	0.00	0.00	0.00	1.05	0.28	0.74	0.00	2.83	1.82	2.56	5.00	1.08
43 Surat Thani		0.00	0.00	1.00	0.00	0.00	0.50	1.00	2.00	2.00	1.77	1.55	1.91	2.12	1.07
44 Uthai Thani		0.00	1.37	0.00	0.00	0.63	0.00	1.48	0.00	0.00	2.13	0.00	2.66	3.28	1.81
45 Phichit		0.00	0.00	0.50	0.00	0.50	1.05	2.50	1.50	2.02	0.52	2.50	1.51	0.00	0.94
46 Ubon Ratchathani		1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.97	1.50	3.24	0.50	0.79	2.05	0.93
47 Krabi		0.00	0.00	0.00	1.20	0.00	0.57	0.00	0.00	0.84	0.00	0.72	1.57	4.65	0.93
48 Surin		0.00	0.00	0.52	1.48	0.00	0.50	1.60	0.47	2.88	0.00	1.59	1.89	1.53	0.92
49 Tak		0.00	0.00	0.00	0.57	1.40	1.50	1.19	0.00	1.33	2.15	0.31	1.37	2.12	0.68
50 Nan		0.00	0.00	0.81	1.39	1.74	0.00	0.68	1.79	0.53	1.55	1.75	1.32	1.18	0.34
51 Nonthaburi			0.00	0.80	0.63	0.00	1.19	0.73	0.96	1.75	0.93	1.00	1.49	1.96	0.85
52 Chainat			2.00	0.00	0.00	0.00	0.00	0.00	2.30	1.72	1.06	0.00	1.01	2.07	0.84
53 Nakhonnayok		0.00	0.00	0.00	0.90	0.00	1.42	1.74	0.72	0.00	0.00	2.43	2.76	1.59	0.82
54 Narathiwat		0.00	0.00	1.30	1.00	0.00	0.00	1.65	1.00	0.50	0.47	2.43	2.27	0.00	0.87
55 Khon Kaen	0.00	0.49	0.00	0.00	0.95	0.00	0.51	0.40	2.02	2.22	1.46		1.58	1.18	0.77
56 Nakhomphanom		0.00	0.00	2.56	1.79	1.67	0.00	0.00	1.16	0.00	0.00	2.15	0.40	0.23	0.80
57 Buriram		0.00	0.00	0.00	2.15	0.00	0.00	0.00	0.63	1.53	0.63	0.00	0.85	1.11	0.72
58 Kalasin		0.00	0.00	0.00	0.29	0.28	0.60	1.06	0.28	0.93	0.00	0.66	2.86	1.46	0.70
59 Srisaket		0.00	0.00	0.00	0.00	0.61	0.83	0.00	1.36	1.97	0.82	0.59	2.67	1.02	0.69
60 Yasothon		0.00	0.00	0.00	0.00	1.85	1.94	0.00	1.87	1.00	0.00	1.23	0.00	1.03	0.68

Table 23 HIV Surveillance among pregnant women rounds 1-15

Round Mth/Yr	1 Jun-89	2 Dec-89	3 Jun-90	4 Dec-90	5 Jun-91	6 Dec-91	7 Jun-92	8 Dec-92	9 Jun-93	10 Dec-93	11 Jun-94	12 Dec-94	13 Jun-95	14 Jun-96	15 Average	
61 Nakhon Ratchasima	1.00	0.00	0.00	0.50	0.00	0.00	0.00	0.53	0.99	1.33	0.95		1.00	3.20	0.93	0.67
62 Lopburi			0.00	0.68	0.00	1.24	0.00	0.00	1.26	0.00	2.51		0.41	0.83	1.71	0.66
63 Sakeaw			0.00		0.00						2.75	1.38	2.35	1.69	1.49	0.64
64 Singburi		0.74	0.00	0.75	0.00	0.00	0.00	1.21	0.36	0.00	2.12	1.18	1.30	0.51	0.90	0.64
65 Phangnga			0.00	0.00	0.00	0.67	0.99	1.00	0.94	0.00	0.78	2.00	1.97	0.00	0.86	0.61
66 Phetchabun			0.00	0.00	0.81	0.00	0.00	0.00	1.00	0.00	0.00	0.77	2.78	0.88	0.95	0.55
67 Yala			0.00	0.00	0.00	0.00	0.00	1.03	0.46	1.54	1.10		1.73	0.60	1.51	0.53
68 Satun			0.00	0.00	0.00	0.00	0.00	0.00	2.33	0.00	1.00		2.17	0.00	0.50	0.50
69 Nongbua Lamphu			0.00	0.00	0.00	0.00	0.50	1.00	0.50	0.50	0.00	0.00	0.00	0.74	1.74	0.50
70 Nakhon Sri Thammar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.50	0.44	0.82	1.83	0.48
71 Phatthalung		0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.00	2.04		0.91	0.96	0.81	0.42
72 Phitsanulok	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.55	0.79	1.05	1.53	0.21	0.41
73 Sakonnakhon			0.00	0.00	0.81	0.00	0.00	0.00	0.79	0.52	0.00	0.78	1.20	1.12	0.89	0.41
74 Chaiyaphum			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.78	0.89	1.31	0.35
75 Trang		0.00	0.00	0.50	0.50	1.00	1.00	0.00	0.00	0.00	0.27		0.90	0.00	0.28	0.32
76 Mukdahan			0.00		0.00	0.00	0.00	0.00	0.72	0.72	0.00	0.84	0.70	0.57	0.27	0.28
Whole Country	0.00	0.00	0.00	0.00	0.81	0.63	1.00	1.00	1.39	1.88	1.78	2.08	2.29	1.82	1.68	1.09

Indicate less than 20 cases were tested for HIV

Source: AIDS Epidemiology Working Group, Epidemiology Division, the Ministry of Public Health. Report of AIDS Statistics in Thailand


Table 24 HIV Serosurveillance among military conscripts based on the province of longest residence two years prior to conscription, rounds 1-12

Round		1	2	3	4	5	6	7	8	9	10	11	12	Average
Mth/Yr		Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	May-98	
1	Chiang Rai	15.0	17.9	16.8	16.4	7.4	9.7	5.9	7.4	5.6	4.4	3.2	2.8	9.36
2	Phayao	19.8	14.1	17.5	18.9	6.3	3.5	11.2	4.0	3.4	5.7	1.8	4.5	9.23
3	Chiang Mai	14.0	13.8	14.8	11.3	9.2	6.1	7.0	4.0	6.2	4.5	4.7	4.2	8.32
4	Samut Songkhram	12.5	0.0	8.3	7.1	16.7	7.7	0.0	0.0	25.0	0.0	11.1	1.7	7.51
5	Rayong	11.2	13.3	11.7	10.0	10.8	5.8	4.1	5.1	4.7	3.7	3.2	6.4	7.50
6	Lamphun	9.8	10.4	13.2	14.9	9.3	10.3	3.8	6.8	1.8	3.1	2.9	0.0	7.20
7	Trat	12.0	18.8	6.5	16.7	5.9	5.2	0.0	0.0	0.0	16.7	0.0	0.0	6.80
8	Mac Hong Son	0.0	6.3	20.0	5.6	0.0	2.5	0.0	2.9	0.0	6.2	33.3	3.3	6.68
9	Phangnga	0.0	0.0	25.0	25.0	0.0	0.0	3.5	0.0	0.0	20.0	0.0	0.0	6.12
10	Pathum Thani	3.9	4.5	3.9	3.2	0.8	3.4	3.0	3.1	1.0	6.2	33.3	3.3	5.79
11	Lampang	7.4	8.4	8.5	9.2	6.2	4.5	3.0	5.9	5.8	2.4	2.6	1.1	5.42
12	Phachuap Khiri Khan	7.1	5.2	7.2	7.9	5.9	5.0	12.5	3.3	4.3	2.9	0.0	2.5	5.32
13	Chanthaburi	4.3	2.8	4.8	8.8	6.8	4.4	7.7	6.5	2.1	4.2	2.3	2.8	4.79
14	Satun	0.0	8.3	0.0	33.3	0.0	0.0	2.3	2.8	6.6	0.0	1.9	0.0	4.61
15	Mukdahan	1.4	2.3	1.8	2.8	1.8	0.0	1.0	0.0	0.6	20.0	20.0	0.0	4.30
16	Phuket	2.3	6.7	9.1	7.7	6.8	0.0	5.0	2.0	4.2	0.0	3.3	3.9	4.25
17	Suphanburi	4.3	3.6	4.8	4.5	10.0	3.3	12.5	2.7	0.0	2.8	0.0	1.2	4.14
18	Phetchaburi	12.4	8.5	3.8	4.4	3.2	2.0	10.0	1.3	0.0	0.8	0.0	2.0	4.04
19	Nakornprathom	4.4	6.7	10.8	6.6	1.6	3.7	1.1	2.5	0.8	2.5	0.9	1.6	3.60
20	Kanchanaburi	7.5	5.3	5.9	6.8	7.7	2.8	0.0	3.1	0.0	1.5	0.0	2.0	3.55
21	Chonburi	3.7	5.1	4.8	4.9	3.9	2.7	4.3	3.4	4.5	1.8	1.6	1.5	3.52
22	Ranong	7.7	0.0	11.8	0.0	0.0	3.9	8.3	1.1	0.0	0.0	9.3	0.0	3.51
23	Ratchaburi	4.3	2.6	6.8	4.0	3.2	4.8	6.2	2.0	0.0	4.0	0.0	1.7	3.31
24	Phrae	5.3	4.1	8.3	5.0	4.3	1.9	2.7	0.7	3.1	1.8	1.9	0.0	3.27
25	Saraburi	9.1	2.1	4.6	3.0	6.2	2.0	1.6	2.5	0.0	2.7	3.1	0.8	3.14
26	Pattani	3.8	1.6	11.3	1.3	3.4	3.2	2.0	3.5	1.2	1.1	1.9	1.4	2.97
27	Samut Sakorn	3.8	5.1	3.3	2.9	3.6	4.9	1.3	4.3	1.1	2.2	1.1	0.8	2.87
28	Srisaket	1.8	1.8	2.3	0.0	2.0	0.6	1.1	3.0	0.6	3.3	1.3	15.4	2.77
29	Bangkok Metropolitan	3.6	3.2	3.5	3.7	2.3	2.8	2.1	2.4	1.7	2.7	1.3	3.0	2.69
30	Chumphon	2.0	2.8	4.1	3.3	2.8	1.5	1.8	2.4	3.8	3.1	2.3	0.4	2.52
31	Nonthaburi	0.0	3.2	3.7	2.4	2.2	3.3	3.1	4.0	1.0	3.6	1.3	1.8	2.47
32	Chainat	0.0	1.7	20.0	1.7	0.0	1.4	0.0	2.1	0.0	1.5	0.0	0.8	2.43
33	Samut Prakan	2.1	3.7	2.9	2.8	1.9	1.7	2.0	2.2	1.2	3.2	1.0	3.6	2.35
34	Trang	1.0	0.0	1.3	5.6	2.2	2.7	3.4	2.0	1.7	3.0	3.9	1.2	2.33
35	Narathiwat	1.3	1.9	1.8	1.3	2.3	2.0	2.0	3.9	1.9	1.9	0.9	6.7	2.33
36	Phatthalung	0.4	0.3	0.6	2.5	2.0	1.7	3.1	2.8	1.4	6.0	4.3	2.3	2.30
37	Nakhon Sri Thammarat	0.6	1.1	0.7	1.7	2.2	1.5	1.9	2.9	3.1	3.7	2.5	5.6	2.29
38	Petchaboon	2.2	3.5	3.1	2.6	2.0	2.3	2.8	1.1	2.5	1.0	2.5	1.2	2.23
39	Lopburi	0.0	3.0	0.0	1.8	2.9	2.3	8.0	1.7	1.6	1.7	2.6	1.0	2.21
40	Phichit	2.0	1.9	2.2	3.1	0.7	4.4	2.8	1.3	2.4	0.6	1.2	3.4	2.18
41	Songkhla	0.8	2.3	3.7	2.0	3.7	2.1	3.1	1.0	2.3	2.1	1.6	0.6	2.11
42	Singburi	0.0	1.4	0.0	2.4	0.0	1.5	0.0	3.1	0.0	14.8	0.0	2.0	2.11
43	Chachoengsao	0.0	2.6	8.3	2.9	2.3	1.7	0.0	1.1	2.3	2.8	0.0	0.7	2.06
44	Roi Et	2.2	1.4	2.5	2.0	2.8	1.6	2.9	2.2	1.4	1.5	1.9	1.7	2.01
45	Yala	3.7	1.5	4.4	2.2	0.0	0.6	0.8	2.1	0.8	1.9	2.4	3.5	2.00
46	Tak	0.9	5.9	3.4	3.3	1.0	1.5	1.9	0.6	2.2	0.6	1.5	1.1	1.99
47	Udon Thani	2.4	1.6	2.7	3.1	3.3	0.4	3.0	1.5	2.1	1.1	0.2	1.5	1.92
48	Khon Kaen	1.9	2.5	2.4	1.6	1.8	1.2	2.6	2.8	1.8	2.0	0.8	1.6	1.92
49	Nong Khai	1.6	1.6	1.8	2.4	2.0	0.9	1.4	2.1	1.4	0.0	7.7	0.0	1.91
50	Nakhon Sawan	1.4	2.0	1.3	4.7	2.6	1.2	2.2	0.8	1.7	0.4	1.6	2.3	1.86
51	Ayutthaya	0.0	2.4	3.6	2.6	2.8	1.2	2.4	2.5	0.0	2.2	0.0	2.0	1.81
52	Sukhothai	2.1	2.0	3.7	2.4	2.3	1.8	1.4	1.0	1.3	1.8	1.5	0.3	1.81
53	Nan	4.4	2.1	4.5	1.2	0.7	0.5	1.1	1.0	3.1	0.6	1.4	0.0	1.73
54	Prachinburi	0.0	2.6	3.6	2.9	0.0	1.2	0.0	2.2	0.0	1.3	6.2	0.0	1.67
55	Maharakham	3.0	2.4	2.5	0.8	2.5	1.7	1.0	1.7	1.5	1.2	1.1	0.0	1.62
56	Uttaradit	3.0	1.4	2.0	2.2	2.5	1.7	2.0	0.7	0.8	1.6	1.5	0.0	1.62
57	Ubon Ratchathani	2.2	1.4	2.8	3.4	2.1	0.9	1.4	1.3	1.3	0.3	1.2	0.9	1.60
58	Sakonkakhon	1.8	2.0	1.8	2.6	2.4	1.6	1.3	1.4	1.4	0.0	0.0	2.5	1.57
59	Kam Phaeng Phet	2.2	0.9	3.4	1.0	1.4	1.7	1.0	2.1	0.9	0.6	1.2	2.2	1.55
60	Surat Thani	0.5	1.3	0.5	1.2	1.1	2.0	0.0	1.4	2.2	2.8	2.2	2.6	1.49
61	Uthai Thani	1.3	0.0	2.3	2.5	3.0	0.0	1.0	4.4	3.1	0.0	0.0	0.0	1.47
62	Phitsanulok	1.0	2.5	3.1	1.6	1.8	1.8	0.6	2.0	1.3	0.6	0.3	0.6	1.45
63	Yasothon	2.1	2.2	1.8	1.6	2.1	0.6	1.6	0.0	1.7	0.7	1.6	0.9	1.40
64	Kalasin	1.5	1.2	2.6	0.8	1.0	3.6	1.6	0.4	1.4	1.6	0.9	0.0	1.38
65	Nakhon Ratchasima	1.8	2.4	2.1	2.4	1.7	1.1	0.8	1.0	0.8	0.4	1.1	0.7	1.36
66	Surin	1.0	3.0	1.9	3.0	2.3	0.0	0.8	0.2	0.7	1.0	0.7	1.6	1.35
67	Nakhonnayok	0.0	4.0	0.0	3.3	0.0	0.9	0.0	4.1	0.0	1.3	0.0	2.0	1.30
68	Chaiyaphum	2.1	2.2	0.9	0.0	1.3	1.0	1.0	1.0	0.9	2.7	1.7	0.0	1.23
69	Buriram	1.4	1.3	1.9	2.3	1.5	0.0	1.9	0.4	0.1	1.0	0.4	1.2	1.13
70	Ang Thong	0.0	0.9	0.0	2.6	0.0	2.8	0.0	2.0	0.0	1.7	0.0	2.6	1.05
71	Loei	1.4	1.0	2.3	0.0	1.9	1.7	2.6	0.6	0.8	1.7	2.6	0.6	1.44
72	Krabi	0.0	0.0	0.0	0.0	0.0	2.5	0.0	2.8	2.8	1.0	0.0	2.5	0.97
73	Nakhonpranom	0.2	2.2	0.3	1.2	2.8	1.5	0.8	0.0	0.0	1.1	0.7	0.0	0.90

Excluding Amnat Charoen, Srakaew, Nongbuo Lamphu,

Table 24 HIV Serosurveillance among military conscripts based on the province of longest residence two years prior to conscription, rounds 1-12

Round	1	2	3	4	5	6	7	8	9	10	11	12	
Mth/Yr	Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	May-98	Average
1 North Region	6	7.2	6.9	7.4	4.2	3.4	3.3	2.7	2.9	2.2	2.1	1.8	4.18
2 Central Reg. + BKK	4.4	3.5	4.4	3.8	2.9	2.9	2.4	2.5	1.7	2.5	1.3	2.1	2.87
3 North-East Region	1.8	1.9	2.2	2.2	2	1.1	1.7	1.2	1.2	1.1	1	1.2	1.55
4 South Region	3	3.6	3.5	4	2.6	2.5	2.3	2.2	1.9	2.1	1.6	1.9	2.60

 Indicate less than 20 cases were tested for HIV.

Source Armed Forces Research Institute of Medical Sciences (AFRIM). Report of AIDS Statistics tested among military conscripts, November 1991-May 1998.

Table 25 Male death rates by different age groups for the period 1984-1991

Province	0-4 yrs	Province	25-29 yrs	Province	15-49 yrs	Province	All ages
1 Mae Hong Son	6.672	1 Trat	5.625	1 Trat	5.680	1 Chanthaburi	7.687
2 Trat	5.657	2 Chanthaburi	5.522	2 Chanthaburi	5.526	2 Trat	7.416
3 Nakhomphanom	5.533	3 Phuket	5.076	3 Saraburi	4.931	3 Saraburi	6.963
4 Chanthaburi	5.489	4 Saraburi	4.780	4 Phuket	4.663	4 Singburi	6.860
5 Mukdahan	4.937	5 Surat Thani	4.304	5 Prachinburi	4.362	5 Phuket	6.808
6 Sakonnakhon	4.825	6 Prachinburi	4.024	6 Surat Thani	3.924	6 Phrae	6.797
7 Songkhla	4.676	7 Rayong	3.818	7 Tak	3.865	7 Chiang Mai	6.761
8 Tak	4.449	8 Chonburi	3.768	8 Rayong	3.840	8 Ang Thong	6.461
9 Kam Phaeng Phet	4.391	9 Samut Sakhon	3.695	9 Chonburi	3.836	9 Lampang	6.445
10 Nakhon Pathom	4.162	10 Singburi	3.577	10 Samut Sakhon	3.598	10 Prachinburi	6.407
11 Phitsanulok	4.159	11 Ratchaburi	3.391	11 Singburi	3.565	11 Nonthaburi	6.298
12 Uttaradit	4.067	12 Clumphon	3.350	12 Ratchaburi	3.556	12 Lamphun	6.187
13 Ubon Ratchathani	4.023	13 Tak	3.310	13 Chiang Mai	3.391	13 Ratchaburi	6.166
14 Lampang	3.984	14 Phetchaburi	3.212	14 Phrae	3.389	14 Uttaradit	6.112
15 Satun	3.964	15 Phachuap Khiri Khan	3.199	15 Uttaradit	3.362	15 Nakhomphanom	5.935
16 Nong Khai	3.827	16 Phangnga	3.194	16 Sakonnakhon	3.324	16 Samut Songkhram	5.871
17 Yala	3.825	17 Nonthaburi	3.032	17 Nakhomphanom	3.318	17 Phayao	5.868
18 Bangkok Metropolis	3.706	18 Ang Thong	3.031	18 Udon Thani	3.306	18 Samut Sakhon	5.835
19 Rayong	3.643	19 Samut Prakan	3.029	19 Phachuap Khiri Khan	3.289	19 Tak	5.818
20 Loei	3.618	20 Kanchanaburi	3.024	20 Nonthaburi	3.271	20 Udon Thani	5.682
21 Nakhon Sawan	3.590	21 Songkhla	2.970	21 Chumphon	3.267	21 Chonburi	5.659
22 Kalasin	3.530	22 Chiang Mai	2.903	22 Phitsanulok	3.177	22 Mae Hong Son	5.531
23 Saraburi	3.523	23 Nakhonayok	2.891	23 Mae Hong Son	3.152	23 Sakonnakhon	5.526
24 Trang	3.498	24 Chachoengsao	2.866	24 Phangnga	3.150	24 Nakhon Pathom	5.499
25 Samut Prakan	3.462	25 Phitsanulok	2.844	25 Kam Phaeng Phet	3.136	25 Nakhonayok	5.468
26 Lamphun	3.428	26 Kam Phaeng Phet	2.810	26 Nakhonayok	3.109	26 Chiang Rai	5.452
27 Pattani	3.422	27 Uttaradit	2.786	27 Kanchanaburi	3.099	27 Bangkok Metropolis	5.395
28 Phrae	3.353	28 Uthai Thani	2.779	28 Phetchaburi	3.065	28 Phetchaburi	5.341
29 Samut Sakhon	3.255	29 Phrae	2.744	29 Khon Kaen	3.049	29 Rayong	5.328
30 Chiang Mai	3.155	30 Nakhon Pathom	2.727	30 Songkhla	3.042	30 Phitsanulok	5.314
31 Prachinburi	3.140	31 Samut Songkhram	2.724	31 Ranong	3.025	31 Roi Et	5.266
32 Uthai Thani	3.041	32 Bangkok Metropolis	2.684	32 Ang Thong	3.024	32 Uthai Thani	5.227
33 Narathiwat	3.010	33 Nakhon Sri Thammarat	2.672	33 Bangkok Metropolis	3.017	33 Khon Kaen	5.214
34 Nan	2.970	34 Loei	2.607	34 Nakhon Pathom	3.015	34 Surat Thani	5.206
35 Krabi	2.917	35 Khon Kaen	2.607	35 Kalasin	3.010	35 Songkhla	5.195
36 Udon Thani	2.862	36 Chainat	2.604	36 Samut Prakan	3.004	36 Kalasin	5.184
37 Nakhon Ratvhasima	2.833	37 Suphanburi	2.558	37 Loei	2.998	37 Suphanburi	5.167
38 Chonburi	2.819	38 Trang	2.532	38 Lampang	2.986	38 Chainat	5.166
39 Ratchaburi	2.818	39 Phayao	2.518	39 Roi Et	2.941	39 Ubon Ratchathani	5.074
40 Phuket	2.803	40 Lopburi	2.509	40 Chiang Rai	2.941	40 Loei	4.975
41 Khon Kaen	2.782	41 Mae Hong Son	2.407	41 Uthai Thani	2.926	41 Yala	4.962
42 Yasothon	2.782	42 Satun	2.405	42 Phayao	2.911	42 Chumphon	4.943
43 Nonthaburi	2.780	43 Lampang	2.376	43 Samut Songkhram	2.907	43 Mukdahan	4.919
44 Nakhon Sri Thammarat	2.705	44 Nakhon Sawan	2.375	44 Suphanburi	2.852	44 Nakhon Sawan	4.918
45 Phichit	2.609	45 Ranong	2.352	45 Chachoengsao	2.837	45 Kam Phaeng Phet	4.907
46 Sukhothai	2.578	46 Chiang Rai	2.332	46 Lamphun	2.794	46 Nan	4.904
47 Phetchabun	2.515	47 Nakhomphanom	2.326	47 Nakhon Sawan	2.767	47 Chachoengsao	4.904
48 Ang Thong	2.484	48 Krabi	2.307	48 Ubon Ratchathani	2.729	48 Phangnga	4.901
49 Sisaket	2.471	49 Ayutthaya	2.287	49 Sukhothai	2.709	49 Nong Khai	4.899
50 Chainat	2.443	50 Sukhothai	2.257	50 Nong Khai	2.692	50 Ayutthaya	4.882
51 Roi Et	2.403	51 Ubon Ratchathani	2.255	51 Mukdahan	2.679	51 Samut Prakan	4.855
52 Buriram	2.396	52 Lamphun	2.229	52 Chainat	2.621	52 Satun	4.791
53 Phangnga	2.372	53 Phetchabun	2.210	53 Lopburi	2.595	53 Narathiwat	4.782
54 Ayutthaya	2.368	54 Nakhon Ratvhasima	2.207	54 Trang	2.589	54 Sukhothai	4.768
55 Suphanburi	2.336	55 Sakonnakhon	2.174	55 Phetchabun	2.537	55 Yasothon	4.756
56 Phetchaburi	2.327	56 Udon Thani	2.146	56 Nakhon Sri Thammarat	2.514	56 Phachuap Khiri Khan	4.647
57 Chachoengsao	2.317	57 Mukdahan	2.141	57 Krabi	2.514	57 Pattani	4.646
58 Surat Thani	2.291	58 Pathum Thani	2.140	58 Yasothon	2.501	58 Trang	4.551
59 Phayao	2.287	59 Kalasin	2.000	59 Satun	2.494	59 Lopburi	4.483
60 Nakhonayok	2.198	60 Phatthalung	1.989	60 Nakhon Ratvhasima	2.492	60 Pathum Thani	4.337
61 Phachuap Khiri Khan	2.167	61 Nong Khai	1.988	61 Buriram	2.400	61 Phetchabun	4.306
62 Pathum Thani	2.100	62 Roi Et	1.967	62 Nan	2.371	62 Nakhon Ratvhasima	4.279
63 Singburi	2.072	63 Yala	1.957	63 Yala	2.304	63 Mahasarakham	4.249
64 Samut Songkhram	2.043	64 Yasothon	1.954	64 Ayutthaya	2.286	64 Buriram	4.234
65 Chiang Rai	2.024	65 Buriram	1.938	65 Mahasarakham	2.280	65 Ranong	4.136
66 Lopburi	1.953	66 Surin	1.856	66 Pathum Thani	2.271	66 Kanchanaburi	4.125
67 Phatthalung	1.901	67 Nan	1.787	67 Narathiwat	2.252	67 Nakhon Sri Thammarat	4.046
68 Surin	1.718	68 Narathiwat	1.774	68 Sisaket	2.231	68 Sisaket	3.960
69 Kanchanaburi	1.619	69 Sisaket	1.697	69 Surin	2.122	69 Phatthalung	3.835
70 Chumphon	1.600	70 Pattani	1.523	70 Phatthalung	2.010	70 Phichit	3.830
71 Mahasarakham	1.583	71 Phichit	1.506	71 Pattani	1.893	71 Krabi	3.789
72 Ranong	1.453	72 Mahasarakham	1.328	72 Chaiyaphum	1.869	72 Surin	3.780
73 Chaiyaphum	1.440	73 Chaiyaphum	1.324	73 Phichit	1.810	73 Chaiyaphum	3.753
74 Sakeaw	0.000	74 Amnat Cheom	0.000	74 Sakeaw	0.000	74 Sakeaw	0.000
75 Nongbua Lamphu	0.000	75 Nongbua Lamphu	0.000	75 Nongbua Lamphu	0.000	75 Nongbua Lamphu	0.000
76 Amnat Cheom	0.000	76 Sakeaw	0.000	76 Amnat Cheom	0.000	76 Amnat Cheom	0.000

Table 25 Male death rates by different age groups for the period 1984-1991

Province	0-4 yrs	Province	25-29 yrs	Province	15-49 yrs	Province	All ages
1 Zone 08	3.641	1 Zone 03	3.877	Zone 12	2.477	1 Zone 10	6.167
2 Zone 12	3.599	2 Zone 11	3.273	Zone 11	3.110	2 Zone 03	5.746
3 Zone 06	3.417	3 Zone 04	3.145	Zone 10	3.083	3 Zone 02	5.471
4 Zone 07	3.385	4 Zone 02	3.087	Zone 09	2.776	4 Zone 04	5.325
5 Zone 03	3.350	5 Zone 01	2.724	Zone 08	2.982	5 Zone 01	5.236
6 Zone 09	3.235	6 Zone 08	2.600	Zone 07	2.658	6 Zone 06	5.211
7 Zone 10	3.105	7 Zone 10	2.542	Zone 06	3.044	7 Zone 09	5.091
8 Zone 01	2.697	8 Zone 09	2.342	Zone 05	2.287	8 Zone 08	5.022
9 Zone 04	2.668	9 Zone 12	2.290	Zone 04	3.240	9 Zone 07	4.838
10 Zone 11	2.461	10 Zone 06	2.237	Zone 03	3.926	10 Zone 12	4.754
11 Zone 02	2.428	11 Zone 07	2.008	Zone 02	3.220	11 Zone 11	4.586
12 Zone 05	2.178	12 Zone 05	1.846	Zone 01	2.782	12 Zone 05	4.099
1 North	3.301	1 Central	3.000	Central Region	3.199	1 North	5.505
2 Central	3.086	2 South	2.757	North Region	2.956	2 Central	5.428
3 South	3.062	3 North	2.494	South Region	2.778	3 Northeast	4.692
4 North-East	2.956	4 Northeast	2.027	North-Eastern Region	2.655	4 South	4.674
Whole Country	3.120	Whole Country	2.565	Whole Country	2.966	Whole Country	5.092

Table 26 Female death rates by different age groups for the period 1984-1991

Province	0-4 yrs	Province	25-29 yrs	Province	15-49 yrs	Province	All ages
1 Mae Hong Son	6.218	1 Chanthaburi	1.865	1 Chanthaburi	2.400	1 Phrae	5.719
2 Chanthaburi	4.649	2 Phuket	1.538	2 Sakonnakhon	2.251	2 Chiang Mai	5.459
3 Trat	4.143	3 Trat	1.526	3 Nakhomphanom	2.197	3 Lampang	5.353
4 Sakonnakhon	4.098	4 Prachinburi	1.468	4 Trat	2.126	4 Lamphun	5.192
5 Songkhla	3.993	5 Mukdahan	1.463	5 Prachinburi	2.038	5 Ang Thong	5.070
6 Mukdahan	3.821	6 Singburi	1.407	6 Mae Hong Son	1.984	6 Singburi	4.958
7 Nakhomphanom	3.591	7 Nakhonnayok	1.387	7 Roi Et	1.955	7 Chanthaburi	4.892
8 Kam Phaeng Phet	3.481	8 Saraburi	1.375	8 Kalasin	1.894	8 Phayao	4.860
9 Tak	3.472	9 Ubon Ratchathani	1.355	9 Udon Thani	1.892	9 Mae Hong Son	4.699
10 Ubon Ratchathani	3.416	10 Nakhomphanom	1.351	10 Tak	1.885	10 Nakhomphanom	4.682
11 Satun	3.230	11 Sakonnakhon	1.297	11 Saraburi	1.854	11 Roi Et	4.544
12 Lampang	3.203	12 Ang Thong	1.290	12 Ubon Ratchathani	1.801	12 Nan	4.518
13 Phitsanulok	3.170	13 Ranong	1.286	13 Phayao	1.786	13 Uttaradit	4.445
14 Yala	3.049	14 Songkhla	1.268	14 Phrae	1.761	14 Sakonnakhon	4.443
15 Uttaradit	3.042	15 Phachuap Khiri Khan	1.266	15 Phuket	1.747	15 Saraburi	4.418
16 Nakhon Pathom	3.025	16 Uthai Thani	1.252	16 Mukdahan	1.661	16 Trat	4.396
17 Loei	2.977	17 Tak	1.228	17 Uttaradit	1.647	17 Samut Songkhram	4.348
18 Bangkok Metropolitan	2.958	18 Uttaradit	1.219	18 Nong Khai	1.645	18 Tak	4.328
19 Nakhon Sawan	2.925	19 Mae Hong Son	1.182	19 Yasothon	1.633	19 Ubon Ratchathani	4.313
20 Rayong	2.875	20 Rayong	1.174	20 Chiang Rai	1.616	20 Chiang Rai	4.288
21 Nong Khai	2.862	21 Loei	1.174	21 Singburi	1.610	21 Udon Thani	4.251
22 Phrae	2.851	22 Nong Khai	1.170	22 Lampang	1.607	22 Ratchaburi	4.206
23 Kalasin	2.781	23 Pattani	1.156	23 Kam Phaeng Phet	1.591	23 Chainat	4.203
24 Saraburi	2.712	24 Satun	1.154	24 Uthai Thani	1.587	24 Kalasin	4.183
25 Uthai Thani	2.674	25 Kam Phaeng Phet	1.151	25 Chiang Mai	1.583	25 Phuket	4.165
26 Pattani	2.656	26 Yasothon	1.146	26 Phitsanulok	1.551	26 Prachinburi	4.143
27 Trang	2.612	27 Roi Et	1.143	27 Nakhonnayok	1.551	27 Uthai Thani	4.108
28 Nonthaburi	2.592	28 Kalasin	1.130	28 Songkhla	1.548	28 Nonthaburi	4.096
29 Nan	2.558	29 Chumphon	1.124	29 Loei	1.523	29 Yasothon	4.083
30 Krabi	2.537	30 Surat Thani	1.084	30 Khon Kaen	1.523	30 Nakhonnayok	4.079
31 Chiang Mai	2.537	31 Phayao	1.058	31 Lamphun	1.507	31 Mukdahan	3.988
32 Samut Prakan	2.534	32 Phangnga	1.058	32 Srisaket	1.471	32 Phetchaburi	3.941
33 Phuket	2.473	33 Phrae	1.042	33 Rayong	1.464	33 Nakhon Pathom	3.882
34 Prachinburi	2.425	34 Kanchanaburi	1.041	34 Ratchaburi	1.443	34 Suphanburi	3.845
35 Udon Thani	2.411	35 Nakhon Sawan	1.024	35 Nan	1.437	35 Songkhla	3.770
36 Samut Sakhon	2.387	36 Lampang	1.023	36 Nakhon Sawan	1.430	36 Phitsanulok	3.697
37 Nakhon Sri Thammarat	2.313	37 Phitsanulok	1.019	37 Buriram	1.428	37 Khon Kaen	3.696
38 Khon Kaen	2.263	38 Srisaket	1.013	38 Phachuap Khiri Khan	1.423	38 Nong Khai	3.695
39 Chonburi	2.260	39 Phetchabun	1.005	39 Chonburi	1.405	39 Ayutthaya	3.689
40 Narathiwat	2.230	40 Khon Kaen	0.993	40 Ang Thong	1.401	40 Bangkok Metropolitan	3.657
41 Lamphun	2.108	41 Chiang Rai	0.991	41 Mahasarakham	1.384	41 Nakhon Sawan	3.649
42 Ratchaburi	2.052	42 Phetchaburi	0.985	42 Satun	1.382	42 Mahasarakham	3.645
43 Chainat	2.035	43 Trang	0.983	43 Surat Thani	1.362	43 Chonburi	3.614
44 Nakhon Ratvhasima	2.030	44 Chonburi	0.978	44 Phetchabun	1.334	44 Loei	3.600
45 Yasothon	1.954	45 Phatthalung	0.973	45 Kanchanaburi	1.312	45 Samut Sakhon	3.570
46 Phayao	1.952	46 Chainat	0.971	46 Chainat	1.290	46 Sukhothai	3.553
47 Sukhothai	1.927	47 Buriram	0.966	47 Chumphon	1.283	47 Kam Phaeng Phet	3.420
48 Phangnga	1.921	48 Nonthaburi	0.962	48 Suphanburi	1.270	48 Satun	3.404
49 Surat Thani	1.882	49 Udon Thani	0.952	49 Narathiwat	1.262	49 Chachoengsao	3.369
50 Phetchabun	1.879	50 Sukhothai	0.931	50 Sukhothai	1.258	50 Pattani	3.338
51 Phichit	1.878	51 Nan	0.922	51 Nakhon Ratvhasima	1.254	51 Narathiwat	3.302
52 Buriram	1.868	52 Yala	0.913	52 Nonthaburi	1.238	52 Rayong	3.241
53 Srisaket	1.830	53 Nakhon Sri Thammarat	0.912	53 Phetchaburi	1.233	53 Chumphon	3.221
54 Ayutthaya	1.776	54 Ratchaburi	0.907	54 Samut Songkhram	1.212	54 Lopburi	3.203
55 Phetchaburi	1.770	55 Chachoengsao	0.904	55 Yala	1.210	55 Yala	3.200
56 Roi Et	1.750	56 Samut Songkhram	0.903	56 Surin	1.209	56 Srisaket	3.156
57 Ang Thong	1.727	57 Narathiwat	0.902	57 Lopburi	1.204	57 Pathum Thani	3.146
58 Nakhonnayok	1.677	58 Nakhon Ratvhasima	0.902	58 Nakhon Pathom	1.194	58 Surat Thani	3.142
59 Lopburi	1.632	59 Lamphun	0.896	59 Phangnga	1.186	59 Buriram	3.104
60 Suphanburi	1.630	60 Lopburi	0.891	60 Bangkok Metropolitan	1.166	60 Nakhon Ratvhasima	3.100
61 Singburi	1.593	61 Suphanburi	0.853	61 Pattani	1.120	61 Phangnga	3.078
62 Phachuap Khiri Khan	1.584	62 Sukhothai	0.848	62 Krabi	1.108	62 Phichit	3.022
63 Chachoengsao	1.557	63 Surin	0.831	63 Chachoengsao	1.082	63 Trang	3.016
64 Pathum Thani	1.543	64 Nakhon Pathom	0.830	64 Ranong	1.079	64 Phetchabun	3.015
65 Chumphon	1.531	65 Bangkok Metropolitan	0.802	65 Trang	1.061	65 Phachuap Khiri Khan	2.901
66 Chiang Rai	1.489	66 Krabi	0.769	66 Nakhon Sri Thammarat	1.043	66 Surin	2.901
67 Samut Songkhram	1.430	67 Phichit	0.758	67 Samut Sakhon	1.040	67 Samut Prakan	2.894
68 Surin	1.420	68 Mahasarakham	0.726	68 Chaiyaphum	1.005	68 Chaiyaphum	2.785
69 Ranong	1.392	69 Ayutthaya	0.695	69 Phichit	1.003	69 Nakhon Sri Thammarat	2.715
70 Phatthalung	1.303	70 Pathum Thani	0.680	70 Phatthalung	0.917	70 Phatthalung	2.613
71 Chaiyaphum	1.149	71 Samut Sakhon	0.644	71 Ayutthaya	0.884	71 Kanchanaburi	2.569
72 Kanchanaburi	1.087	72 Samut Prakan	0.568	72 Pathum Thani	0.870	72 Krabi	2.515
73 Mahasarakham	1.070	73 Chaiyaphum	0.554	73 Samut Prakan	0.813	73 Ranong	2.457
74 Sakeaw	0.000	74 Sakeaw	0.000	74 Sakeaw	0.000	74 Sakeaw	0.000
75 Nongbua Lamphu	0.000	75 Nongbua Lamphu	0.000	75 Nongbua Lamphu	0.000	75 Nongbua Lamphu	0.000
76 Amnat Choeorn	0.000	76 Amnat Choeorn	0.000	76 Amnat Choeorn	0.000	76 Amnat Choeorn	0.000

Table 26 Female death rates by different age groups for the period 1984-1991

Province	0-4 yrs	Province	25-29 yrs	Province	15-49 yrs	Province	All ages
1 Zone 08	2.914	1 Zone 7	1.197	1 Zone 06	1.758	1 Zone 10	5.020
2 Zone 12	2.839	2 Zone 03	1.177	2 Zone 07	1.744	2 Zone 07	4.026
3 Zone 06	2.775	3 Zone 12	1.084	3 Zone 10	1.625	3 Zone 02	3.948
4 Zone 03	2.618	4 Zone 06	1.070	4 Zone 03	1.568	4 Zone 06	3.930
5 Zone 07	2.534	5 Zone 08	1.059	5 Zone 08	1.496	5 Zone 09	3.892
6 Zone 09	2.510	6 Zone 02	1.045	6 Zone 09	1.441	6 Zone 08	3.702
7 Zone 10	2.426	7 Zone 11	1.023	7 Zone 02	1.410	7 Zone 03	3.681
8 Zone 11	2.106	8 Zone 09	0.992	8 Zone 04	1.286	8 Zone 04	3.626
9 Zone 01	2.078	9 Zone 10	0.980	9 Zone 05	1.261	9 Zone 01	3.611
10 Zone 04	1.911	10 Zone 04	0.930	10 Zone 12	1.261	10 Zone 12	3.314
11 Zone 02	1.866	11 Zone 05	0.828	11 Zone 11	1.198	11 Zone 05	3.091
12 Zone 05	1.637	12 Zone 01	0.750	12 Zone 01	0.980	12 Zone 11	2.939
Region							
1 North	2.592	1 South	1.056	North-Eastern	1.572	1 North	4.280
2 South	2.502	2 North-East	1.015	North	1.529	2 Central	3.694
3 Central	2.385	3 North	1.004	Central	1.256	3 North-East	3.647
4 North-East	2.278	4 Central	0.902	South	1.231	4 South	3.137
Whole Country	2.393	Whole Country	1.119	Whole Country	1.415	Whole Country	3.719

Table 27 Male death rates by different age groups for the period 1992-1997

Province		0-4 yrs	Province		25-29 yrs	Province		15-49 yrs	All ages		
1	Phitsanulok	4.804	1	Phayao	12.903	1	Saraburi	10.311	1	Saraburi	10.877
2	Chanthaburi	4.278	2	Chiang Rai	12.626	2	Chiang Rai	8.974	2	Phayao	10.634
3	Mae Hong Son	3.969	3	Chiang Mai	9.657	3	Phayao	8.809	3	Chiang Rai	10.423
4	Samut Prakan	3.893	4	Saraburi	9.557	4	Chiang Mai	8.503	4	Chiang Mai	10.362
5	Saraburi	3.805	5	Lamphun	8.272	5	Chanthaburi	7.177	5	Phrae	9.469
6	Trat	3.725	6	Chanthaburi	7.831	6	Lamphun	6.770	6	Chanthaburi	9.063
7	Bangkok Metropolitan	3.598	7	Phetchaburi	7.681	7	Chonburi	6.315	7	Lampang	9.023
8	Phayao	3.516	8	Lampang	7.329	8	Trat	6.270	8	Lamphun	9.018
9	Nakhon Pathom	3.406	9	Phrae	6.670	9	Samut Sakhon	6.081	9	Ang Thong	8.538
10	Lampang	3.328	10	Rayong	6.639	10	Prachinburi	6.043	10	Chonburi	8.439
11	Krabi	3.326	11	Prachinburi	6.605	11	Lampang	6.032	11	Nonthaburi	8.177
12	Chonburi	3.203	12	Nonthaburi	6.271	12	Nonthaburi	6.025	12	Prachinburi	8.059
13	Uttaradit	3.198	13	Trat	6.185	13	Phrae	5.916	13	Trat	8.057
14	Samut Sakhon	3.158	14	Chonburi	6.055	14	Phetchaburi	5.879	14	Ratchaburi	8.019
15	Kam Phaeng Phet	3.058	15	Ratchaburi	5.897	15	Rayong	5.759	15	Samut Sakhon	7.985
16	Chiang Rai	2.995	16	Phachuap Khiri Khan	5.848	16	Ratchaburi	5.577	16	Krabi	7.951
17	Loei	2.970	17	Samut Sakhon	5.730	17	Phuket	5.481	17	Phetchaburi	7.736
18	Nakhomphanom	2.920	18	Krabi	5.639	18	Krabi	5.393	18	Phuket	7.726
19	Rayong	2.870	19	Ranong	5.333	19	Ang Thong	5.164	19	Nakhomphanom	7.712
20	Nakhon Sawan	2.856	20	Nakhonnayok	5.315	20	Pathum Thani	5.135	20	Uttaradit	7.287
21	Phetchaburi	2.814	21	Phuket	5.225	21	Singburi	5.109	21	Nakhon Pathom	7.208
22	Phuket	2.727	22	Nakhon Pathom	4.918	22	Nakhon Pathom	5.069	22	Nakhonnayok	7.109
23	Yala	2.673	23	Kanchanaburi	4.893	23	Phachuap Khiri Khan	5.025	23	Phitsanulok	7.056
24	Mukdahan	2.609	24	Pathum Thani	4.722	24	Ranong	4.960	24	Pathum Thani	7.013
25	Chiang Mai	2.605	25	Samut Prakan	4.717	25	Samut Prakan	4.911	25	Uthai Thani	6.841
26	Nan	2.562	26	Chumphon	4.643	26	Nakhonnayok	4.810	26	Suphanburi	6.807
27	Samut Songkhram	2.549	27	Khon Kaen	4.582	27	Nakhomphanom	4.792	27	Samut Songkhram	6.742
28	Songkhla	2.544	28	Kam Phaeng Phet	4.577	28	Chumphon	4.696	28	Ayutthaya	6.730
29	Yasothon	2.513	29	Ayutthaya	4.574	29	Kanchanaburi	4.608	29	Chainat	6.666
30	Ubon Ratchathani	2.500	30	Uthai Thani	4.444	30	Phitsanulok	4.566	30	Singburi	6.644
31	Nonthaburi	2.437	31	Singburi	4.440	31	Ayutthaya	4.517	31	Rayong	6.479
32	Ang Thong	2.414	32	Ang Thong	4.392	32	Suphanburi	4.350	32	Kam Phaeng Phet	6.463
33	Khon Kaen	2.368	33	Samut Songkhram	4.357	33	Khon Kaen	4.329	33	Samut Prakan	6.462
34	Pattani	2.342	34	Nan	4.346	34	Ubon Ratchathani	4.279	34	Phachuap Khiri Khan	6.346
35	Ayutthaya	2.279	35	Ubon Ratchathani	4.321	35	Tak	4.261	35	Nakhon Sawan	6.322
36	Tak	2.251	36	Uttaradit	4.307	36	Uttaradit	4.232	36	Khon Kaen	6.302
37	Nakhon Ratvhasima	2.241	37	Tak	4.249	37	Kam Phaeng Phet	4.201	37	Roi Et	6.264
38	Ratchaburi	2.178	38	Roi Et	4.162	38	Uthai Thani	4.097	38	Ubon Ratchathani	6.252
39	Trang	2.173	39	Phitsanulok	4.099	39	Nakhon Sawan	4.077	39	Nan	6.186
40	Lamphun	2.157	40	Suphanburi	4.065	40	Mae Hong Son	3.973	40	Kalasin	6.168
41	Nakhonnayok	2.151	41	Mae Hong Son	4.042	41	Samut Songkhram	3.948	41	Chumphon	6.151
42	Uthai Thani	2.124	42	Songkhla	3.996	42	Roi Et	3.936	42	Bangkok Metropolitan	5.986
43	Sakonnakhon	2.087	43	Nakhon Sawan	3.964	43	Bangkok Metropolitan	3.926	43	Kanchanaburi	5.945
44	Pathum Thani	2.084	44	Lopburi	3.953	44	Kalasin	3.811	44	Sakonnakhon	5.892
45	Phachuap Khiri Khan	2.016	45	Nakhomphanom	3.829	45	Chainat	3.802	45	Mae Hong Son	5.819
46	Suphanburi	1.978	46	Kalasin	3.716	46	Lopburi	3.793	46	Tak	5.795
47	Narathiwat	1.942	47	Bangkok Metropolitan	3.689	47	Sakonnakhon	3.789	47	Ranong	5.793
48	Satun	1.917	48	Chainat	3.684	48	Trang	3.724	48	Lopburi	5.649
49	Phrae	1.880	49	Surat Thani	3.676	49	Songkhla	3.713	49	Songkhla	5.646
50	Phichit	1.863	50	Phetchabun	3.588	50	Nakhon Ratvhasima	3.669	50	Yasothon	5.513
51	Kalasin	1.810	51	Sakonnakhon	3.583	51	Phetchabun	3.610	51	Trang	5.509
52	Kanchanaburi	1.803	52	Nakhon Ratvhasima	3.522	52	Nan	3.603	52	Udon Thani	5.504
53	Roi Et	1.767	53	Yasothon	3.521	53	Nong Khai	3.379	53	Mukdahan	5.470
54	Singburi	1.694	54	Trang	3.442	54	Mukdahan	3.371	54	Loei	5.457
55	Chainat	1.693	55	Satun	3.429	55	Udon Thani	3.364	55	Phetchabun	5.446
56	Srisaket	1.654	56	Buriram	3.370	56	Loei	3.362	56	Nakhon Ratvhasima	5.404
57	Phetchabun	1.645	57	Maharakham	3.283	57	Surat Thani	3.310	57	Maharakham	5.367
58	Chumphon	1.638	58	Nong Khai	3.219	58	Yasothon	3.300	58	Sukhothai	5.318
59	Udon Thani	1.629	59	Sukhothai	3.192	59	Maharakham	3.246	59	Nong Khai	5.256
60	Nong Khai	1.616	60	Loei	3.176	60	Buriram	3.210	60	Chachoengsao	5.052
61	Buriram	1.607	61	Udon Thani	3.129	61	Sukhothai	3.191	61	Srisaket	5.005
62	Prachinburi	1.564	62	Amnat Cheorn	3.106	62	Satun	3.159	62	Satun	4.940
63	Lopburi	1.501	63	Surin	3.098	63	Surin	3.155	63	Pattani	4.834
64	Sukhothai	1.429	64	Chachoengsao	3.011	64	Srisaket	3.125	64	Buriram	4.806
65	Chachoengsao	1.426	65	Srisaket	2.992	65	Chachoengsao	3.062	65	Surin	4.627
66	Maharakham	1.374	66	Nakhon Sri Thammarat	2.983	66	Amnat Cheorn	2.883	66	Surat Thani	4.618
67	Nakhon Sri Thammarat	1.374	67	Mukdahan	2.836	67	Sakeaw	2.871	67	Narathiwat	4.610
68	Sakeaw	1.360	68	Sakeaw	2.835	68	Nakhon Sri Thamma	2.660	68	Phichit	4.520
69	Phangnga	1.359	69	Phichit	2.785	69	Phichit	2.551	69	Amnat Cheorn	4.414
70	Surin	1.260	70	Phatthalung	2.483	70	Chaiyaphum	2.443	70	Chaiyaphum	4.326
71	Surat Thani	1.244	71	Chaiyaphum	2.449	71	Phangnga	2.428	71	Yala	4.247
72	Phatthalung	1.159	72	Phangnga	2.378	72	Phatthalung	2.378	72	Phatthalung	4.122
73	Amnat Cheorn	1.111	73	Nongbua Lamphu	2.194	73	Narathiwat	2.162	73	Nakhon Sri Thammarat	4.009
74	Ranong	1.008	74	Narathiwat	1.888	74	Nongbua Lamphu	2.035	74	Phangnga	3.961
75	Chaiyaphum	0.964	75	Pattani	1.846	75	Pattani	2.020	75	Sakeaw	3.755
76	Nongbua Lamphu	0.840	76	Yala	1.719	76	Yala	1.941	76	Nongbua Lamphu	3.267

Table 27 Male death rates by different age groups for the period 1992-1997

Province		0-4 yrs	Province		25-29 yrs	Province		15-49 yrs	All ages		
Public Health Office			Public Health Office			Public Health Office			Public Health Office		
1	Zone 10	2.971	1	Zone 10	10.046	1	Zone 10	7.901	1	Zone 12	5.003
2	Zone 01	2.753	2	Zone 03	5.636	2	Zone 03	5.414	2	Zone 11	4.978
3	Zone 09	2.690	3	Zone 04	5.592	3	Zone 02	5.348	3	Zone 10	9.869
4	Zone 03	2.539	4	Zone 02	5.201	4	Zone 04	5.231	4	Zone 09	6.528
5	Zone 04	2.532	5	Zone 01	5.017	5	Zone 01	5.144	5	Zone 08	6.150
6	Zone 08	2.485	6	Zone 09	4.222	6	Zone 09	4.074	6	Zone 07	5.924
7	Zone 12	2.178	7	Zone 08	4.033	7	Zone 08	3.957	7	Zone 06	5.658
8	Zone 02	2.143	8	Zone 11	3.774	8	Zone 07	3.806	8	Zone 05	4.983
9	Zone 07	2.143	9	Zone 07	3.722	9	Zone 06	3.636	9	Zone 04	7.153
10	Zone 06	1.950	10	Zone 06	3.574	10	Zone 11	3.514	10	Zone 03	7.066
11	Zone 05	1.638	11	Zone 05	3.228	11	Zone 05	3.251	11	Zone 02	7.611
12	Zone 11	1.600	12	Zone 12	2.879	12	Zone 12	2.890	12	Zone 01	7.173
Region			Region			Region			Region		
1	South Region	1.909	1	North	6.713	1	North Region	5.620	1	North	7.776
2	North-Eastern Region	1.896	2	Central	4.752	2	Central Region	4.793	2	Central	6.815
3	North Region	2.736	3	Northeast	3.494	3	North-Eastern Regio	3.549	3	Northeast	5.496
4	Central Region	2.828	4	South	3.300	4	South Region	3.185	4	South	4.991
Whole Country		2.344	Whole Country		4.525	Whole Country		4.336	Whole Country		6.300

Table 28 Female death rates by different age groups for the period 1992-1997

Province	0-4 yrs	Province	25-29 yrs	Province	15-49 yrs	All ages	
1 Mae Hong Son	3.867	1 Phayao	4.000	1 Saraburi	2.809	1 Phayao	7.046
2 Phitsanulok	3.458	2 Chiang Rai	3.993	2 Phayao	2.801	2 Phrae	6.787
3 Phayao	3.346	3 Saraburi	2.630	3 Chiang Rai	2.735	3 Chiang Rai	6.420
4 Chanthaburi	3.337	4 Chiang Mai	2.197	4 Chanthaburi	1.974	4 Ang Thong	6.330
5 Bangkok Metropolitan	2.951	5 Nakhonnayok	2.099	5 Nakhomphanom	1.928	5 Lampang	6.305
6 Lampang	2.770	6 Lampang	1.823	6 Chiang Mai	1.895	6 Chiang Mai	6.076
7 Chiang Rai	2.714	7 Phetchaburi	1.742	7 Phrae	1.769	7 Saraburi	5.955
8 Trat	2.671	8 Mae Hong Son	1.699	8 Trat	1.678	8 Lamphun	5.691
9 Uttaradit	2.618	9 Krabi	1.667	9 Lampang	1.644	9 Nakhomphanom	5.671
10 Chonburi	2.589	10 Lamphun	1.665	10 Lamphun	1.608	10 Uttaradit	5.463
11 Rayong	2.537	11 Chanthaburi	1.618	11 Chonburi	1.575	11 Krabi	5.306
12 Samut Prakan	2.480	12 Chonburi	1.529	12 Ang Thong	1.543	12 Chanthaburi	5.190
13 Nakhon Pathom	2.458	13 Nan	1.526	13 Krabi	1.522	13 Nan	5.180
14 Krabi	2.406	14 Ratchaburi	1.478	14 Mae Hong Son	1.509	14 Ratchaburi	5.065
15 Nakhon Sawan	2.389	15 Phrae	1.456	15 Prachinburi	1.501	15 Prachinburi	5.032
16 Saraburi	2.373	16 Singburi	1.449	16 Sakonnakhon	1.481	16 Uthai Thani	4.989
17 Kam Phaeng Phet	2.293	17 Prachinburi	1.442	17 Singburi	1.462	17 Chonburi	4.972
18 Nan	2.192	18 Ranong	1.429	18 Phitsanulok	1.443	18 Chainat	4.958
19 Chiang Mai	2.133	19 Kam Phaeng Phet	1.415	19 Ratchaburi	1.441	19 Singburi	4.860
20 Khon Kaen	2.104	20 Trat	1.409	20 Ubon Ratchathani	1.440	20 Roi Et	4.851
21 Songkhla	2.088	21 Phitsanulok	1.390	21 Nakhonnayok	1.422	21 Samut Songkhram	4.829
22 Phetchaburi	2.065	22 Ang Thong	1.358	22 Uttaradit	1.418	22 Phetchaburi	4.819
23 Ubon Ratchathani	2.028	23 Uthai Thani	1.304	23 Roi Et	1.413	23 Nakhonnayok	4.731
24 Phrae	2.020	24 Rayong	1.294	24 Phetchaburi	1.409	24 Phitsanulok	4.664
25 Mukdahan	1.993	25 Tak	1.287	25 Suphanburi	1.401	25 Suphanburi	4.638
26 Nonthaburi	1.981	26 Phachuap Khiri Khan	1.263	26 Uthai Thani	1.364	26 Ayutthaya	4.597
27 Nakhomphanom	1.971	27 Phuket	1.256	27 Kam Phaeng Phet	1.361	27 Nakhon Pathom	4.561
28 Ratchaburi	1.955	28 Ubon Ratchathani	1.234	28 Kalasin	1.359	28 Trat	4.538
29 Tak	1.911	29 Uttaradit	1.228	29 Ranong	1.354	29 Phuket	4.532
30 Uthai Thani	1.905	30 Nakhomphanom	1.217	30 Phachuap Khiri Kha	1.337	30 Nakhon Sawan	4.510
31 Yala	1.901	31 Kalasin	1.208	31 Khon Kaen	1.318	31 Nonthaburi	4.425
32 Phuket	1.895	32 Mukdahan	1.186	32 Nakhon Sawan	1.312	32 Kalasin	4.387
33 Ang Thong	1.881	33 Chumphon	1.176	33 Yasothon	1.299	33 Kam Phaeng Phet	4.367
34 Loei	1.874	34 Kanchanaburi	1.172	34 Udon Thani	1.274	34 Ubon Ratchathani	4.344
35 Samut Songkhram	1.822	35 Nakhon Sawan	1.165	35 Nonthaburi	1.272	35 Samut Sakhon	4.319
36 Lamphun	1.807	36 Khon Kaen	1.159	36 Samut Sakhon	1.262	36 Sakonnakhon	4.317
37 Satun	1.793	37 Yasothon	1.157	37 Nakhon Pathom	1.260	37 Yasothon	4.302
38 Trang	1.789	38 Nakhon Pathom	1.136	38 Nan	1.258	38 Khon Kaen	4.290
39 Sakonnakhon	1.759	39 Roi Et	1.132	39 Nong Khai	1.256	39 Mae Hong Son	4.251
40 Nakhon Ratvhasima	1.739	40 Loei	1.115	40 Rayong	1.254	40 Pathum Thani	4.152
41 Phachuap Khiri Khan	1.578	41 Ayutthaya	1.112	41 Phuket	1.239	41 Mukdahan	4.076
42 Pattani	1.572	42 Udon Thani	1.098	42 Mukdahan	1.228	42 Mahasarakham	4.075
43 Samut Sakhon	1.566	43 Chainat	1.094	43 Tak	1.221	43 Tak	4.052
44 Pathum Thani	1.484	44 Samut Sakhon	1.078	44 Kanchanaburi	1.215	44 Udon Thani	3.944
45 Narathiwat	1.481	45 Nonthaburi	1.058	45 Srisaket	1.164	45 Sukhothai	3.907
46 Suphanburi	1.479	46 Pathum Thani	1.046	46 Chumphon	1.158	46 Phachuap Khiri K	3.763
47 Prachinburi	1.459	47 Buriram	1.034	47 Nakhon Ratvhasima	1.156	47 Lopburi	3.737
48 Yasothon	1.453	48 Phetchabun	1.031	48 Mahasarakham	1.143	48 Nong Khai	3.709
49 Phichit	1.450	49 Songkhla	1.025	49 Buriram	1.139	49 Loei	3.658
50 Ayutthaya	1.439	50 Samut Songkhram	1.019	50 Samut Songkhram	1.134	50 Chumphon	3.640
51 Ranong	1.424	51 Nakhon Ratvhasima	1.009	51 Pathum Thani	1.128	51 Songkhla	3.573
52 Nong Khai	1.389	52 Nong Khai	1.008	52 Chainat	1.087	52 Nakhon Ratvhasi	3.569
53 Udon Thani	1.382	53 Lopburi	0.999	53 Lopburi	1.081	53 Phetchabun	3.558
54 Kalasin	1.371	54 Sakonnakhon	0.998	54 Surin	1.065	54 Pattani	3.555
55 Roi Et	1.370	55 Trang	0.997	55 Ayutthaya	1.064	55 Srisaket	3.549
56 Kanchanaburi	1.296	56 Amnat Cheorn	0.977	56 Phetchabun	1.064	56 Bangkok Metropol	3.539
57 Chainat	1.243	57 Mahasarakham	0.941	57 Amnat Cheorn	1.049	57 Chachoengsao	3.518
58 Singburi	1.238	58 Srisaket	0.913	58 Trang	1.046	58 Samut Prakan	3.463
59 Phetchabun	1.176	59 Phatthalung	0.896	59 Loei	1.030	59 Kanchanaburi	3.429
60 Nakhonnayok	1.144	60 Sakeaw	0.886	60 Satun	0.997	60 Buriram	3.379
61 Buriram	1.136	61 Samut Prakan	0.886	61 Samut Prakan	0.996	61 Trang	3.371
62 Srisaket	1.130	62 Sukhothai	0.882	62 Songkhla	0.993	62 Rayong	3.326
63 Chachoengsao	1.128	63 Satun	0.871	63 Sukhothai	0.967	63 Surin	3.316
64 Sukhothai	1.117	64 Suphanburi	0.844	64 Sakeaw	0.903	64 Ranong	3.264
65 Sakeaw	1.087	65 Phichit	0.841	65 Bangkok Metropolitan	0.885	65 Phichit	3.261
66 Surat Thani	1.081	66 Nakhon Sri Thammar	0.827	66 Pattani	0.876	66 Satun	3.168
67 Nakhon Sri Thammar	1.077	67 Surat Thani	0.822	67 Chaiyaphum	0.835	67 Chaiyaphum	3.147
68 Surin	1.075	68 Pattani	0.820	68 Narathiwat	0.814	68 Narathiwat	3.107
69 Chumphon	1.013	69 Surin	0.816	69 Phichit	0.809	69 Amnat Cheorn	2.947
70 Lopburi	0.960	70 Phangnga	0.720	70 Surat Thani	0.805	70 Yala	2.770
71 Amnat Cheorn	0.863	71 Narathiwat	0.693	71 Chachoengsao	0.756	71 Phatthalung	2.709
72 Mahasarakham	0.846	72 Nongbua Lamphu	0.692	72 Nongbua Lamphu	0.755	72 Surat Thani	2.703

Table 28 Female death rates by different age groups for the period 1992-1997

Province	0-4 yrs	Province	25-29 yrs	Province	15-49 yrs	All ages	
73 Phatthalung	0.802	73 Yala	0.680	73 Nakhon Sri Thamm:	0.708	73 Nakhon Sri Tharr	2.595
74 Nongbua Lamphu	0.671	74 Bangkok Metropolis	0.677	74 Yala	0.696	74 Phangnga	2.546
75 Phangnga	0.662	75 Chaiyaphum	0.665	75 Phatthalung	0.672	75 Sakeaw	2.352
76 Chaiyaphum	0.637	76 Chachoengsao	0.568	76 Phangnga	0.670	76 Nongbua Lamphu	2.221
Public Health Office		Public Health Office		Public Health Office		Public Health Office	
1 Zone 10	2.583	1 Zone 10	2.704	1 Zone 10	2.122	1 Zone 10	6.204
2 Zone 09	2.118	2 Zone 02	1.364	2 Zone 02	1.473	2 Zone 02	4.936
3 Zone 03	2.068	3 Zone 03	1.277	3 Zone 07	1.373	3 Zone 09	4.619
4 Zone 08	2.015	4 Zone 04	1.273	4 Zone 03	1.370	4 Zone 04	4.391
5 Zone 01	1.897	5 Zone 09	1.226	5 Zone 04	1.309	5 Zone 08	4.357
6 Zone 04	1.844	6 Zone 08	1.191	6 Zone 09	1.272	6 Zone 07	4.313
7 Zone 12	1.682	7 Zone 07	1.115	7 Zone 06	1.269	7 Zone 01	4.313
8 Zone 06	1.600	8 Zone 06	1.079	8 Zone 08	1.250	8 Zone 03	4.210
9 Zone 07	1.559	9 Zone 01	1.020	9 Zone 01	1.136	9 Zone 06	3.975
10 Zone 02	1.507	10 Zone 11	0.983	10 Zone 05	1.087	10 Zone 05	3.490
11 Zone 05	1.227	11 Zone 05	0.922	11 Zone 11	0.902	11 Zone 12	3.272
12 Zone 11	1.219	12 Zone 12	0.886	12 Zone 12	0.893	12 Zone 11	3.083
Region		Region		Region		Region	
1 North	2.261	1 North	1.834	1 North	1.604	1 North	5.167
2 Central	2.174	2 North-East	1.032	2 North-East	1.235	2 Central	4.134
3 South	1.470	3 Central	1.009	3 Central	1.154	3 North-East	3.902
4 North-East	1.453	4 South	0.931	4 South	0.898	4 South	3.183
Whole Country	1.797	Whole Country	1.150	Whole Country	1.222	Whole Country	4.121

Table 29 Percent of differences in male death rates in 1992-1996 relative to baseline death rates (1984-1991)

Province	0-4 yrs	Province	25-29 yrs	Province	15-49 yrs	Province	All ages
1 Phayao	53.7	1 Chiang Rai	441.4	1 Chiang Rai	205.2	1 Krabi	109.9
2 Chiang Rai	48.0	2 Phayao	412.4	2 Phayao	202.6	2 Chiang Rai	91.2
3 Samut Songkhram	24.8	3 Lamphun	271.1	3 Chiang Mai	150.7	3 Phayao	81.2
4 Phetchaburi	20.9	4 Chiang Mai	232.6	4 Lamphun	142.3	4 Pathum Thani	61.7
5 Phitsanulok	15.5	5 Lampang	208.5	5 Pathum Thani	126.1	5 Saraburi	56.2
6 Krabi	14.0	6 Mahasarakham	147.2	6 Krabi	114.5	6 Chiang Mai	53.3
7 Chonburi	13.6	7 Krabi	144.4	7 Saraburi	109.1	7 Chonburi	49.1
8 Samut Prakan	12.4	8 Nan	143.3	8 Lampang	102.0	8 Lamphun	45.8
9 Kanchanaburi	11.3	9 Phrae	143.1	9 Ayutthaya	97.6	9 Phetchaburi	44.8
10 Saraburi	8.0	10 Phetchaburi	139.1	10 Phetchaburi	91.8	10 Kanchanaburi	44.1
11 Chumphon	2.3	11 Ranong	126.7	11 Nonthaburi	84.2	11 Ranong	40.0
12 Pathum Thani	-0.7	12 Pathum Thani	120.7	12 Phrae	74.6	12 Lampang	40.0
13 Nakhonnayok	-2.1	13 Roi Et	111.5	13 Ang Thong	70.8	13 Phrae	39.3
14 Phuket	-2.7	14 Nonthaburi	106.8	14 Samut Sakhon	69.0	14 Ayutthaya	37.8
15 Ang Thong	-2.8	15 Ayutthaya	100.0	15 Nakhon Pathom	68.1	15 Samut Sakhon	36.8
16 Bangkok Metropolitan	-2.9	16 Saraburi	100.0	16 Chonburi	64.6	16 Phachuap Khiri Khan	36.6
17 Samut Sakhon	-3.0	17 Ubon Ratchathani	91.6	17 Ranong	63.9	17 Samut Prakan	33.1
18 Ayutthaya	-3.8	18 Kalasin	85.8	18 Samut Prakan	63.5	18 Phitsanulok	32.8
19 Phachuap Khiri Khan	-7.0	19 Chaiyaphum	85.0	19 Ratchaburi	56.8	19 Ang Thong	32.2
20 Yasothon	-9.7	20 Phichit	84.9	20 Ubon Ratchathani	56.8	20 Suphanburi	31.7
21 Nonthaburi	-12.4	21 Nakhonnayok	83.8	21 Nakhonnayok	54.7	21 Kam Phaeng Phet	31.7
22 Mahasarakham	-13.2	22 Phachuap Khiri Khan	82.8	22 Phachuap Khiri Khan	52.8	22 Nakhon Pathom	31.1
23 Nan	-13.8	23 Nakhon Pathom	80.3	23 Suphanburi	52.5	23 Uthai Thani	30.9
24 Khon Kaen	-14.9	24 Yasothon	80.1	24 Nan	52.0	24 Ratchaburi	30.1
25 Suphanburi	-15.4	25 Srisaket	76.3	25 Rayong	50.0	25 Nakhonnayok	30.0
26 Lampang	-16.5	26 Khon Kaen	75.8	26 Kanchanaburi	48.7	26 Nakhomphanom	29.9
27 Chiang Mai	-17.4	27 Buriram	73.9	27 Surin	48.7	27 Nonthaburi	29.8
28 Loei	-17.9	28 Rayong	73.9	28 Nakhon Sawan	47.4	28 Chainat	29.0
29 Nakhon Pathom	-18.2	29 Ratchaburi	73.9	29 Nakhon Ratvhasima	47.2	29 Nakhon Sawan	28.5
30 Singburi	-18.2	30 Mae Hong Son	67.9	30 Lopburi	46.2	30 Phetchabun	26.5
31 Nakhon Sawan	-20.4	31 Nakhon Sawan	66.9	31 Chainat	45.0	31 Srisaket	26.4
32 Nakhon Ratvhasima	-20.9	32 Surin	66.9	32 Nakhomphanom	44.4	32 Mahasarakham	26.3
33 Rayong	-21.2	33 Sakonnakhon	64.8	33 Trang	43.9	33 Nakhon Ratvhasima	26.3
34 Uttaradit	-21.4	34 Nakhomphanom	64.6	34 Chumphon	43.7	34 Nan	26.1
35 Chanthaburi	-22.1	35 Prachinburi	64.1	35 Phitsanulok	43.7	35 Lopburi	26.0
36 Ratchaburi	-22.7	36 Kam Phaeng Phet	62.9	36 Singburi	43.3	36 Prachinburi	25.8
37 Lopburi	-23.2	37 Phetchabun	62.4	37 Mahasarakham	42.4	37 Chumphon	24.5
38 Roi Et	-26.5	38 Nong Khai	61.9	38 Phetchabun	42.3	38 Ubon Ratchathani	23.2
39 Surin	-26.7	39 Kanchanaburi	61.8	39 Khon Kaen	42.0	39 Surin	22.4
40 Phichit	-28.6	40 Chonburi	60.7	40 Phichit	40.9	40 Rayong	21.6
41 Yala	-30.1	41 Samut Songkhram	60.0	41 Srisaket	40.1	41 Trang	21.0
42 Uthai Thani	-30.1	42 Uthai Thani	59.9	42 Uthai Thani	40.0	42 Khon Kaen	20.9
43 Kam Phaeng Phet	-30.4	43 Nakhon Ratvhasima	59.6	43 Prachinburi	38.5	43 Uttaradit	19.2
44 Ranong	-30.6	44 Suphanburi	58.9	44 Samut Songkhram	35.8	44 Kalasin	19.0
45 Chainat	-30.7	45 Lopburi	57.5	45 Kam Phaeng Phet	34.0	45 Roi Et	19.0
46 Pattani	-31.6	46 Samut Prakan	55.7	46 Roi Et	33.9	46 Phichit	18.0
47 Buriram	-32.9	47 Samut Sakhon	55.1	47 Buriram	33.7	47 Chanthaburi	17.9
48 Srisaket	-33.1	48 Uttaradit	54.6	48 Yasothon	31.9	48 Yasothon	15.9
49 Chaiyaphum	-33.1	49 Udon Thani	45.8	49 Chaiyaphum	30.7	49 Chaiyaphum	15.3
50 Trat	-34.2	50 Ang Thong	44.9	50 Bangkok Metropolitan	30.1	50 Samut Songkhram	14.8
51 Phetchabun	-34.6	51 Phitsanulok	44.1	51 Chanthaburi	29.9	51 Buriram	13.5
52 Narathiwat	-35.5	52 Satun	42.6	52 Satun	26.7	52 Phuket	13.5
53 Lamphun	-37.1	53 Chanthaburi	41.8	53 Kalasin	26.6	53 Sukhothai	11.5
54 Ubon Ratchathani	-37.9	54 Chainat	41.5	54 Mae Hong Son	26.0	54 Mukdahan	11.2
55 Trang	-37.9	55 Sukhothai	41.4	55 Uttaradit	25.9	55 Bangkok Metropolitan	11.0
56 Chachoengsao	-38.5	56 Chumphon	38.6	56 Mukdahan	25.8	56 Loei	9.7
57 Phatthalung	-39.0	57 Bangkok Metropolitan	37.4	57 Nong Khai	25.5	57 Songkhla	8.7
58 Mae Hong Son	-40.5	58 Trang	35.9	58 Songkhla	22.1	58 Trat	8.7
59 Phangnga	-42.7	59 Songkhla	34.5	59 Phatthalung	18.3	59 Phatthalung	7.5
60 Udon Thani	-43.1	60 Mukdahan	32.4	60 Sukhothai	17.8	60 Nong Khai	7.3
61 Phrae	-43.9	61 Tak	28.4	61 Phuket	17.5	61 Sakonnakhon	6.6
62 Sukhothai	-44.6	62 Phatthalung	24.8	62 Sakonnakhon	14.0	62 Mae Hong Son	5.2
63 Songkhla	-45.6	63 Singburi	24.1	63 Loei	12.1	63 Pattani	4.0
64 Surat Thani	-45.7	64 Loei	21.8	64 Trat	10.4	64 Satun	3.1
65 Mukdahan	-47.1	65 Pattani	21.2	65 Tak	10.3	65 Chachoengsao	3.0
66 Nakhomphanom	-47.2	66 Nakhon Sri Thammarat	11.7	66 Chachoengsao	7.9	66 Tak	-0.4
67 Kalasin	-48.7	67 Trat	10.0	67 Pattani	6.7	67 Nakhon Sri Thammarat	-0.9
68 Nakhon Sri Thammarat	-49.2	68 Narathiwat	6.4	68 Nakhon Sri Thammarat	5.8	68 Udon Thani	-3.1
69 Tak	-49.4	69 Chachoengsao	5.1	69 Udon Thani	1.8	69 Singburi	-3.1
70 Prachinburi	-50.2	70 Phuket	2.9	70 Narathiwat	-4.0	70 Narathiwat	-3.6
71 Satun	-51.6	71 Yala	-12.1	71 Surat Thani	-15.7	71 Surat Thani	-11.3
72 Sakonnakhon	-56.8	72 Surat Thani	-14.6	72 Yala	-15.7	72 Yala	-14.4
73 Nong Khai	-57.8	73 Phangnga	-25.6	73 Phangnga	-22.9	73 Phangnga	-19.2
74 Amnat Charoen	na	74 Amnat Charoen	na	74 Amnat Charoen	na	74 Nongbua Lamphu	na
75 Nongbua Lamphu	na	75 Nongbua Lumphu	na	75 Nongbua Lumphu	na	75 Srakaew	na
76 Sakeaw	na	76 Srakaew	na	76 Srakaew	na	76 Amnat Charoen	na

Table 29 Percent of differences in male death rates in 1992-1996 relative to baseline death rates (1984-1991)

Age 0-4		Age 25-29		Age 15-49		All Ages	
Public Health Office		Public Health Office		Public Health Office		Public Health Office	
1 Zone 01	2.1	1 Zone 10	295.1	1 Zone 10	156.2	1 Zone 06	60.0
2 Zone 10	-4.3	2 Zone 07	85.4	2 Zone 01	84.9	2 Zone 02	39.1
3 Zone 04	-5.1	3 Zone 01	84.2	3 Zone 02	66.1	3 Zone 10	37.0
4 Zone 02	-11.7	4 Zone 09	80.2	4 Zone 04	61.4	4 Zone 04	34.3
5 Zone 09	-16.9	5 Zone 04	77.8	5 Zone 09	46.8	5 Zone 05	28.2
6 Zone 03	-24.2	6 Zone 05	74.9	6 Zone 07	43.2	6 Zone 01	23.0
7 Zone 05	-24.8	7 Zone 02	68.5	7 Zone 05	42.1	7 Zone 07	22.5
8 Zone 08	-31.8	8 Zone 06	59.8	8 Zone 03	37.9	8 Zone 08	22.5
9 Zone 11	-35.0	9 Zone 08	55.2	9 Zone 08	32.7	9 Zone 09	21.6
10 Zone 07	-36.7	10 Zone 03	45.4	10 Zone 06	19.4	10 Zone 03	8.6
11 Zone 12	-39.5	11 Zone 12	25.8	11 Zone 12	16.7	11 Zone 11	8.5
12 Zone 06	-42.9	12 Zone 11	15.3	12 Zone 11	13.0	12 Zone 12	5.2
Region		Region		Region		Region	
1 Central Region	-8.3	1 North	143.5	1 Central Region	49.8	1 North	41.3
2 North Region	-17.1	2 South	62.8	2 North Region	90.1	2 Central	25.5
3 North-Eastern Region	-35.8	3 Central	58.4	3 North-Eastern Region	33.7	3 Northeast	17.1
4 South Region	-37.7	4 Northeast	40.1	4 South Region	14.6	4 South	6.8
Whole Country	-24.9	Whole Country	76.4	Whole Country	46.2	Whole Country	23.7

Table 30 Differences in female death rates in 1992-1996 relative to baseline death rates (1984-1991)

Province		0-4 yrs	Province		25-29 yrs	Province		15-49 yrs	Province		All ages
1	Chiang Rai	82.3	1	Chiang Rai	302.8	1	Chiang Rai	69.2	1	Krabi	111.0
2	Phayao	71.4	2	Phayao	277.9	2	Phayao	56.8	2	Chiang Rai	49.7
3	Samut Songkhram	27.4	3	Chiang Mai	135.9	3	Saraburi	51.5	3	Phayao	45.0
4	Kanchanaburi	19.2	4	Krabi	116.7	4	Krabi	37.3	4	Chonburi	37.6
5	Phetchaburi	16.6	5	Saraburi	91.3	5	Pathum Thani	29.7	5	Saraburi	34.8
6	Chonburi	14.6	6	Lamphun	85.9	6	Ranong	25.5	6	Kanchanaburi	33.5
7	Phitsanulok	9.1	7	Lampang	78.3	7	Samut Prakan	22.5	7	Ranong	32.8
8	Ang Thong	9.0	8	Phetchaburi	76.9	8	Samut Sakhon	21.3	8	Pathum Thani	32.0
9	Ranong	2.3	9	Samut Sakhon	67.3	9	Ayutthaya	20.3	9	Phachuap Khiri Khan	29.7
10	Bangkok Metropolis	-0.2	10	Nan	65.6	10	Chiang Mai	19.7	10	Kam Phaeng Phet	27.7
11	Phachuap Khiri Khan	-0.4	11	Ratchaburi	62.9	11	Phetchaburi	14.2	11	Phitsanulok	26.2
12	Samut Prakan	-2.1	12	Ayutthaya	60.0	12	Chonburi	12.1	12	Ang Thong	24.9
13	Pathum Thani	-3.8	13	Chonburi	56.4	13	Suphanburi	10.3	13	Ayutthaya	24.6
14	Ratchaburi	-4.8	14	Samut Prakan	55.8	14	Ang Thong	10.1	14	Nakhon Sawan	23.6
15	Krabi	-5.2	15	Pathum Thani	53.8	15	Lamphun	6.8	15	Uttaradit	22.9
16	Khon Kaen	-7.0	16	Nakhonnayok	51.3	16	Nakhon Pathom	5.5	16	Phetchaburi	22.3
17	Suphanburi	-9.2	17	Mae Hong Son	43.8	17	Nonthaburi	2.7	17	Uthai Thani	21.4
18	Rayong	-11.8	18	Phrae	39.8	18	Lampang	2.3	18	Prachinburi	21.4
19	Saraburi	-12.5	19	Nakhon Pathom	36.9	19	Phrae	0.5	19	Nakhomphanom	21.1
20	Lampang	-13.5	20	Phitsanulok	36.4	20	Ratchaburi	-0.1	20	Samut Sakhon	21.0
21	Uttaradit	-13.9	21	Maharakham	29.6	21	Trang	-1.4	21	Suphanburi	20.6
22	Lamphun	-14.3	22	Kam Phaeng Phet	23.0	22	Phachuap Khiri Khan	-6.1	22	Ratchaburi	20.4
23	Nan	-14.3	23	Chaiyaphum	20.1	23	Samut Songkhram	-6.4	23	Samut Prakan	19.7
24	Nakhon Ratvhasima	-14.3	24	Khon Kaen	16.7	24	Phitsanulok	-7.0	24	Phrae	18.7
25	Chiang Mai	-15.9	25	Udon Thani	15.3	25	Kanchanaburi	-7.4	25	Phetchabun	18.0
26	Nakhon Sawan	-18.3	26	Nakhon Sawan	13.8	26	Nakhon Ratvhasima	-7.8	26	Chainat	18.0
27	Nakhon Pathom	-18.7	27	Samut Songkhram	12.8	27	Nakhon Sawan	-8.3	27	Lampang	17.8
28	Ayutthaya	-19.0	28	Chainat	12.7	28	Nakhonnayok	-8.3	28	Nakhon Pathom	17.5
29	Maharakham	-21.0	29	Kanchanaburi	12.5	29	Singburi	-9.2	29	Lopburi	16.7
30	Roi Et	-21.7	30	Lopburi	12.1	30	Chumphon	-9.7	30	Khon Kaen	16.1
31	Singburi	-22.3	31	Nakhon Ratvhasima	11.9	31	Lopburi	-10.2	31	Nakhonnayok	16.0
32	Phichit	-22.8	32	Ranong	11.1	32	Surin	-11.9	32	Nakhon Ratvhasima	15.1
33	Phuket	-23.4	33	Phichit	10.9	33	Nakhomphanom	-12.3	33	Nan	14.6
34	Nonthaburi	-23.6	34	Rayong	10.2	34	Nan	-12.5	34	Surin	14.3
35	Surin	-24.3	35	Nonthaburi	10.0	35	Khon Kaen	-13.5	35	Chumphon	13.0
36	Yasothon	-25.6	36	Buriram	7.0	36	Uttaradit	-13.9	36	Chaiyaphum	13.0
37	Chachoengsao	-27.6	37	Kalasin	6.9	37	Uthai Thani	-14.1	37	Srisaket	12.4
38	Chanthaburi	-28.2	38	Ang Thong	5.3	38	Rayong	-14.3	38	Maharakham	11.8
39	Uthai Thani	-28.8	39	Tak	4.8	39	Kam Phaeng Phet	-14.4	39	Trang	11.8
40	Phrae	-29.1	40	Chumphon	4.7	40	Chainat	-15.8	40	Chiang Mai	11.3
41	Trang	-31.5	41	Uthai Thani	4.2	41	Chaiyaphum	-16.9	41	Samut Songkhram	11.1
42	Nakhonnayok	-31.8	42	Sukhothai	4.0	42	Maharakham	-17.4	42	Sukhothai	10.0
43	Narathiwat	-33.6	43	Singburi	3.0	43	Chanthaburi	-17.7	43	Lamphun	9.6
44	Chumphon	-33.9	44	Phetchabun	2.6	44	Phichit	-19.4	44	Buriram	8.8
45	Kam Phaeng Phet	-34.1	45	Trang	1.5	45	Ubon Ratchathani	-20.1	45	Phuket	8.8
46	Samut Sakhon	-34.4	46	Yasothon	0.9	46	Buriram	-20.2	46	Nonthaburi	8.0
47	Trat	-35.5	47	Uttaradit	0.7	47	Phetchabun	-20.3	47	Phichit	7.9
48	Loei	-37.1	48	Phachuap Khiri Khan	-0.3	48	Yasothon	-20.4	48	Roi Et	6.8
49	Phetchabun	-37.4	49	Roi Et	-1.0	49	Srisaket	-20.8	49	Pattani	6.5
50	Yala	-37.7	50	Suphanburi	-1.0	50	Trat	-21.1	50	Chanthaburi	6.1
51	Mae Hong Son	-37.8	51	Prachinburi	-1.8	51	Pattani	-21.8	51	Yasothon	5.4
52	Srisaket	-38.2	52	Surin	-1.8	52	Sukhothai	-23.2	52	Kalasin	4.9
53	Phatthalung	-38.5	53	Loei	-5.0	53	Nong Khai	-23.6	53	Chachoengsao	4.4
54	Chainat	-38.9	54	Trat	-7.7	54	Mae Hong Son	-23.9	54	Phatthalung	3.7
55	Buriram	-39.2	55	Phatthalung	-7.9	55	Bangkok Metropolis	-24.1	55	Trat	3.2
56	Prachinburi	-39.9	56	Ubon Ratchathani	-9.0	56	Mukdahan	-26.1	56	Rayong	2.6
57	Ubon Ratchathani	-40.7	57	Nakhon Sri Thammarat	-9.3	57	Prachinburi	-26.4	57	Mukdahan	2.2
58	Pattani	-40.8	58	Srisaket	-9.8	58	Phatthalung	-26.7	58	Loei	1.6
59	Lopburi	-41.2	59	Nakhomphanom	-9.9	59	Roi Et	-27.7	59	Ubon Ratchathani	0.7
60	Sukhothai	-42.0	60	Chanthaburi	-13.2	60	Satun	-27.9	60	Nong Khai	0.4
61	Surat Thani	-42.6	61	Nong Khai	-13.9	61	Kalasin	-28.2	61	Singburi	-2.0
62	Udon Thani	-42.7	62	Bangkok Metropolis	-15.6	62	Phuket	-29.1	62	Sakonnakhon	-2.8
63	Satun	-44.5	63	Phuket	-18.3	63	Chachoengsao	-30.2	63	Bangkok Metropolis	-3.2
64	Chaiyaphum	-44.6	64	Mukdahan	-19.0	64	Nakhon Sri Thammarat	-32.0	64	Nakhon Sri Thammarat	-4.4
65	Tak	-45.0	65	Songkhla	-19.2	65	Loei	-32.4	65	Songkhla	-5.2
66	Nakhomphanom	-45.1	66	Sakonnakhon	-23.0	66	Udon Thani	-32.7	66	Narathiwat	-5.9
67	Songkhla	-47.7	67	Narathiwat	-23.2	67	Sakonnakhon	-34.2	67	Tak	-6.4
68	Mukdahan	-47.8	68	Surat Thani	-24.1	68	Tak	-35.2	68	Satun	-6.9
69	Kalasin	-50.7	69	Satun	-24.5	69	Narathiwat	-35.5	69	Udon Thani	-7.2
70	Nong Khai	-51.5	70	Yala	-25.6	70	Songkhla	-35.9	70	Mae Hong Son	-9.5
71	Nakhon Sri Thammarat	-53.4	71	Pattani	-29.1	71	Surat Thani	-40.9	71	Yala	-13.4
72	Sakonnakhon	-57.1	72	Phangnga	-31.9	72	Yala	-42.5	72	Surat Thani	-14.0
73	Phangnga	-65.5	73	Chachoengsao	-37.2	73	Phangnga	-43.5	73	Phangnga	-17.3
74	Amnat Charoen	na	74	Amnat Charoen	na	74	Amnat Charoen	na	74	Amnat Charoen	na
75	Nonbua Lumphun	na	75	Nonbua Lumphun	na	75	Nonbua Lumphun	na	75	Nonbua Lumphun	na
76	Sakaew	na	76	Sakaew	na	76	Sakaew	na	76	Sakaew	na

Table 30 Differences in female death rates in 1992-1996 relative to baseline death rates (1984-1991)

Age 0-4		Age 25-29		Age 15-49		All Ages	
Public Health Office		Public Health Office		Public Health Office		Public Health Office	
1 Zone 10	6.5	1 Zone 01	260.5	1 Zone 10	30.6	1 Zone 02	25.0
2 Zone 04	-3.5	2 Zone 05	48.0	2 Zone 01	15.9	2 Zone 10	23.6
3 Zone 01	-8.7	3 Zone 04	37.0	3 Zone 02	4.5	3 Zone 04	21.1
4 Zone 09	-15.6	4 Zone 02	30.5	4 Zone 04	1.8	4 Zone 01	19.4
5 Zone 02	-19.2	5 Zone 06	11.3	5 Zone 09	-11.7	5 Zone 09	18.7
6 Zone 03	-21.0	6 Zone 03	8.4	6 Zone 03	-12.6	6 Zone 08	17.7
7 Zone 05	-25.0	7 Zone 09	2.8	7 Zone 05	-13.8	7 Zone 03	14.4
8 Zone 08	-30.8	8 Zone 08	1.9	8 Zone 08	-16.4	8 Zone 05	12.9
9 Zone 07	-38.5	9 Zone 10	0.2	9 Zone 07	-21.3	9 Zone 07	7.1
10 Zone 12	-40.8	10 Zone 07	-6.9	10 Zone 11	-24.7	10 Zone 11	4.9
11 Zone 11	-42.1	11 Zone 11	-9.8	11 Zone 06	-27.8	11 Zone 06	1.2
12 Zone 06	-42.3	12 Zone 12	-18.3	12 Zone 12	-29.1	12 Zone 12	-1.3
Region							
1 Central	-8.8	1 Central	103.3	1 North	4.9	1 North	20.7
2 North	-12.8	2 North	2.7	2 Central	-8.1	2 Central	11.9
3 North-East	-36.2	3 North-East	-0.6	3 North-East	-21.4	3 North-East	7.0
4 South	-41.3	4 South	-11.9	4 South	-27.1	4 South	1.5
Whole Country	-24.9	Whole Country	2.8	Whole Country	-13.6	Whole Country	10.8

Table 31 Correlations between certified death rates and selected AIDS statistics in 73 provinces classified by sex, 1984-1997

<i>Men</i>		<i>Years</i>																				
Reported male AIDS deaths (all ages)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997								
Male certified death rates (all ages)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997								
Pearson's correlation	-0.060	0.026	0.001	0.092	-0.007	0.043	0.132	0.245*	0.276*	0.117	0.418**	0.543**	0.491**	0.487**								
Spearman's rank correlation	-0.670	0.078	0.017	0.193	-0.001	0.084	0.480*	0.338**	0.168	0.295*	0.379**	0.458**	0.388**	0.370**								
<i>Women</i>		<i>Years</i>																				
Reported female AIDS deaths (all ages)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997								
Female certified death rates (15-49 yea	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997								
Pearson's correlation	a	a	a	a	0.011	0.055	0.218	0.230*	0.299*	0.069	0.322**	0.491**	0.516**	0.509**								
Spearman's rank correlation	a	a	a	a	0.033	0.077	0.209	0.148	0.134	0.043	0.190	0.266**	0.164	0.207								

* p value < 0.05 ** p value < 0.01

Table 32. Correlations between certified death rates and selected AIDS statistics of men in 65 provinces classified by sex, 1984-1997

<i>Reported male AIDS death rates</i>		<i>Years</i>																											
Reported male AIDS death rates (all ages)		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Male certified death rates (all ages)		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Pearson's correlation		-0.055	0.025	0.001	0.159	0.027	0.042	0.329**	0.381**	0.396**	0.445**	0.550**	0.638**	0.669**	0.682**	-0.104	-0.017	0.026	0.066	-0.007	0.087	0.129	0.237*	0.253*	0.468**	0.658**	0.723**	0.745**	0.781**
Spearman's rank correlation		-0.06	0.08	0.020	0.223	0.036	0.130	0.356**	0.425**	0.326**	0.501**	0.498**	0.528**	0.614**	0.474**	-0.120	-0.020	0.067	0.190	-0.023	0.174	0.286*	0.259*	0.282*	0.600**	0.590**	0.587**	0.641**	0.539**
Reported male AIDS death rates (all ages)		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Male certified death rates (15-49 years)		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Pearson's correlation		-0.104	-0.017	0.026	0.066	-0.007	0.087	0.129	0.237*	0.253*	0.468**	0.658**	0.723**	0.745**	0.781**	-0.120	-0.020	0.067	0.190	-0.023	0.174	0.286*	0.259*	0.282*	0.600**	0.590**	0.587**	0.641**	0.539**
Spearman's rank correlation		-0.120	-0.020	0.067	0.190	-0.023	0.174	0.286*	0.259*	0.282*	0.600**	0.590**	0.587**	0.641**	0.539**	-0.120	-0.020	0.067	0.190	-0.023	0.174	0.286*	0.259*	0.282*	0.600**	0.590**	0.587**	0.641**	0.539**
Reported male AIDS death rates (all ages)		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Male certified death rates (25-29 years)		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Pearson's correlation		-0.097	-0.052	-0.010	0.086	-0.002	0.203	0.121	0.162	0.276*	0.580**	0.747**	0.792**	0.742**	0.732**	-0.097	-0.052	-0.010	0.086	-0.002	0.203	0.121	0.162	0.276*	0.580**	0.747**	0.792**	0.742**	0.732**
Spearman's rank correlation		-0.133	-0.087	-0.013	0.203	0.050	0.274*	0.175	0.333**	0.336**	0.638**	0.646**	0.617**	0.573**	0.405**	-0.133	-0.087	-0.013	0.203	0.050	0.274*	0.175	0.333**	0.336**	0.638**	0.646**	0.617**	0.573**	0.405**
<i>HIV Serosurveillance among military conscripts</i>		<i>Years</i>																											
HIV Serosurveillance among military conscripts		Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97						
Male certified death rates (all ages)		Nov-91	1992	1992	1993	1994	1995	1995	1996	1996	1997	1997	Nov-91	1992	1992	1993	1994	1995	1995	1996	1996	1997	1997						
Pearson's correlation		0.37**	0.418**	0.257**	0.195	0.466**	0.542**	0.386**	0.361**	0.167	0.068	0.015	0.37**	0.418**	0.257**	0.195	0.466**	0.542**	0.386**	0.361**	0.167	0.068	0.015						
Spearman's rank correlation		0.261**	0.396**	0.389**	0.43**	0.444**	0.404**	0.224	0.316*	0.064	0.151	0.034	0.261**	0.396**	0.389**	0.43**	0.444**	0.404**	0.224	0.316*	0.064	0.151	0.034						
HIV Serosurveillance among military conscripts		Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97						
Male certified death rates (15-49 years)		Nov-91	1992	1992	1993	1994	1995	1995	1996	1996	1997	1997	Nov-91	1992	1992	1993	1994	1995	1995	1996	1996	1997	1997						
Pearson's correlation		0.263*	0.436**	0.191	0.286*	0.508**	0.596**	0.500**	0.369**	0.161	0.123	0.033	0.263*	0.436**	0.191	0.286*	0.508**	0.596**	0.500**	0.369**	0.161	0.123	0.033						
Spearman's rank correlation		0.159	0.470**	0.380**	0.483**	0.461**	0.454**	0.311**	0.257**	0.067	0.233	0.138	0.159	0.470**	0.380**	0.483**	0.461**	0.454**	0.311**	0.257**	0.067	0.233	0.138						
HIV Serosurveillance among military conscripts		Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97						
Male certified death rates (25-29 years)		Nov-91	1992	1992	1993	1994	1995	1995	1996	1996	1997	1997	Nov-91	1992	1992	1993	1994	1995	1995	1996	1996	1997	1997						
Pearson's correlation		0.228	0.463**	0.297**	0.365**	0.521**	0.556**	0.543**	0.318**	0.191	0.106	-0.025	0.228	0.463**	0.297**	0.365**	0.521**	0.556**	0.543**	0.318**	0.191	0.106	-0.025						
Spearman's rank correlation		0.083	0.509**	0.434**	0.482**	0.433**	0.380**	0.346**	0.299**	0.204	0.136	0.141	0.083	0.509**	0.434**	0.482**	0.433**	0.380**	0.346**	0.299**	0.204	0.136	0.141						

* p value < 0.05 ** p value < 0.01

Table 33 Correlations between certified death rates and selected AIDS statistics of women 65 provinces classified by sex, 1984-1997

<i>Reported female AIDS death rates</i>		<i>Years</i>															
Reported female AIDS death rates (all ages)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1996	1997	
Female certified death rates (all ages)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1996	1997	
Pearson's correlation	a	a	a	a	-0.011	0.023	0.280*	0.184	0.359**	0.375**	0.376**	0.537**	0.616**	0.589**			
Spearman's rank correlation	a	a	a	a	0.046	0.098	0.238	0.177	0.168	0.254*	0.282*	0.300*	0.361**	0.268*			
Reported female AIDS death rates (all ages)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1996	1997	
Female certified death rates (15-49 years)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1996	1997	
Pearson's correlation	a	a	a	a	0.004	0.064	-0.005	0.044	-0.132	0.025	-0.111	0.120	0.110	0.186			
Spearman's rank correlation	a	a	a	a	0.590	0.290	0.530	0.075	-0.168	0.001	-0.14	-0.128	0.057	0.013			
Reported female AIDS death rates (all ages)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1996	1997	
Female certified death rates (25-29 years)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1996	1997	
Pearson's correlation	a	a	a	a	0.522**	0.456**	0.484**	0.255**	0.317*	0.274*	0.408**	0.462**	0.468**	0.414**			
Spearman's rank correlation	a	a	a	a	0.207	0.242	0.076	0.270*	0.343**	0.353**	0.167	0.209	0.151	0.213			
<i>HIV Serosurveillance among pregnant women</i>		<i>Years</i>															
HIV Serosurveillance among pregnant women	Jun-89	Dec-89	Jun-90	Dec-90	Jun-91	Dec-91	Jun-92	Dec-92	Jun-93	Dec-93	Jun-94	Dec-94	Jun-95	Jun-96	Jun-96	Jun-97	
Female certified death rates (all ages)	1989	1989	1990	1990	1991	1991	1992	1992	1993	1993	1994	1994	1995	1996	1996	1997	
Pearson's correlation	0.020	-0.069	0.121	0.074	0.001	0.001	0.025	0.117	0.109	0.081	0.091	0.234	0.074	0.156	0.305*		
Spearman's rank correlation	0.435	-0.0049	0.225	0.024	0.074	-0.023	-0.037	0.233	0.187	0.146	0.159	0.205	0.081	0.135	0.108		
HIV Serosurveillance among pregnant women	Jun-89	Dec-89	Jun-90	Dec-90	Jun-91	Dec-91	Jun-92	Dec-92	Jun-93	Dec-93	Jun-94	Dec-94	Jun-95	Jun-96	Jun-96	Jun-97	
Female certified death rates (15-49 years)	1989	1989	1990	1990	1991	1991	1992	1992	1993	1993	1994	1994	1995	1996	1996	1997	
Pearson's correlation	0.153	0.341	0.002	-0.092	-0.147	-0.212	-0.146	-0.066	-0.04	-0.082	-0.016	0.039	-0.008	0.063	0.245		
Spearman's rank correlation	0.341	0.020	-0.092	-0.147	-0.212	-0.146	-0.066	-0.040	-0.082	-0.016	-0.039	-0.008	-0.063	0.135	0.084		
HIV Serosurveillance among pregnant women	Jun-89	Dec-89	Jun-90	Dec-90	Jun-91	Dec-91	Jun-92	Dec-92	Jun-93	Dec-93	Jun-94	Dec-94	Jun-95	Jun-96	Jun-96	Jun-97	
Female certified death rates (25-29 years)	1989	1989	1990	1990	1991	1991	1992	1992	1993	1993	1994	1994	1995	1996	1996	1997	
Pearson's correlation	-0.288	0.100	-0.093	-0.018	-0.01	0.089	0.155	0.139	0.128*	0.534**	0.476**	0.422**	0.618**	0.611**	0.554**		
Spearman's rank correlation	-0.348	0.166	-0.053	-0.030	0.187	0.212	0.150	0.153	0.143	0.300**	0.321**	0.390**	0.416**	0.226	0.305*		

a Not computed because of no female AIDS death

* p value < 0.05

** p value < 0.01

Table 34 Correlations between reported numbers of registered deaths and selected AIDS statistics of men and women in 65 provinces, 1984-1996

Men	Years														
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Reported no. of male AIDS deaths (all ages)	0.832**	0.856**	0.010	0.839**	0.505**	0.833**	0.798**	0.398**	0.432**	0.476**	0.608**	0.689**	0.722**	0.15	
Pearson's correlation	0.213	0.213	0.087	0.161	0.211	0.317*	0.159	0.266*	0.447**	0.546**	0.487**	0.539**	0.407**	0.380**	
Spearman's rank correlation															
HIV Serosurveillance among military conscripts	Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97				
Number of male certified deaths (all ages)	0.038	0.047	-0.07	-0.069	0.082	0.128	0.084	0.016	0.015	-0.163	-0.123				
Pearson's correlation	0.139	0.126	-0.055	-0.091	0.375**	0.079	0.267**	0.131	0.174	-0.007	0.029				
Spearman's rank correlation															
Women	Years														
Reported number of female AIDS deaths (all ages)	0.167	-0.095	0.310**	0.423**	0.263*	0.165	0.471**	0.462**	0.487**	0.641**	0.495**	0.597**	0.631**	0.151	
Number of female certified deaths (all ages)	-0.167	-0.125	0.256*	0.164	0.280*	0.112	0.248*	0.282*	0.453**	0.512**	0.279**	0.494**	0.421**	0.282*	
Pearson's correlation															
Spearman's rank correlation															
HIV Serosurveillance among pregnant women	Jun-89	Dec-89	Jun-90	Dec-90	Jun-91	Dec-91	Jun-92	Dec-92	Jun-93	Dec-93	Jun-94	Dec-94	Jun-95	Jun-96	Jun-97
Number of female certified deaths (all ages)	0.167	-0.095	0.310**	0.423**	0.263*	0.165	0.471**	0.462**	0.487**	0.641**	0.495**	0.597**	0.631**	0.151	0.282*
Pearson's correlation															
Spearman's rank correlation															

* p value < 0.05 ** p value < 0.01

Table 35 Correlations between increased death rates relative to the 1984-1991 baseline and selected AIDS statistics of 65 provinces classified by sex, 1984-1997

<i>Men</i>		<i>Years</i>											
Reported male AIDS death rates (all ages)		1992	1993	1994	1995	1996	1997						
Relative increased death rates (all ages)		1992	1993	1994	1995	1996	1997						
Pearson's correlation		0.244	0.324**	0.446**	0.603**	0.517**	0.448**						
Spearman's rank correlation		0.256*	0.392**	0.450**	0.544**	0.329	0.200						
HIV Serosurveillance among military conscripts													
		May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97		
Relative increased death rates (all ages)		1992	1992	1993	1994	1995	1995	1996	1996	1997	1997		
Pearson's correlation		0.060	0.132	-0.018	0.372**	0.465**	0.455**	0.332**	0.072	-0.0045	-0.067		
Spearman's rank correlation		0.245*	0.251*	0.221	0.370**	0.378***	0.280*	0.260*	0.004	-0.009	0.086		
<i>Women</i>													
Reported female AIDS death rates (all ages)		1992	1993	1994	1995	1996	1997						
Relative increased death rates (all ages)		1992	1993	1994	1995	1996	1997						
Pearson's correlation		0.088	0.124	0.197	0.445**	0.452**	0.391**						
Spearman's rank correlation		0.123	0.231	0.137	0.334**	0.314**	0.158						
HIV Serosurveillance among pregnant women													
		Jun-92	Dec-92	Jun-93	Dec-93	Jun-94	Dec-94	Jun-95	Jun-96	Jun-97			
Relative increased death rates (all ages)		1992	1993	1993	1993	1994	1994	1995	1996	1997			
Pearson's correlation		0.268*	0.072	0.159	0.127	0.184	0.261	0.337**	0.336**	0.171			
Spearman's rank correlation		0.162	0.082	0.067	0.072	0.149	0.15	0.274*	0.205	0.088			

* p value < 0.05 ** p value < 0.01

Table 36 Correlations between selected AIDS statistics of 65 provinces, 1990-1997

	Years																		
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1994	1995	1996	1997	
Reported male AIDS death rates																			
Reported female AIDS death rates																			
Pearson's correlation	a	a	a	a	-0.023	-0.039	0.444**	0.534**	0.416**	0.831**	0.912**	0.930**	0.918**	0.920**	0.954**	0.954**	0.954**	0.954**	
Spearman's rank correlation	a	a	a	a	0.280*	0.171	0.330**	0.416**	0.537**	0.634**	0.823**	0.772**	0.790**	0.858**	0.823**	0.790**	0.858**	0.858**	
Reported male AIDS death rates (all ages)	1991	1992	1992	1993	1994	1995	1995	1996	1996	1997	1997	1997	1997	1997	1997	1997	1997	1997	
HIV Serosurveillance among military conscripts	Nov-91	May-92	Nov-92	May-93	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	Nov-97	Nov-97	Nov-97	Nov-97	Nov-97	Nov-97	Nov-97	
Pearson's correlation	0.457**	0.689**	0.523**	0.384**	0.474**	0.646**	0.388**	0.233	0.226	0.066	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	
Spearman's rank correlation	0.224	0.487**	0.468**	0.446**	0.279*	0.572**	0.312*	0.287*	0.104	0.234	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	
Reported female AIDS death rates (all ages)	1989	1989	1990	1990	1991	1991	1992	1992	1993	1993	1994	1994	1994	1994	1994	1995	1996	1997	
HIV Serosurveillance among pregnant women	Jun-89	Dec-89	Jun-90	Dec-90	Jun-91	Dec-91	Jun-92	Dec-92	Jun-93	Dec-93	Jun-94	Dec-94	Jun-95	Dec-95	Jun-96	Dec-96	Jun-97	Nov-97	
Pearson's correlation	-0.167	-0.095	0.271*	0.426**	0.252*	0.183	0.461**	0.393**	0.696**	0.093	0.248*	0.699**	0.655**	0.571**	0.655**	0.655**	0.655**	0.571**	
Spearman's rank correlation	-0.167	-0.125	0.245*	0.169	0.298*	0.130	0.261*	0.252*	0.509	0.325**	0.298*	0.517**	0.558**	0.393**	0.558**	0.393**	0.381**	0.381**	
HIV Serosurveillance among military conscripts	Nov-91	Nov-91	May-92	Nov-92	May-93	May-93	Nov-94	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	Nov-97	Nov-97	Nov-97	Nov-97	
HIV Serosurveillance among pregnant women	Jun-91	Dec-91	Jun-92	Dec-92	Jun-93	Dec-93	Jun-94	Dec-94	Jun-95	Jun-95	Jun-96	Jun-96	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	
Pearson's correlation	0.326**	0.489**	0.626**	0.449**	0.318*	0.405**	0.482**	0.357**	0.750**	0.378**	0.354**	0.144	0.086	-0.161	0.144	0.086	-0.161	-0.161	
Spearman's rank correlation	0.410**	0.450**	0.424**	0.474**	0.265*	0.350**	0.474**	0.318*	0.540**	0.24	0.285*	0.135	0.098	0.032	0.135	0.098	0.032	0.032	

* p value < 0.05

** p value < 0.01

Table 37 Total deaths and deaths in government hospital by region, number and percentage, 1984-1996

	Whole Country			North			Northeast			Central			South		
	Total Deaths	Deaths in Gov. Hospital	%	Total Deaths	Deaths in Gov. Hospital	%	Total Deaths	Deaths in Gov. Hospital	%	Total Deaths	Deaths in Gov. Hospital	%	Total Deaths	Deaths in Gov. Hospital	%
1984	225,282	46,740	20.7	48,372	10,193	21.1	71,610	6,285	8.8	76,994	26,398	34.3	28,306	3,864	13.7
1985	225,088	41,941	18.6	52,092	8,526	16.4	74,434	8,023	10.8	70,214	21,933	31.2	28,346	3,459	12.2
1986	218,025	36,882	16.9	48,722	4,868	10.0	73,567	7,189	9.8	70,021	22,814	32.6	25,715	2,641	10.3
1987	232,968	40,750	17.5	51,328	6,046	11.8	78,509	7,160	9.1	77,595	24,855	32.0	25,536	2,689	10.5
1988	231,227	35,770	15.5	51,271	5,825	11.4	75,669	4,972	6.6	79,060	21,989	27.8	25,227	2,264	9.0
1989	246,570	49,792	20.2	52,931	6,947	13.1	78,217	9,201	11.8	87,204	28,922	33.2	16,734	4,722	28.2
1990	252,512	47,407	18.8	53,640	7,655	14.3	78,900	10,432	13.2	90,144	24,428	27.1	29,828	4,892	16.4
1991	264,350	50,241	19.0	57,015	8,346	14.6	81,672	11,444	14.0	96,884	25,381	26.2	28,779	5,070	17.6
1992	275,313	55,927	20.3	60,782	6,633	10.9	85,294	13,274	15.6	100,035	31,775	31.8	29,202	4,245	14.5
1993	285,731	50,310	17.6	62,496	8,751	14.0	87,837	15,090	17.2	104,919	22,183	21.1	30,479	4,286	14.1
1994	305,526	50,329	16.5	70,230	9,382	13.4	92,569	13,082	14.1	112,631	23,839	21.2	30,096	4,046	13.4
1995	324,842	56,074	17.3	79,128	10,415	13.2	99,458	16,807	16.9	115,591	24,602	21.3	30,665	4,250	13.9
1996	353,595	86,972	24.6	90,825	23,952	26.4	111,592	21,637	19.4	113,984	32,462	28.5	37,194	9,821	26.4

Table 38 Numbers and proportions of first ten leading cause groups of death according to ICD-9 (1984-1993) and ICD-10 (1994-1997) by sex

ICD-9	Ten leading cause groups of deaths (numbers)										Sum 1-10	Total Deaths All Causes	Unknown Age Deaths	Proportions of deaths by cause groups to total deaths										Sum 1-10
	1	2	3	4	5	6	7	8	9	10				1	2	3	4	5	6	7	8	9	10	
MALES																								
ICD-9																								
1984	10265	6857	6899	4091	4179	6456	3476	3404	4507	2759	52893	125908	128932	0.080	0.053	0.054	0.032	0.032	0.032	0.027	0.026	0.035	0.021	0.410
1985	10824	6782	7333	4547	4154	5321	3524	2906	3397	2648	51436	128280	130865	0.083	0.052	0.058	0.035	0.032	0.032	0.041	0.027	0.022	0.026	0.393
1986	11311	6601	5928	4921	3709	4720	3333	3042	3419	2878	49862	121705	125755	0.090	0.052	0.047	0.039	0.029	0.038	0.027	0.024	0.027	0.027	0.397
1987	13094	7193	6599	5231	4247	4517	3602	3102	3675	3362	54622	130118	133129	0.098	0.054	0.050	0.039	0.029	0.034	0.027	0.023	0.028	0.028	0.410
1988	13976	6956	7546	5690	4309	4712	2994	3216	4491	3109	57199	130582	2988	0.105	0.052	0.056	0.043	0.032	0.035	0.022	0.024	0.034	0.034	0.428
1989	15866	7089	9143	6274	4819	4488	2815	3489	5471	3375	62829	140257	2988	0.111	0.050	0.064	0.044	0.034	0.031	0.020	0.024	0.038	0.038	0.439
1990	17108	7147	10958	6852	4710	4154	2696	3701	6938	3524	67798	145161	2726	0.116	0.048	0.074	0.046	0.032	0.028	0.018	0.025	0.047	0.047	0.458
1991	18026	7301	11452	7016	5070	3952	2507	3887	8407	3556	71174	152734	2794	0.116	0.047	0.074	0.045	0.033	0.025	0.016	0.025	0.054	0.054	0.458
1992	18932	7129	12020	7827	5506	4249	2462	4316	9418	3626	75485	159864	2682	0.116	0.044	0.074	0.048	0.034	0.026	0.015	0.027	0.058	0.058	0.464
1993	20263	7215	13548	7502	6386	3888	2547	4066	10340	3757	79512	178289	30045	0.097	0.035	0.065	0.036	0.031	0.019	0.012	0.020	0.050	0.050	0.382
ICD-10																								
1994	32079	28833	17216	14102	10609	7381	3467	4156	1892	3481	123216	182583	2871	0.173	0.158	0.093	0.076	0.057	0.040	0.019	0.022	0.010	0.019	0.664
1995	35191	35603	18202	15229	11789	7456	3690	5445	1904	3143	137632	195686	2703	0.177	0.179	0.092	0.077	0.059	0.038	0.019	0.027	0.010	0.016	0.694
1996	40218	37844	18734	13997	12088	7512	2760	8598	2375	3347	147473	207797	10796	0.184	0.173	0.086	0.064	0.055	0.034	0.013	0.039	0.011	0.015	0.675
FEMALES																								
ICD-9																								
1984	6509	3289	2509	3429	2633	898	1692	2132	1385	1826	26262	90283	92578	0.070	0.036	0.027	0.037	0.028	0.010	0.018	0.023	0.015	0.020	0.284
1985	7058	3481	2620	3893	2487	811	1818	1883	1060	1739	26850	95704	97631	0.072	0.036	0.027	0.040	0.025	0.008	0.019	0.019	0.011	0.018	0.275
1986	7383	3176	2184	3975	2260	705	1836	1802	989	1843	26153	91645	94058	0.078	0.034	0.023	0.042	0.024	0.007	0.020	0.019	0.011	0.020	0.278
1987	8532	3394	2193	4333	2511	712	1869	2010	961	2188	28703	97955	99851	0.085	0.034	0.022	0.043	0.025	0.007	0.019	0.020	0.010	0.022	0.287
1988	8960	3275	2635	4531	2567	768	1501	2009	1163	2120	29529	95513	890	0.092	0.034	0.027	0.047	0.026	0.008	0.015	0.021	0.012	0.022	0.303
1989	10341	3445	2748	4875	2784	710	1403	2251	1382	2191	32130	101513	1886	0.100	0.033	0.027	0.047	0.027	0.007	0.014	0.022	0.013	0.021	0.311
1990	10809	3224	3298	5563	2600	614	1241	2187	1628	2110	33274	102742	1869	0.103	0.031	0.032	0.053	0.025	0.006	0.012	0.022	0.016	0.021	0.318
1991	11720	3183	3191	5411	2819	691	1156	2395	1968	2279	34813	107606	1457	0.107	0.029	0.029	0.050	0.026	0.006	0.011	0.022	0.018	0.021	0.319
1992	11838	3094	3410	5796	2737	704	1133	2460	2114	2184	35470	111070	1688	0.105	0.027	0.030	0.051	0.024	0.006	0.010	0.022	0.019	0.019	0.315
1993	12138	3098	3578	5548	3230	640	967	2402	2200	2006	35807	120242	1820	0.099	0.025	0.029	0.045	0.026	0.005	0.008	0.020	0.018	0.016	0.293
ICD-10																								
1994	19857	7322	11525	6670	5352	3237	2871	2178	2628	680	62320	119858	1913	0.163	0.060	0.095	0.055	0.044	0.027	0.024	0.018	0.022	0.006	0.512
1995	21127	8692	11993	7401	5778	3036	2995	2649	2741	1153	67565	124801	1612	0.167	0.069	0.095	0.059	0.046	0.024	0.024	0.021	0.022	0.009	0.534
1996	24603	9286	12164	6351	6514	3152	2402	4540	3600	581	73193	128974	11340	0.175	0.066	0.087	0.045	0.046	0.022	0.017	0.032	0.026	0.004	0.522

ICD-9 First ten leading of cause groups of death over 1984-1993

ICD-10 First ten leading of cause groups of death over 1994-1996

- 1 Diseases of pulmonary circulation and other forms of heart disease (415-492)
- 2 Diseases of the digestive system other than oral cavity, salivary glands and jaws (530-579)
- 3 Other accidents, including late effect (E900-E929)
- 4 Malignant neoplasm of other and unspecified sites (1900-199)
- 5 Diseases of the respiratory system other than the upper respiratory tract (466, 480-519)
- 6 Homicide and injury purposely inflicted by other persons (E960-E969)
- 7 Tuberculosis (010-018)
- 8 Cerebrovascular disease (430-438)
- 9 Transport accidents (E800-E848)
- 10 Diseases of nervous system (320-359)

Indicate cause groups of death by accidents

- 1 Diseases of circulatory system (100-199)
- 2 Other accidents, including late effect (V01-V99, W00-W99, X00-X59, Y10-Y89)
- 3 Neoplasms (C00-D48)
- 4 Diseases of the respiratory system (100-198)
- 5 Certain infections and parasitic diseases (A00-B99)
- 6 Diseases of the digestive system (K00-K92)
- 7 Diseases of the genitourinary system (N00-N98)
- 8 Diseases of the nervous system (G00-G98)
- 9 Endocrine, nutritional and metabolic diseases (E00-E88)
- 10 Assault (X85-Y09)

Table 39 Age-sex distribution of deaths from motor vehicle traffic accidents rate per 100,000 from 1984 to 1996, by region

MALES													
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
0-4	2.8	3.1	2.8	1.4	2.8	2.5	2.8	3.2	3.4	3.5	4.1	4.3	4.3
5-9	4.3	3.3	4.3	3.7	4.1	2.8	4.0	4.7	4.6	4.8	5.6	4.8	7.1
10-14	4.6	3.9	4.6	3.5	3.9	4.5	5.4	6.4	7.2	8.3	10.0	11.7	14.4
15-19	19.3	13.5	19.3	16.9	19.3	24.4	33.9	41.9	47.2	56.2	63.3	71.9	83.8
20-24	104.5	74.8	100.9	71.6	92.8	114.4	147.1	180.9	199.0	213.5	223.2	251.6	292.1
25-29	32.7	25.3	30.7	24.2	26.1	35.6	42.6	49.0	52.3	58.1	59.4	65.0	73.4
30-34	25.0	17.4	23.3	18.0	25.1	26.8	32.3	42.4	41.3	47.0	49.6	49.9	58.2
35-39	22.0	16.0	20.1	17.7	20.5	23.5	26.6	36.0	37.6	42.2	43.6	41.7	51.5
40-44	22.7	16.5	20.8	15.4	18.3	20.8	27.7	31.2	31.0	35.3	37.2	40.1	41.5
45-49	22.7	15.2	21.8	17.0	18.7	20.0	25.1	25.9	28.3	34.7	32.8	40.3	45.6
50-54	21.3	13.5	20.3	15.7	17.9	24.5	22.9	25.3	31.8	29.3	33.5	31.8	37.6
55-59	17.8	15.0	16.8	12.7	17.6	20.1	22.4	24.2	28.2	31.1	33.3	35.4	38.1
60-64	19.9	14.8	18.4	18.6	17.4	20.3	23.9	23.2	25.1	28.5	32.4	29.4	35.9
65-69	18.6	15.6	17.2	13.9	11.1	17.4	14.5	25.6	24.5	26.7	28.6	31.3	36.2
70-74	13.0	14.4	12.4	11.5	16.4	13.6	24.1	17.4	26.8	20.5	29.8	28.3	28.7
75 +	8.9	7.4	8.4	5.1	7.6	8.2	12.1	7.5	15.6	14.9	12.8	19.9	18.3
Total	17.3	12.9	16.8	13.3	17.8	19.2	23.9	28.6	31.0	34.6	37.0	40.1	46.2
North Region	na	13.5	13.2	12.7	12.8	17.8	19.8	25.9	32.4	36.7	35.4	47.5	53.7
Northeast Region	na	5.2	5.0	4.9	8.0	9.8	9.2	11.6	12.7	18.4	19.0	27.8	41.7
Central Region + BKK.	na	20.0	19.4	21.7	26.3	30.7	43.5	50.3	52.3	54.9	62.2	54.4	49.3
South Region	na	13.6	13.4	14.4	14.7	16.2	21.0	27.4	28.0	26.7	28.5	29.7	45.8
Bangkok	na	9.8	100.6	13.4	15.2	16.9	40.4	54.4	56.4	56.8	64.3	47.8	1.3
FEMALES													
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
0-4	2.0	1.7	1.6	1.1	1.4	1.3	1.7	2.8	1.9	2.7	3.0	2.6	3.7
5-9	3.0	2.3	2.5	2.3	2.6	3.0	2.2	2.9	3.3	3.3	2.8	3.6	3.7
10-14	2.4	1.9	2.2	1.8	2.0	2.1	2.6	3.6	3.4	4.5	3.8	5.1	5.2
15-19	5.7	3.7	3.5	4.0	4.9	5.3	5.9	9.1	10.1	9.8	11.4	12.0	13.3
20-24	6.0	5.0	4.9	4.5	4.9	6.7	6.9	8.7	9.5	8.0	9.7	10.9	11.4
25-29	5.4	3.8	3.8	4.1	5.4	5.9	6.9	8.4	8.4	8.5	9.9	8.9	11.7
30-34	4.5	4.4	3.6	3.7	4.9	5.7	6.9	8.1	7.2	8.3	9.1	9.2	11.8
35-39	5.3	5.0	4.6	4.1	5.4	6.3	6.5	7.7	8.4	8.0	9.8	8.3	11.3
40-44	6.9	5.6	4.8	3.7	4.4	6.2	6.0	6.9	7.3	9.8	8.7	9.4	10.4
45-49	8.2	5.2	3.6	3.5	5.4	6.6	7.0	8.3	7.9	8.1	8.5	10.8	11.4
50-54	8.1	5.2	4.3	5.8	5.2	5.9	6.8	8.4	8.3	9.1	9.8	8.9	11.1
55-59	9.2	6.5	5.6	6.2	5.3	5.9	8.3	9.0	8.8	10.4	9.2	8.4	11.4
60-64	7.2	7.9	5.9	6.4	5.8	6.9	9.5	7.2	8.4	9.3	10.1	9.1	11.8
65-69	7.5	6.3	4.5	3.7	6.0	7.0	7.3	6.8	8.5	9.9	12.2	10.6	10.3
70-74	11.5	8.9	6.1	5.3	4.9	8.5	8.7	9.1	11.9	10.3	9.8	11.2	10.8
75 +	4.8	3.4	2.3	2.5	2.8	3.2	4.4	5.9	5.4	3.2	5.0	5.4	5.7
Total	5.1	4.0	3.6	3.5	4.2	4.9	5.5	6.7	6.9	7.3	8.0	8.2	9.6
North Region	na	3.5	3.2	3.1	3.2	4.4	3.7	5.5	6.7	7.6	7.2	9.6	11.1
Northeast Region	na	1.7	1.3	1.5	2.4	2.6	2.6	2.9	2.8	4.1	4.1	5.8	7.8
Central Region +BKK.	na	5.7	5.2	5.8	6.2	7.8	9.6	11.2	11.5	11.3	13.4	10.9	10.5
South Region	na	6.3	6.3	3.3	5.0	4.4	6.3	8.5	7.9	6.3	6.8	6.5	11.8
Bangkok	na	3.0	3.6	3.1	3.7	3.7	7.4	10.5	9.0	9.4	10.7	7.2	1.3

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Whole Country													
Registered deaths	125,908	128,280	121,705	130,118	130,582	140,257	145,161	152,734	159,864	178,289	182,583	195,686	207,797
Unknown age	3,024	2,585	3,387	3,011	2,988	2,887	2,726	2,439	2,682	3,045	2,894	2,725	10,887
Deaths corrected for unknown age	[2]	128,932	130,865	125,092	133,129	133,370	143,144	147,887	162,546	181,334	185,477	198,411	218,684
Proportion complete registration	[4]	0.738	0.757	0.776	0.795	0.814	0.833	0.853	0.891	0.910	0.929	0.948	0.967
Deaths with AIDS corrected for incomplete	[5]=[3]/[4]	174,728	172,873	161,180	167,416	164,030	171,759	173,474	182,492	199,312	199,674	209,294	226,123
Deaths without AIDS (1984-91 trend)	[6]	168,167	168,815	169,464	170,113	170,761	171,410	172,058	173,356	174,004	174,653	175,302	175,950
Excess deaths	[7]=[5]-[6]	6,562	4,058	-8,284	-2,697	-6,731	349	5,325	9,137	25,308	25,021	33,993	50,173
							Cumulative total death attributable to AIDS over the period 1992-1996 =			143,631			
Central Region													
Observed deaths	58,039	56,089	51,860	55,853	56,261	61,255	62,638	66,196	67,340	75,229	74,401	75,433	72,164
Expected deaths	53,589	54,999	56,409	57,819	59,229	60,638	62,048	63,458	64,868	66,278	67,688	69,098	70,508
Excess deaths	4,450	1,090	-4,549	-1,966	-2,968	617	590	2,737	2,472	8,951	6,713	6,336	1,656
							Cumulative total death attributable to AIDS over the period 1992-1996 =			26,128			
Bangkok Metropolitan													
Observed deaths	15,950	18,046	15,742	17,791	17,148	18,852	18,945	21,018	20,553	21,328	21,963	21,449	16,323
Expected deaths	15,908	16,488	17,067	17,646	18,226	18,805	19,384	19,964	20,543	21,122	21,702	22,281	22,860
Excess deaths	42	1,558	-1,325	145	-1,078	47	-439	1,055	10	206	262	-832	-6,538
							Cumulative total death attributable to AIDS over the period 1992-1996 =			-6,892			
Zone 01													
Observed deaths	8,603	7,614	7,779	8,204	7,854	9,030	9,121	9,758	10,630	11,437	12,111	12,211	13,160
Expected deaths	7,703	7,929	8,156	8,382	8,609	8,835	9,062	9,288	9,515	9,741	9,968	10,194	10,421
Excess deaths	900	-315	-377	-178	-754	195	59	470	1,116	1,696	2,143	2,017	2,739
							Cumulative total death attributable to AIDS over the period 1992-1996 =			9,710			
Samut Prakan													
Observed deaths	1,707	1,644	1,844	1,912	1,991	2,200	2,419	2,544	2,751	2,938	3,239	3,184	2,871
Expected deaths	1,579	1,709	1,838	1,968	2,097	2,227	2,356	2,486	2,615	2,745	2,874	3,004	3,133
Excess deaths	127	-64	6	-55	-106	-27	62	58	136	193	365	180	-263
							Cumulative total death attributable to AIDS over the period 1992-1996 =			612			
Nonthaburi													
Observed deaths	2,469	1,636	1,875	2,125	1,876	2,303	2,341	2,390	2,717	2,923	3,369	3,374	2,796
Expected deaths	1,960	2,008	2,056	2,103	2,151	2,199	2,246	2,294	2,342	2,389	2,437	2,485	2,532
Excess deaths	509	-372	-180	22	-275	105	95	96	375	533	932	889	263
							Cumulative total death attributable to AIDS over the period 1992-1996 =			2,992			
Pathum Thani													
Observed deaths	992	927	871	789	875	1,236	1,192	1,441	1,486	1,686	1,480	1,543	2,674
Expected deaths	805	872	940	1,007	1,074	1,141	1,209	1,276	1,343	1,411	1,478	1,545	1,612
Excess deaths	187	55	-68	-218	-199	95	-16	165	142	275	3	-2	1,061
							Cumulative total death attributable to AIDS over the period 1992-1996 =			1,479			

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Ayutthaya													
Observed deaths	2,312	2,063	2,050	2,095	2,012	2,034	1,990	2,105	2,392	2,566	2,612	2,602	3,134
Expected deaths	2,164	2,141	2,117	2,094	2,071	2,048	2,025	2,001	1,978	1,955	1,932	1,909	1,885
Excess deaths	149	-78	-67	1	-59	-14	-35	104	414	610	680	694	1,249
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Ang Thong													
Observed deaths	779	1,011	828	978	814	937	871	959	970	1,006	1,102	1,215	1,368
Expected deaths	867	876	884	893	901	910	919	927	936	944	953	962	970
Excess deaths	-88	135	-56	85	-87	27	-48	32	34	62	149	253	398
	Cumulative total death attributable to AIDS over the period 1992-1996 = 897												
Zone 02													
Observed deaths	9,895	8,673	8,256	9,031	9,457	9,506	10,129	10,463	10,662	12,027	12,856	12,445	12,124
Expected deaths	8,783	8,967	9,151	9,334	9,518	9,702	9,885	10,069	10,253	10,436	10,620	10,804	10,987
Excess deaths	1,112	-294	-894	-303	-61	-196	244	394	409	1,591	2,236	1,641	1,136
	Cumulative total death attributable to AIDS over the period 1992-1996 = 7,013												
Lopburi													
Observed deaths	1,765	1,717	1,711	1,697	1,872	1,948	1,968	2,089	1,938	2,092	2,178	1,994	2,830
Expected deaths	1,663	1,715	1,767	1,820	1,872	1,925	1,977	2,030	2,082	2,134	2,187	2,239	2,292
Excess deaths	103	2	-56	-123	0	23	-9	59	-144	-42	-9	-245	539
	Cumulative total death attributable to AIDS over the period 1992-1996 = 98												
Singburi													
Observed deaths	966	842	683	735	930	958	1,122	1,106	1,000	953	923	1,127	1,052
Expected deaths	776	817	857	897	938	978	1,019	1,059	1,099	1,140	1,180	1,220	1,261
Excess deaths	190	25	-174	-163	-8	-21	103	47	-100	-187	-257	-94	-209
	Cumulative total death attributable to AIDS over the period 1992-1996 = -847												
Chainat													
Observed deaths	1,100	1,051	948	1,030	953	1,020	999	1,054	1,063	1,115	1,175	1,308	1,399
Expected deaths	1,038	1,033	1,027	1,022	1,017	1,011	1,006	1,001	996	990	985	980	975
Excess deaths	62	19	-80	8	-64	8	-7	53	67	124	190	328	424
	Cumulative total death attributable to AIDS over the period 1992-1996 = 1,134												
Saraburi													
Observed deaths	2,390	1,482	1,425	2,045	2,259	2,425	2,599	2,618	3,069	3,952	4,550	3,494	2,286
Expected deaths	1,723	1,846	1,970	2,094	2,217	2,341	2,465	2,588	2,712	2,836	2,960	3,083	3,207
Excess deaths	668	-365	-544	-48	42	84	134	30	357	1,116	1,590	411	-921
	Cumulative total death attributable to AIDS over the period 1992-1996 = 2,554												
Nakhonnayok													
Observed deaths	797	705	703	669	676	671	736	696	738	897	882	857	1,035
Expected deaths	734	726	718	711	703	695	688	680	672	665	657	649	642
Excess deaths	63	-20	-15	-41	-27	-24	48	16	65	232	224	208	393
	Cumulative total death attributable to AIDS over the period 1992-1996 = 1,122												

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Suphanburi													
Observed deaths	2,516	2,552	2,491	2,574	2,494	2,218	2,451	2,653	2,629	2,786	2,925	3,460	3,280
Expected deaths	2,512	2,507	2,502	2,496	2,491	2,486	2,480	2,475	2,470	2,464	2,459	2,454	2,448
Excess deaths	4	45	-11	78	3	-268	-30	178	159	322	466	1,006	832
	Cumulative total death attributable to AIDS over the period 1992-1996 = 2,784												
Zone 03													
Observed deaths	9,929	8,777	8,433	8,623	9,082	10,715	10,908	11,264	11,161	15,115	11,459	12,897	14,098
Expected deaths	8,579	8,904	9,229	9,554	9,879	10,204	10,529	10,854	11,179	11,504	11,829	12,154	12,479
Excess deaths	1,350	-127	-796	-931	-797	511	379	410	-18	3,611	-370	743	1,619
	Cumulative total death attributable to AIDS over the period 1992-1996 = 5,585												
Chonburi													
Observed deaths	3,218	2,585	2,355	2,299	2,559	3,487	3,702	3,879	3,695	6,919	3,287	3,731	3,983
Expected deaths	2,433	2,598	2,763	2,928	3,093	3,258	3,423	3,588	3,753	3,918	4,083	4,248	4,413
Excess deaths	785	-13	-408	-629	-534	229	279	291	-58	3,001	-796	-517	-430
	Cumulative total death attributable to AIDS over the period 1992-1996 = 1,200												
Rayong													
Observed deaths	1,258	1,261	1,278	1,286	1,345	1,625	1,456	1,519	1,493	1,531	1,688	1,858	1,991
Expected deaths	1,216	1,262	1,309	1,355	1,402	1,448	1,495	1,541	1,588	1,634	1,681	1,727	1,773
Excess deaths	42	-1	-31	-70	-56	177	-39	-22	-95	-104	7	131	218
	Cumulative total death attributable to AIDS over the period 1992-1996 = 158												
Chanthaburi													
Observed deaths	1,972	1,842	1,749	1,679	1,740	1,847	1,941	1,980	1,935	2,045	2,220	2,504	2,070
Expected deaths	1,806	1,816	1,827	1,838	1,849	1,860	1,871	1,881	1,892	1,903	1,914	1,925	1,936
Excess deaths	166	25	-79	-159	-109	-12	70	98	42	142	306	579	135
	Cumulative total death attributable to AIDS over the period 1992-1996 = 1,205												
Trat													
Observed deaths	721	648	620	673	701	724	804	690	704	666	643	1,082	898
Expected deaths	660	671	681	692	703	714	724	735	746	757	767	778	789
Excess deaths	61	-23	-61	-19	-2	10	80	-46	-42	-91	-125	304	109
	Cumulative total death attributable to AIDS over the period 1992-1996 = 156												
Chachoengsao													
Observed deaths	1,890	1,665	1,618	1,555	1,702	1,716	1,797	1,760	1,650	1,398	1,392	1,430	2,223
Expected deaths	1,705	1,707	1,710	1,712	1,714	1,716	1,719	1,721	1,723	1,726	1,728	1,730	1,733
Excess deaths	185	-42	-91	-157	-12	0	79	39	-73	-328	-336	-300	491
	Cumulative total death attributable to AIDS over the period 1992-1996 = -547												
Prachinburi													
Observed deaths	1,505	1,295	1,274	1,554	1,467	1,796	1,686	1,899	2,100	3,112	1,591	1,378	1,625
Expected deaths	1,302	1,375	1,449	1,523	1,597	1,670	1,744	1,818	1,892	1,965	2,039	2,113	2,186
Excess deaths	204	-81	-175	31	-129	126	-58	82	208	1,146	-448	-735	-561
	Cumulative total death attributable to AIDS over the period 1992-1996 = -389												

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Sakaeaw													
Observed deaths	0	0	0	0	0	0	0	0	0	0	1,037	1,337	1,747
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Zone 04													
Observed deaths	10,116	9,595	8,763	9,274	9,911	10,241	10,746	10,906	11,708	12,550	13,528	14,045	14,402
Expected deaths	9,263	9,457	9,652	9,847	10,041	10,236	10,430	10,625	10,820	11,014	11,209	11,404	11,598
Excess deaths	853	138	-889	-572	-131	5	315	281	888	1,536	2,319	2,641	2,804
							Cumulative total death attributable to AIDS over the period 1992-1996 =		10,189				
Ratchaburi													
Observed deaths	2,910	2,830	2,723	2,629	2,570	2,702	2,778	2,730	3,045	3,164	3,448	3,656	3,431
Expected deaths	2,802	2,783	2,763	2,744	2,724	2,705	2,685	2,666	2,646	2,627	2,607	2,588	2,568
Excess deaths	107	47	-40	-115	-155	-2	93	64	399	538	841	1,068	863
							Cumulative total death attributable to AIDS over the period 1992-1996 =		3,709				
Kanchanaburi													
Observed deaths	1,293	1,388	1,166	1,347	1,514	1,443	1,644	1,527	2,046	1,799	2,239	2,115	2,288
Expected deaths	1,252	1,299	1,345	1,392	1,438	1,485	1,532	1,578	1,625	1,671	1,718	1,765	1,811
Excess deaths	41	89	-179	-45	75	-42	112	-51	422	128	521	350	477
							Cumulative total death attributable to AIDS over the period 1992-1996 =		1,898				
Nakhon Pathom													
Observed deaths	2,290	2,058	1,959	2,174	2,233	2,362	2,464	2,290	2,443	2,813	3,016	3,016	2,983
Expected deaths	2,091	2,131	2,170	2,209	2,248	2,288	2,327	2,366	2,405	2,445	2,484	2,523	2,562
Excess deaths	198	-73	-210	-35	-15	74	137	-76	38	368	532	493	420
							Cumulative total death attributable to AIDS over the period 1992-1996 =		1,851				
Samut Sakhon													
Observed deaths	1,009	931	931	915	1,002	1,093	1,185	1,475	1,276	1,471	1,572	1,739	1,512
Expected deaths	855	916	976	1,037	1,098	1,159	1,220	1,280	1,341	1,402	1,463	1,524	1,584
Excess deaths	154	15	-45	-122	-96	-66	-35	195	-65	69	109	215	-72
							Cumulative total death attributable to AIDS over the period 1992-1996 =		256				
Samut Songkhram													
Observed deaths	722	726	659	737	654	603	588	627	630	735	743	604	881
Expected deaths	732	712	693	674	655	636	617	598	578	559	540	521	502
Excess deaths	-10	14	-34	63	-1	-33	-28	29	52	176	203	84	379
							Cumulative total death attributable to AIDS over the period 1992-1996 =		894				
Phetchaburi													
Observed deaths	1,374	1,077	875	884	1,214	1,312	1,359	1,419	1,426	1,594	1,498	1,842	1,934
Expected deaths	1,049	1,089	1,129	1,169	1,209	1,249	1,289	1,329	1,369	1,409	1,449	1,489	1,529
Excess deaths	325	-12	-254	-286	5	63	70	89	56	184	48	353	405
							Cumulative total death attributable to AIDS over the period 1992-1996 =		1,046				

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Phachuap Khiri Khan													
Observed deaths	1,153	1,162	957	1,095	1,204	1,193	1,179	1,257	1,262	1,410	1,447	1,485	1,771
Expected deaths	1,082	1,101	1,140	1,160	1,160	1,179	1,199	1,218	1,237	1,257	1,276	1,296	1,315
Excess deaths	71	61	-164	-45	44	14	-20	39	24	153	171	189	456
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	59,691	59,399	56,923	58,771	55,227	55,198	54,120	54,511	55,410	58,922	57,735	61,178	68,850
Expected deaths	59,704	58,855	58,005	57,155	56,306	55,456	54,606	53,757	52,907	52,057	51,208	50,358	49,508
Excess deaths	-14	544	-1,081	1,616	-1,078	-258	-486	754	2,503	6,865	6,527	10,820	19,342
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	18,612	18,595	17,378	18,809	17,630	17,954	17,331	17,611	17,790	18,469	19,300	20,065	23,155
Expected deaths	18,523	18,371	18,219	18,066	17,914	17,762	17,610	17,458	17,306	17,153	17,001	16,849	16,697
Excess deaths	89	225	-840	743	-284	192	-279	154	485	1,316	2,299	3,216	6,458
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Nakhon Rachasima													
Observed deaths	6,676	6,764	6,546	6,691	6,786	6,701	6,770	6,597	6,828	7,261	7,516	7,711	8,015
Expected deaths	6,689	6,690	6,690	6,691	6,691	6,692	6,692	6,693	6,694	6,694	6,695	6,695	6,696
Excess deaths	-14	74	-145	0	94	9	77	-96	135	567	822	1,016	1,320
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	3,536	3,776	3,706	3,885	3,486	3,545	3,249	3,423	3,550	3,476	3,659	4,100	4,423
Expected deaths	3,755	3,704	3,653	3,601	3,550	3,499	3,448	3,396	3,345	3,294	3,243	3,191	3,140
Excess deaths	-219	72	53	283	-64	46	-198	27	205	182	416	908	1,283
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	3,040	3,118	2,494	2,963	2,335	2,741	2,729	2,767	2,524	2,291	3,076	3,893	4,300
Expected deaths	2,930	2,885	2,840	2,796	2,751	2,707	2,662	2,617	2,573	2,528	2,484	2,439	2,394
Excess deaths	111	233	-346	168	-416	34	67	150	-49	-237	592	1,454	1,905
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	2,622	2,338	2,100	2,710	2,640	2,527	2,240	2,519	2,484	2,781	2,284	1,644	3,340
Expected deaths	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,463	2,463	2,463	2,463
Excess deaths	160	-124	-362	248	178	65	-222	57	22	319	-178	-819	878
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	2,739	2,600	2,533	2,560	2,384	2,439	2,342	2,305	2,403	2,660	2,764	2,718	3,077
Expected deaths	2,687	2,630	2,573	2,516	2,459	2,402	2,345	2,289	2,232	2,175	2,118	2,061	2,004
Excess deaths	52	-30	-40	44	-76	37	-3	16	171	486	647	657	1,072
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	3,040	3,118	2,494	2,963	2,335	2,741	2,729	2,767	2,524	2,291	3,076	3,893	4,300
Expected deaths	2,930	2,885	2,840	2,796	2,751	2,707	2,662	2,617	2,573	2,528	2,484	2,439	2,394
Excess deaths	111	233	-346	168	-416	34	67	150	-49	-237	592	1,454	1,905
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	2,622	2,338	2,100	2,710	2,640	2,527	2,240	2,519	2,484	2,781	2,284	1,644	3,340
Expected deaths	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,463	2,463	2,463	2,463
Excess deaths	160	-124	-362	248	178	65	-222	57	22	319	-178	-819	878
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Observed deaths	2,739	2,600	2,533	2,560	2,384	2,439	2,342	2,305	2,403	2,660	2,764	2,718	3,077
Expected deaths	2,687	2,630	2,573	2,516	2,459	2,402	2,345	2,289	2,232	2,175	2,118	2,061	2,004
Excess deaths	52	-30	-40	44	-76	37	-3	16	171	486	647	657	1,072
	Cumulative total death attributable to AIDS over the period 1992-1996 =												

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Zone 06													
Observed deaths	22,564	22,239	21,567	22,070	20,623	20,259	19,952	19,994	19,895	19,799	20,652	22,036	24,132
Expected deaths	22,609	22,195	21,780	21,366	20,952	20,538	20,123	19,709	19,295	18,881	18,466	18,052	17,638
Excess deaths	-45	45	-213	704	-329	-278	-171	285	600	918	2,186	3,984	6,494
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	0	0	0	0	0	0	0	0	0	75	1,151	1,238	1,586
Nongbua Lamphu													
Observed deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Khon Kaen													
Observed deaths	5,638	5,028	4,910	5,036	5,179	5,200	5,073	5,367	5,625	5,699	5,833	6,310	5,858
Expected deaths	5,207	5,199	5,191	5,183	5,175	5,167	5,159	5,151	5,143	5,135	5,127	5,119	5,111
Excess deaths	432	-170	-281	-147	4	33	-86	216	481	564	706	1,191	747
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Udon Thani													
Observed deaths	5,433	5,480	5,562	5,473	4,961	4,767	4,641	4,601	4,344	4,377	3,498	4,180	4,771
Expected deaths	5,653	5,499	5,345	5,192	5,038	4,884	4,730	4,577	4,423	4,269	4,115	3,961	3,808
Excess deaths	-220	-19	217	282	-77	-117	-89	24	-79	108	-618	218	963
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Loei													
Observed deaths	1,801	1,947	1,908	1,848	1,711	1,719	1,726	1,549	1,509	1,644	1,712	1,777	2,017
Expected deaths	1,925	1,882	1,840	1,797	1,755	1,712	1,670	1,627	1,585	1,542	1,500	1,457	1,415
Excess deaths	-124	65	68	51	-44	6	56	-78	-76	101	212	319	602
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Nong Khai													
Observed deaths	2,688	2,677	2,622	2,893	2,409	2,490	2,370	2,364	2,296	2,256	2,436	2,465	2,820
Expected deaths	2,759	2,703	2,648	2,592	2,536	2,481	2,425	2,369	2,313	2,258	2,202	2,146	2,091
Excess deaths	-71	-27	-26	301	-127	9	-55	-5	-18	-1	234	319	729
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Kalasin													
Observed deaths	3,270	3,115	2,828	2,942	2,858	2,873	2,790	2,813	2,836	2,840	2,963	2,990	3,387
Expected deaths	3,135	3,078	3,021	2,965	2,908	2,851	2,794	2,737	2,680	2,624	2,567	2,510	2,453
Excess deaths	135	37	-193	-22	-50	22	-4	75	155	217	396	480	934
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Sakon Nakhon													
Observed deaths	3,734	3,991	3,737	3,877	3,505	3,211	3,351	3,301	3,286	2,907	3,060	3,077	3,693
Expected deaths	3,930	3,832	3,735	3,637	3,540	3,442	3,345	3,247	3,150	3,052	2,955	2,857	2,760
Excess deaths	-195	159	3	240	-35	-232	7	53	136	-145	105	219	933
	Cumulative total death attributable to AIDS over the period 1992-1996 =												

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Northern Region													
Observed deaths	32,829	34,248	31,359	32,367	32,532	33,138	33,914	35,656	38,361	39,894	46,428	51,287	59,498
Expected deaths	32,271	32,553	32,834	33,115	33,396	33,678	33,959	34,240	34,522	34,803	35,084	35,365	35,647
Excess deaths	557	1,695	-1,475	-748	-864	-540	-45	1,416	3,839	5,091	11,344	15,921	23,851
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Zone 08													
Observed deaths	8,436	8,325	7,482	7,930	7,936	8,099	8,361	8,198	8,716	8,896	10,533	10,047	11,831
Expected deaths	8,080	8,085	8,089	8,094	8,098	8,102	8,107	8,111	8,116	8,120	8,124	8,129	8,133
Excess deaths	356	240	-608	-164	-162	-3	254	87	600	776	2,408	1,919	3,698
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Nakhon Sawan													
Observed deaths	3,107	3,007	2,457	2,807	2,820	2,944	3,084	2,951	3,288	3,534	3,778	3,874	4,208
Expected deaths	2,865	2,874	2,883	2,893	2,902	2,911	2,920	2,929	2,939	2,948	2,957	2,966	2,975
Excess deaths	242	133	-426	-86	-82	33	164	22	349	586	821	908	1,233
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Uthai Thani													
Observed deaths	827	820	838	821	865	862	847	820	1,013	1,010	1,060	1,211	1,280
Expected deaths	829	831	834	836	838	841	843	846	848	850	853	855	857
Excess deaths	-2	-12	4	-15	26	21	3	-26	165	160	208	356	422
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Kam Phaeng Phet													
Observed deaths	1,861	1,777	1,665	1,748	1,643	1,720	1,784	1,799	1,931	1,880	3,132	2,288	2,479
Expected deaths	1,764	1,760	1,756	1,752	1,748	1,744	1,740	1,736	1,731	1,727	1,723	1,719	1,715
Excess deaths	98	17	-91	-4	-105	-24	45	63	200	152	1,409	569	764
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Tak													
Observed deaths	997	1,091	1,063	1,095	1,047	1,216	1,183	1,127	984	1,042	999	1,160	1,425
Expected deaths	1,028	1,049	1,071	1,092	1,113	1,134	1,156	1,177	1,198	1,219	1,241	1,262	1,283
Excess deaths	-31	41	-8	3	-66	82	27	-50	-214	-177	-242	-102	142
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Sukothai													
Observed deaths	1,644	1,630	1,459	1,459	1,562	1,357	1,462	1,500	1,500	1,429	1,564	1,514	2,439
Expected deaths	1,594	1,570	1,546	1,521	1,497	1,473	1,448	1,424	1,400	1,375	1,351	1,327	1,302
Excess deaths	49	60	-87	-63	65	-115	14	76	100	54	213	187	1,137
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
Zone 09													
Observed deaths	10,396	10,707	9,595	10,177	9,738	9,997	10,299	10,577	11,459	11,532	12,652	13,782	15,924
Expected deaths	10,186	10,186	10,186	10,186	10,185	10,185	10,185	10,185	10,185	10,185	10,185	10,185	10,184
Excess deaths	210	521	-591	-8	-447	-189	114	392	1,274	1,347	2,468	3,597	5,740
	Cumulative total death attributable to AIDS over the period 1992-1996 =												

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Uttaradit													
Observed deaths	1,537	1,581	1,500	1,511	1,472	1,467	1,509	1,448	1,672	1,733	1,755	1,954	1,804
Expected deaths	1,550	1,536	1,523	1,510	1,496	1,483	1,470	1,456	1,443	1,429	1,416	1,403	1,389
Excess deaths	-13	45	-23	1	-24	-16	39	-8	229	303	339	551	415
	Cumulative total death attributable to AIDS over the period 1992-1996 = 1,837												
Phrae													
Observed deaths	1,280	1,823	1,861	1,899	1,951	2,084	1,877	2,135	2,444	2,422	2,580	2,693	2,936
Expected deaths	1,573	1,656	1,739	1,822	1,905	1,988	2,071	2,154	2,237	2,320	2,403	2,486	2,569
Excess deaths	-293	167	122	77	46	96	-194	-19	206	102	177	207	367
	Cumulative total death attributable to AIDS over the period 1992-1996 = 1,060												
Nan													
Observed deaths	1,867	1,421	1,014	1,062	926	956	995	1,065	1,113	1,107	1,291	1,866	1,977
Expected deaths	1,499	1,403	1,307	1,211	1,115	1,019	924	828	732	636	540	444	348
Excess deaths	368	18	-293	-150	-189	-64	71	238	381	471	751	1,422	1,628
	Cumulative total death attributable to AIDS over the period 1992-1996 = 4,653												
Phitsanulok													
Observed deaths	2,322	2,404	2,207	2,389	2,162	2,302	2,518	2,657	2,819	2,808	3,161	3,168	3,266
Expected deaths	2,246	2,282	2,317	2,352	2,388	2,423	2,459	2,494	2,529	2,565	2,600	2,635	2,671
Excess deaths	76	122	-110	37	-226	-121	59	163	289	244	561	532	595
	Cumulative total death attributable to AIDS over the period 1992-1996 = 2,222												
Phichit													
Observed deaths	1,616	1,304	947	1,329	1,082	1,137	1,164	1,087	1,068	1,012	1,276	1,373	2,329
Expected deaths	1,378	1,330	1,281	1,232	1,184	1,135	1,087	1,038	990	941	892	844	795
Excess deaths	238	-25	-334	97	-102	1	78	49	79	71	384	530	1,534
	Cumulative total death attributable to AIDS over the period 1992-1996 = 2,597												
Phetchabun													
Observed deaths	1,773	2,173	2,067	1,988	2,146	2,051	2,236	2,185	2,344	2,450	2,590	2,728	3,613
Expected deaths	1,940	1,979	2,018	2,058	2,097	2,137	2,176	2,215	2,255	2,294	2,334	2,373	2,412
Excess deaths	-166	194	48	-70	49	-85	60	-30	89	156	256	355	1,201
	Cumulative total death attributable to AIDS over the period 1992-1996 = 2,057												
Zone 10													
Observed deaths	13,996	15,216	14,282	14,260	14,857	15,042	15,255	16,882	18,187	19,466	23,243	27,458	31,742
Expected deaths	14,004	14,281	14,558	14,835	15,112	15,389	15,666	15,943	16,220	16,497	16,774	17,051	17,328
Excess deaths	-8	935	-276	-575	-255	-347	-412	939	1,967	2,969	6,468	10,407	14,414
	Cumulative total death attributable to AIDS over the period 1992-1996 = 36,225												
Chiang Mai													
Observed deaths	5,508	5,626	4,445	4,554	5,090	5,284	5,381	6,077	6,517	6,784	7,656	9,294	10,964
Expected deaths	5,004	5,073	5,142	5,211	5,280	5,350	5,419	5,488	5,557	5,626	5,696	5,765	5,834
Excess deaths	504	553	-697	-657	-190	-66	-38	589	960	1,158	1,961	3,530	5,130
	Cumulative total death attributable to AIDS over the period 1992-1996 = 12,738												

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Lamphun													
Observed deaths	1,396	1,498	1,445	1,408	1,406	1,308	1,360	1,440	1,592	1,817	2,038	2,340	2,873
Expected deaths	1,441	1,431	1,422	1,412	1,403	1,394	1,384	1,375	1,365	1,356	1,346	1,337	1,328
Excess deaths	-45	67	23	-5	3	-85	-24	66	226	462	691	1,003	1,546
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	2,576	2,753	2,875	2,682	2,823	2,645	2,652	2,858	3,082	3,308	3,816	4,199	4,557
Lampang													
Observed deaths	2,695	2,706	2,717	2,727	2,738	2,749	2,760	2,771	2,782	2,793	2,804	2,815	2,826
Expected deaths	-119	48	158	-46	85	-105	-108	87	301	515	1,012	1,385	1,731
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	4,944									4,944			
Phayao													
Observed deaths	1,592	1,712	1,684	1,683	1,671	1,728	1,650	1,910	2,065	2,365	2,661	3,616	3,966
Expected deaths	1,619	1,643	1,667	1,692	1,716	1,740	1,764	1,789	1,813	1,837	1,862	1,886	1,910
Excess deaths	-27	69	17	-8	-45	-13	-114	121	252	528	799	1,730	2,055
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	5,365									5,365			
Chiang Rai													
Observed deaths	2,369	3,069	3,290	3,476	3,415	3,648	3,704	3,999	4,355	4,677	6,549	7,602	8,624
Expected deaths	2,721	2,907	3,093	3,278	3,464	3,650	3,836	4,021	4,207	4,393	4,579	4,764	4,950
Excess deaths	-352	162	197	197	-49	-2	-131	-22	148	284	1,970	2,838	3,674
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	8,915									8,915			
Mae Hong Son													
Observed deaths	556	558	543	457	453	429	507	597	575	514	523	406	759
Expected deaths	525	522	518	514	511	507	503	500	496	492	489	485	481
Excess deaths	31	36	25	-57	-58	-78	4	98	79	21	35	-79	277
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	334									334			
Southern Region													
Observed deaths	25,798	23,420	21,299	20,762	20,164	22,457	23,009	21,740	21,343	25,292	20,856	21,256	24,779
Expected deaths	23,481	23,152	22,824	22,495	22,167	21,838	21,510	21,182	20,853	20,525	20,196	19,868	19,540
Excess deaths	2,318	268	-1,525	-1,733	-2,003	619	1,499	558	490	4,767	659	1,388	5,239
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	12,543									12,543			
Zone 11													
Observed deaths	12,144	10,711	9,877	10,455	10,097	11,290	10,886	9,242	10,015	12,970	9,511	10,078	12,379
Expected deaths	11,237	11,051	10,866	10,681	10,496	10,310	10,125	9,940	9,754	9,569	9,384	9,198	9,013
Excess deaths	907	-340	-989	-226	-398	980	761	-698	260	3,401	127	880	3,366
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	8,035									8,035			
Nakhon Sri Thammarat													
Observed deaths	4,948	4,293	3,614	3,850	4,001	4,578	4,139	2,728	3,724	3,154	3,464	3,617	4,712
Expected deaths	4,572	4,414	4,256	4,098	3,940	3,782	3,624	3,466	3,308	3,150	2,992	2,834	2,676
Excess deaths	377	-121	-642	-248	61	796	515	-738	416	3	472	782	2,035
	Cumulative total death attributable to AIDS over the period 1992-1996 =												
	3,709									3,709			

Table 40 Adjusted estimates of excess male deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Krabi													
Observed deaths	753	610	622	805	731	781	692	750	850	3,933	849	878	948
Expected deaths	685	694	704	713	723	732	742	751	760	770	779	789	798
Excess deaths	68	-85	-81	92	8	49	-50	-1	89	3,163	69	90	150
		Cumulative total death attributable to AIDS over the period 1992-1996 =											
Phangnga													
Observed deaths	917	788	675	612	566	642	679	777	525	473	424	490	862
Expected deaths	776	757	737	717	697	677	657	637	618	598	578	558	538
Excess deaths	140	31	-61	-105	-131	-36	22	140	-93	-125	-154	-68	324
		Cumulative total death attributable to AIDS over the period 1992-1996 =											
Phuket													
Observed deaths	754	624	687	720	719	924	932	875	829	1,395	616	716	775
Expected deaths	651	687	724	761	798	835	871	908	945	982	1,019	1,055	1,092
Excess deaths	104	-63	-37	-40	-79	89	61	-33	-116	413	-403	-340	-317
		Cumulative total death attributable to AIDS over the period 1992-1996 =											
Surat Thani													
Observed deaths	2,848	2,845	2,979	2,997	2,624	2,535	2,507	2,393	2,072	2,088	2,320	2,358	2,811
Expected deaths	2,990	2,912	2,834	2,755	2,677	2,599	2,520	2,442	2,363	2,285	2,207	2,128	2,050
Excess deaths	-142	-67	145	242	-53	-64	-13	-49	-291	-197	113	230	761
		Cumulative total death attributable to AIDS over the period 1992-1996 =											
Ranong													
Observed deaths	363	303	215	291	267	324	510	418	559	446	366	494	465
Expected deaths	264	285	305	326	346	367	387	408	429	449	470	490	511
Excess deaths	98	18	-91	-35	-80	-43	122	10	131	-3	-104	4	-46
		Cumulative total death attributable to AIDS over the period 1992-1996 =											
Chumphon													
Observed deaths	1,561	1,247	1,086	1,179	1,191	1,506	1,427	1,300	1,455	1,482	1,473	1,526	1,806
Expected deaths	1,298	1,302	1,306	1,310	1,314	1,318	1,323	1,327	1,331	1,335	1,339	1,343	1,347
Excess deaths	263	-55	-220	-131	-124	187	105	-26	125	147	134	183	459
		Cumulative total death attributable to AIDS over the period 1992-1996 =											
Zone 12													
Observed deaths	13,654	13,567	12,283	10,848	10,493	11,527	12,493	12,768	11,582	12,790	11,712	11,524	13,857
Expected deaths	12,796	12,627	12,458	12,289	12,120	11,951	11,782	11,613	11,444	11,275	11,106	10,937	10,768
Excess deaths	858	940	-175	-1,441	-1,628	-424	711	1,155	138	1,515	606	587	3,088
		Cumulative total death attributable to AIDS over the period 1992-1996 =											
Songkhla													
Observed deaths	4,411	4,218	4,454	3,245	3,164	3,809	4,326	4,872	3,878	4,943	3,927	3,474	4,417
Expected deaths	3,989	4,010	4,031	4,052	4,073	4,094	4,115	4,135	4,156	4,177	4,198	4,219	4,240
Excess deaths	422	208	422	-807	-909	-285	212	737	-278	766	-271	-745	177
		Cumulative total death attributable to AIDS over the period 1992-1996 =											

Table 41 Adjusted estimates of excess female deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Whole Country													
Observed deaths	125,461	128,971	120,906	125,567	119,616	124,069	122,711	125,233	126,595	134,164	131,107	133,366	145,167
Expected deaths	125,290	124,941	124,591	124,242	123,892	123,543	123,193	122,844	122,494	122,145	121,795	121,445	121,096
Excess deaths	171	4,030	-3,686	1,325	-4,277	526	-482	2,389	4,101	12,019	9,312	11,921	24,071
Cumulative total death attributable to AIDS over the period 1992-1996 = 61,423													
Central Region													
Observed deaths	40,331	40,548	37,585	40,918	39,760	42,594	42,347	44,198	44,259	47,889	46,176	45,858	46,807
Expected deaths	38,955	39,550	40,144	40,738	41,333	41,927	42,522	43,116	43,710	44,305	44,899	45,493	46,088
Excess deaths	1,376	999	-2,559	179	-1,573	667	-174	1,082	548	3,584	1,277	365	719
Cumulative total death attributable to AIDS over the period 1992-1996 = 6,494													
Bangkok Metropolis													
Observed deaths	11,483	13,195	11,277	12,886	12,433	13,511	12,737	13,759	13,021	13,516	13,694	13,019	10,772
Expected deaths	11,832	12,069	12,305	12,542	12,779	13,016	13,252	13,489	13,726	13,963	14,199	14,436	14,673
Excess deaths	-349	1,127	-1,029	344	-346	495	-516	270	-705	-447	-505	-1,417	-3,901
Cumulative total death attributable to AIDS over the period 1992-1996 = -6,975													
Zone 01													
Observed deaths	6,123	5,797	5,933	6,223	5,572	6,363	6,380	6,602	7,098	7,178	7,271	7,264	9,082
Expected deaths	5,836	5,918	6,001	6,083	6,165	6,247	6,330	6,412	6,494	6,576	6,659	6,741	6,823
Excess deaths	286	-121	-68	141	-593	115	50	190	604	601	612	523	2,259
Cumulative total death attributable to AIDS over the period 1992-1996 = 4,600													
Samut Prakan													
Observed deaths	1,080	1,119	1,173	1,200	1,250	1,292	1,467	1,475	1,549	1,660	1,668	1,677	1,905
Expected deaths	1,052	1,111	1,169	1,228	1,286	1,345	1,403	1,462	1,520	1,579	1,638	1,696	1,755
Excess deaths	28	8	4	-27	-36	-53	64	13	28	81	30	-19	150
Cumulative total death attributable to AIDS over the period 1992-1996 = 270													
Nonhaburi													
Observed deaths	1,529	1,140	1,328	1,401	1,220	1,519	1,618	1,571	1,662	1,673	1,853	1,773	1,707
Expected deaths	1,288	1,324	1,361	1,397	1,434	1,470	1,507	1,544	1,580	1,617	1,653	1,690	1,726
Excess deaths	241	-184	-32	3	-214	48	111	27	82	56	200	83	-20
Cumulative total death attributable to AIDS over the period 1992-1996 = 402													
Pathum Thani													
Observed deaths	750	699	703	700	589	857	833	892	984	935	864	917	1,695
Expected deaths	669	693	717	741	765	789	813	837	861	884	908	932	956
Excess deaths	81	6	-14	-41	-176	68	20	55	123	50	-44	-15	739
Cumulative total death attributable to AIDS over the period 1992-1996 = 853													
Ayutthaya													
Observed deaths	1,876	1,687	1,724	1,858	1,594	1,687	1,478	1,565	1,855	1,879	1,885	1,754	2,422
Expected deaths	1,834	1,791	1,748	1,705	1,662	1,619	1,576	1,534	1,491	1,448	1,405	1,362	1,319
Excess deaths	42	-104	-24	153	-68	67	-98	31	365	432	480	392	1,103
Cumulative total death attributable to AIDS over the period 1992-1996 = 2,772													
Ang Thong													
Observed deaths	644	899	772	838	720	794	773	890	844	837	824	967	1,136
Expected deaths	748	760	773	785	797	810	822	834	847	859	871	884	896
Excess deaths	-104	139	-1	53	-77	-16	-49	55	-3	-22	-48	83	240
Cumulative total death attributable to AIDS over the period 1992-1996 = 251													
Zone 02													
Observed deaths	7,147	6,407	6,319	7,103	7,102	7,265	7,521	7,566	7,682	8,007	8,467	8,357	8,453
Expected deaths	6,581	6,716	6,851	6,986	7,121	7,256	7,391	7,526	7,661	7,796	7,931	8,066	8,201
Excess deaths	566	-309	-532	117	-19	9	130	39	20	211	536	290	251
Cumulative total death attributable to AIDS over the period 1992-1996 = 1,308													
Lopburi													
Observed deaths	1,184	1,113	1,205	1,313	1,301	1,353	1,423	1,487	1,380	1,450	1,452	1,264	1,829
Expected deaths	1,126	1,175	1,224	1,273	1,322	1,371	1,420	1,469	1,518	1,566	1,615	1,664	1,713
Excess deaths	58	-63	-19	40	-21	-18	4	19	-137	-117	-163	-400	116
Cumulative total death attributable to AIDS over the period 1992-1996 = -702													
Singburi													
Observed deaths	726	632	605	554	773	855	871	881	861	718	786	860	887
Expected deaths	602	641	679	718	757	795	834	873	911	950	989	1,027	1,066
Excess deaths	124	-8	-74	-164	16	60	37	8	-50	-232	-203	-167	-179
Cumulative total death attributable to AIDS over the period 1992-1996 = -830													
Chainat													
Observed deaths	876	872	772	945	918	943	878	925	926	887	947	1,000	1,093
Expected deaths	855	865	876	886	896	907	917	927	937	948	958	968	979
Excess deaths	21	6	-104	59	22	37	-38	-2	-12	-61	-11	32	114
Cumulative total death attributable to AIDS over the period 1992-1996 = 62													
Saraburi													
Observed deaths	1,574	1,042	1,081	1,379	1,448	1,513	1,573	1,528	1,641	2,133	2,433	1,996	1,464
Expected deaths	1,238	1,282	1,326	1,370	1,414	1,458	1,502	1,546	1,590	1,634	1,678	1,722	1,766
Excess deaths	336	-240	-246	9	33	54	70	-18	51	499	755	274	-302
Cumulative total death attributable to AIDS over the period 1992-1996 = 1,276													
Nakhonnayok													
Observed deaths	547	556	500	556	476	521	537	572	593	603	590	612	673
Expected deaths	531	531	532	533	534	534	535	536	536	537	538	538	539
Excess deaths	17	24	-32	24	-58	-14	2	36	57	66	52	74	134
Cumulative total death attributable to AIDS over the period 1992-1996 = 382													

Table 41 Adjusted estimates of excess female deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Suphanburi													
Observed deaths	1,982	1,957	1,939	2,123	1,978	1,875	2,043	1,980	2,104	2,050	2,101	2,483	2,342
Expected deaths	1,981	1,982	1,983	1,984	1,985	1,986	1,987	1,988	1,988	1,989	1,990	1,991	1,992
Excess deaths	1	-25	-44	139	-7	-111	56	-8	116	60	111	491	350
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,129			
Zone 03													
Observed deaths	6,215	5,681	5,632	5,862	5,676	6,451	6,510	6,873	6,836	9,127	6,794	7,108	8,111
Expected deaths	5,654	5,785	5,916	6,047	6,178	6,309	6,440	6,571	6,703	6,834	6,965	7,096	7,227
Excess deaths	561	-103	-283	-185	-503	141	70	301	134	2,293	-171	12	884
Cumulative total death attributable to AIDS over the period 1992-1996 =										3,153			
Chonburi													
Observed deaths	2,041	1,750	1,690	1,552	1,628	2,058	2,106	2,257	2,244	3,984	1,917	2,081	2,275
Expected deaths	1,699	1,752	1,805	1,859	1,912	1,965	2,018	2,071	2,125	2,178	2,231	2,284	2,337
Excess deaths	342	-2	-116	-307	-284	93	88	185	119	1,806	-314	-203	-62
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,346			
Rayong													
Observed deaths	805	774	816	809	781	826	874	869	889	865	795	862	1,007
Expected deaths	780	791	802	814	825	836	848	859	870	882	893	904	916
Excess deaths	26	-17	14	-5	-44	-11	26	10	19	-17	-98	-42	92
Cumulative total death attributable to AIDS over the period 1992-1996 =										-47			
Chanthaburi													
Observed deaths	1,138	1,277	1,090	1,141	1,077	1,159	1,204	1,156	1,140	1,230	1,260	1,253	1,173
Expected deaths	1,159	1,158	1,157	1,156	1,155	1,154	1,152	1,151	1,150	1,149	1,148	1,147	1,145
Excess deaths	-21	119	-68	-15	-78	5	52	4	-10	81	112	106	28
Cumulative total death attributable to AIDS over the period 1992-1996 =										318			
Trat													
Observed deaths	390	357	402	429	400	432	353	389	377	347	372	580	448
Expected deaths	392	393	393	394	394	394	395	395	396	396	397	397	397
Excess deaths	-3	-36	8	35	6	37	-42	-7	-19	-49	-24	183	50
Cumulative total death attributable to AIDS over the period 1992-1996 =										141			
Chachoengsao													
Observed deaths	1,248	1,084	1,130	1,199	1,190	1,160	1,225	1,284	1,132	995	1,110	1,017	1,489
Expected deaths	1,147	1,159	1,172	1,184	1,196	1,209	1,221	1,234	1,246	1,259	1,271	1,283	1,296
Excess deaths	101	-75	-41	15	-6	-49	4	51	-114	-263	-161	-267	193
Cumulative total death attributable to AIDS over the period 1992-1996 =										-611			
Prachinburi													
Observed deaths	990	789	820	1,030	880	1,114	1,039	1,202	1,312	2,038	963	712	998
Expected deaths	838	880	921	962	1,004	1,045	1,086	1,128	1,169	1,210	1,251	1,293	1,334
Excess deaths	151	-90	-101	68	-124	69	-48	75	143	828	-289	-581	-337
Cumulative total death attributable to AIDS over the period 1992-1996 =										-235			
Sakeaw													
Observed deaths	0	0	0	0	0	0	0	0	0	0	623	848	982
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cumulative total death attributable to AIDS over the period 1992-1996 =										n.a.			
Zone 04													
Observed deaths	6,937	7,057	6,383	6,740	7,023	7,031	7,370	7,578	7,941	8,309	8,421	8,689	9,105
Expected deaths	6,670	6,769	6,867	6,966	7,064	7,163	7,261	7,360	7,458	7,557	7,655	7,754	7,853
Excess deaths	267	289	-484	-226	-41	-132	109	218	483	752	765	935	1,252
Cumulative total death attributable to AIDS over the period 1992-1996 =										4,188			
Ratchaburi													
Observed deaths	2,028	2,068	1,985	1,894	1,958	2,058	1,966	2,107	2,167	2,254	2,271	2,360	2,256
Expected deaths	1,994	1,998	2,002	2,006	2,010	2,014	2,018	2,022	2,026	2,030	2,034	2,038	2,042
Excess deaths	33	70	-17	-112	-52	44	-52	85	141	224	237	322	215
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,139			
Kanchanaburi													
Observed deaths	749	1,010	789	878	961	866	1,013	961	1,270	1,085	1,177	1,278	1,328
Expected deaths	828	849	871	892	914	936	957	979	1,001	1,022	1,044	1,065	1,087
Excess deaths	-79	160	-82	-15	47	-70	55	-17	269	63	134	213	241
Cumulative total death attributable to AIDS over the period 1992-1996 =										919			
Nakhon Pathom													
Observed deaths	1,565	1,573	1,459	1,603	1,701	1,476	1,694	1,636	1,678	1,998	1,863	1,900	1,960
Expected deaths	1,536	1,551	1,566	1,581	1,596	1,610	1,625	1,640	1,655	1,670	1,685	1,699	1,714
Excess deaths	29	22	-107	22	105	-135	68	-5	23	329	178	201	246
Cumulative total death attributable to AIDS over the period 1992-1996 =										977			
Samut Sakhon													
Observed deaths	605	617	592	662	607	703	750	887	769	804	875	961	888
Expected deaths	556	591	626	660	695	730	764	799	834	869	903	938	973
Excess deaths	48	26	-34	2	-88	-27	-15	87	-65	-65	-28	23	-84
Cumulative total death attributable to AIDS over the period 1992-1996 =										-219			

Table 41 Adjusted estimates of excess female deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Samut Songkhram													
Observed deaths	591	620	534	586	506	503	500	535	527	573	589	447	710
Expected deaths	595	582	568	554	540	526	512	498	484	470	456	442	428
Excess deaths	-5	39	-34	33	-34	-23	-12	37	43	102	133	5	282
Cumulative total death attributable to AIDS over the period 1992-1996 =										564			
Phetchaburi													
Observed deaths	981	823	772	773	955	1,018	1,070	1,032	1,044	1,075	1,071	1,105	1,227
Expected deaths	823	853	883	913	943	973	1,003	1,033	1,063	1,093	1,123	1,153	1,183
Excess deaths	158	-30	-111	-140	12	45	67	-1	-19	-17	-52	-48	44
Cumulative total death attributable to AIDS over the period 1992-1996 =										-92			
Phachuap Khiri Khan													
Observed deaths	872	775	623	708	685	734	690	724	781	823	855	901	995
Expected deaths	775	761	747	733	719	706	692	678	664	650	637	623	609
Excess deaths	98	14	-124	-25	-35	28	-2	46	117	172	219	279	386
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,172			
North-Eastern Region													
Observed deaths	45,779	46,641	44,282	45,327	41,747	41,794	40,655	40,613	41,000	42,720	41,068	42,102	45,776
Expected deaths	46,569	45,650	44,732	43,814	42,895	41,977	41,059	40,140	39,222	38,304	37,385	36,467	35,549
Excess deaths	-790	991	-450	1,514	-1,149	-183	-404	472	1,778	4,416	3,683	5,635	10,227
Cumulative total death attributable to AIDS over the period 1992-1996 =										25,740			
Zone 05													
Observed deaths	13,783	14,158	13,512	14,649	12,951	13,268	12,745	12,846	12,995	12,930	13,615	14,192	15,330
Expected deaths	14,158	13,967	13,776	13,585	13,393	13,202	13,011	12,820	12,629	12,438	12,247	12,056	11,865
Excess deaths	-375	191	-264	1,064	-442	65	-266	26	366	492	1,368	2,136	3,466
Cumulative total death attributable to AIDS over the period 1992-1996 =										7,829			
Nakhon Ratchasima													
Observed deaths	4,484	4,812	4,837	4,935	4,667	4,634	4,686	4,597	4,721	4,833	4,943	5,181	5,048
Expected deaths	4,737	4,728	4,720	4,711	4,702	4,694	4,685	4,677	4,668	4,660	4,651	4,643	4,634
Excess deaths	-252	84	118	224	-35	-60	1	-80	53	173	292	538	414
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,471			
Buriram													
Observed deaths	2,676	2,877	2,855	3,026	2,544	2,562	2,420	2,460	2,534	2,470	2,697	2,847	2,811
Expected deaths	2,893	2,831	2,770	2,708	2,647	2,585	2,524	2,463	2,401	2,340	2,278	2,217	2,155
Excess deaths	-216	46	85	317	-103	-23	-104	-3	133	131	419	631	655
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,969			
Surin													
Observed deaths	2,561	2,528	2,009	2,544	1,851	2,170	2,067	2,093	1,891	1,531	2,334	2,785	2,964
Expected deaths	2,469	2,400	2,331	2,262	2,194	2,125	2,056	1,987	1,918	1,849	1,780	1,711	1,642
Excess deaths	92	128	-322	282	-343	46	12	106	-27	-318	555	1,074	1,323
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,607			
Chaiyaphum													
Observed deaths	1,707	1,721	1,600	2,005	1,858	1,846	1,671	1,799	1,795	2,009	1,573	1,256	2,331
Expected deaths	1,735	1,747	1,758	1,770	1,782	1,794	1,805	1,817	1,829	1,841	1,852	1,864	1,876
Excess deaths	-28	-26	-158	235	76	53	-135	-18	-34	169	-279	-608	455
Cumulative total death attributable to AIDS over the period 1992-1996 =										-297			
Maharakham													
Observed deaths	2,354	2,219	2,210	2,139	2,031	2,055	1,900	1,897	2,054	2,087	2,067	2,123	2,176
Expected deaths	2,324	2,260	2,197	2,133	2,069	2,005	1,941	1,877	1,813	1,749	1,686	1,622	1,558
Excess deaths	30	-41	13	6	-38	50	-41	20	240	338	382	501	618
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,079			
Zone 06													
Observed deaths	17,153	16,940	15,767	16,124	15,226	15,037	14,430	14,376	14,447	14,149	14,573	14,475	15,653
Expected deaths	17,093	16,676	16,258	15,840	15,423	15,005	14,587	14,170	13,752	13,335	12,917	12,499	12,082
Excess deaths	60	264	-491	284	-197	32	-157	206	695	815	1,656	1,975	3,571
Cumulative total death attributable to AIDS over the period 1992-1996 =										8,711			
Nongbua Lamphu													
Observed deaths	0	0	0	0	0	0	0	0	0	64	844	857	912
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cumulative total death attributable to AIDS over the period 1992-1996 =										n.a.			
Khon Kaen													
Observed deaths	4,384	4,057	3,619	3,732	3,702	3,813	3,717	3,814	3,892	3,989	4,009	4,062	3,886
Expected deaths	4,069	4,008	3,947	3,885	3,824	3,763	3,702	3,641	3,580	3,519	3,457	3,396	3,335
Excess deaths	315	49	-328	-153	-122	50	14	173	312	470	551	666	551
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,551			
Udon Thani													
Observed deaths	3,793	3,912	3,815	3,898	3,634	3,544	3,285	3,283	3,284	3,210	2,556	2,704	3,066
Expected deaths	3,970	3,877	3,785	3,692	3,599	3,507	3,414	3,322	3,229	3,136	3,044	2,951	2,858
Excess deaths	-177	34	31	206	35	37	-129	-38	55	74	-487	-247	208
Cumulative total death attributable to AIDS over the period 1992-1996 =										-398			
Loei													
Observed deaths	1,190	1,268	1,319	1,188	1,170	1,223	1,169	1,046	1,098	1,009	1,066	1,047	1,261
Expected deaths	1,272	1,250	1,229	1,207	1,186	1,164	1,143	1,121	1,100	1,078	1,057	1,035	1,014
Excess deaths	-82	18	90	-19	-16	59	26	-75	-2	-69	10	12	247
Cumulative total death attributable to AIDS over the period 1992-1996 =										197			

Table 41 Adjusted estimates of excess female deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Nong Khai													
Observed deaths	2,057	1,897	1,890	2,018	1,712	1,753	1,706	1,678	1,669	1,606	1,750	1,633	1,760
Expected deaths	2,019	1,968	1,916	1,865	1,813	1,762	1,710	1,659	1,607	1,556	1,505	1,453	1,402
Excess deaths	38	-70	-26	153	-101	-8	-5	19	62	50	246	180	359
Cumulative total death attributable to AIDS over the period 1992-1996 = 897													
Kalasin													
Observed deaths	2,742	2,585	2,266	2,323	2,294	2,156	2,084	2,030	2,110	1,976	2,096	2,009	2,266
Expected deaths	2,637	2,544	2,450	2,357	2,263	2,170	2,077	1,983	1,890	1,796	1,703	1,610	1,516
Excess deaths	105	42	-184	-34	31	-14	7	47	220	180	393	400	749
Cumulative total death attributable to AIDS over the period 1992-1996 = 1,943													
Sakonnakhon													
Observed deaths	2,989	3,221	2,858	2,965	2,713	2,547	2,470	2,524	2,394	2,295	2,250	2,162	2,501
Expected deaths	3,127	3,030	2,932	2,835	2,737	2,639	2,542	2,444	2,347	2,249	2,152	2,054	1,957
Excess deaths	-139	191	-74	130	-24	-92	-72	80	47	45	98	108	545
Cumulative total death attributable to AIDS over the period 1992-1996 = 843													
Zone 07													
Observed deaths	14,842	15,543	15,003	14,554	13,569	13,490	13,480	13,390	13,558	15,640	12,881	13,435	14,793
Expected deaths	15,317	15,008	14,698	14,389	14,079	13,769	13,460	13,150	12,841	12,531	12,222	11,912	11,602
Excess deaths	-475	535	305	166	-510	-280	20	240	718	3,109	659	1,523	3,191
Cumulative total death attributable to AIDS over the period 1992-1996 = 9,200													
Srisaket													
Observed deaths	2,894	2,845	2,564	2,949	2,605	2,578	2,543	2,437	2,611	2,417	2,358	2,547	3,164
Expected deaths	2,886	2,826	2,766	2,707	2,647	2,587	2,528	2,468	2,408	2,349	2,289	2,229	2,170
Excess deaths	8	19	-202	242	-42	-9	15	-32	203	68	69	318	995
Cumulative total death attributable to AIDS over the period 1992-1996 = 1,652													
Uhon Ratchathani													
Observed deaths	3,736	4,547	4,472	4,032	4,068	4,275	4,222	4,315	4,182	4,219	3,529	3,565	3,593
Expected deaths	4,130	4,152	4,175	4,197	4,219	4,242	4,264	4,286	4,309	4,331	4,353	4,376	4,398
Excess deaths	-394	395	297	-165	-152	33	-42	29	-127	-112	-825	-811	-805
Cumulative total death attributable to AIDS over the period 1992-1996 = -2,679													
Yasothon													
Observed deaths	1,515	1,460	1,606	1,428	1,351	1,321	1,333	1,350	1,384	1,350	1,327	1,318	1,447
Expected deaths	1,534	1,501	1,469	1,437	1,404	1,372	1,339	1,307	1,275	1,242	1,210	1,177	1,145
Excess deaths	-19	-41	137	-9	-53	-51	-6	43	109	108	117	140	302
Cumulative total death attributable to AIDS over the period 1992-1996 = 776													
Amnat Cheorn													
Observed deaths	0	0	0	0	0	0	0	0	0	138	770	806	848
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cumulative total death attributable to AIDS over the period 1992-1996 = n.a.													
Roi Et													
Observed deaths	3,688	3,821	3,646	3,420	3,158	3,010	3,220	3,127	3,220	3,120	2,801	3,024	3,319
Expected deaths	3,765	3,657	3,549	3,440	3,332	3,224	3,115	3,007	2,899	2,790	2,682	2,574	2,465
Excess deaths	-77	163	98	-21	-174	-214	105	120	322	330	119	450	854
Cumulative total death attributable to AIDS over the period 1992-1996 = 2,075													
Nakhomphanom													
Observed deaths	2,194	2,134	2,033	2,047	1,795	1,683	1,578	1,594	1,573	3,785	1,522	1,612	1,709
Expected deaths	2,227	2,129	2,030	1,932	1,833	1,735	1,636	1,538	1,439	1,340	1,242	1,143	1,045
Excess deaths	-33	5	2	116	-38	-52	-58	57	134	2,444	280	468	664
Cumulative total death attributable to AIDS over the period 1992-1996 = 3,991													
Mukdahan													
Observed deaths	815	736	683	679	592	624	583	567	588	610	575	564	713
Expected deaths	775	742	709	676	643	610	577	544	512	479	446	413	380
Excess deaths	40	-6	-27	3	-51	13	5	23	76	132	130	151	333
Cumulative total death attributable to AIDS over the period 1992-1996 = 822													
Northern Region													
Observed deaths	23,466	25,559	24,086	25,539	24,814	25,546	25,063	26,506	27,356	27,119	30,107	32,181	36,897
Expected deaths	24,136	24,404	24,671	24,938	25,206	25,473	25,740	26,007	26,275	26,542	26,809	27,077	27,344
Excess deaths	-671	1,156	-585	601	-392	73	-677	498	1,082	577	3,298	5,105	9,552
Cumulative total death attributable to AIDS over the period 1992-1996 = 19,614													
Zone 08													
Observed deaths	5,835	6,078	5,736	6,150	5,924	6,070	5,883	5,937	6,325	6,434	7,692	7,245	8,153
Expected deaths	5,930	5,936	5,942	5,948	5,955	5,961	5,967	5,973	5,979	5,986	5,992	5,998	6,004
Excess deaths	-95	142	-207	201	-30	109	-84	-37	346	448	1,701	1,247	2,149
Cumulative total death attributable to AIDS over the period 1992-1996 = 5,890													
Nakhon Sawan													
Observed deaths	2,231	2,209	2,133	2,184	2,147	2,259	2,163	2,118	2,468	2,583	2,742	2,861	2,927
Expected deaths	2,209	2,201	2,193	2,185	2,176	2,168	2,160	2,152	2,144	2,136	2,128	2,120	2,112
Excess deaths	22	8	-60	0	-29	90	2	-34	324	447	614	741	815
Cumulative total death attributable to AIDS over the period 1992-1996 = 2,940													
Uthai Thani													
Observed deaths	650	653	661	664	631	683	630	706	755	768	786	904	940
Expected deaths	647	651	654	658	662	665	669	673	677	680	684	688	692
Excess deaths	3	3	7	6	-31	18	-39	34	78	87	102	216	248
Cumulative total death attributable to AIDS over the period 1992-1996 = 732													

Table 41 Adjusted estimates of excess female deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Kam Phaeng Phet													
Observed deaths	1,121	1,278	1,118	1,277	1,144	1,164	1,165	1,246	1,295	1,236	2,171	1,487	1,666
Expected deaths	1,176	1,180	1,184	1,187	1,191	1,195	1,199	1,203	1,206	1,210	1,214	1,218	1,222
Excess deaths	-55	98	-66	90	-47	-31	-33	44	89	26	957	270	444
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,785			
Tak													
Observed deaths	748	789	731	830	761	838	815	753	644	702	730	755	928
Expected deaths	766	771	776	781	786	791	796	801	806	811	816	821	826
Excess deaths	-17	18	-45	50	-25	48	19	-47	-161	-108	-86	-65	103
Cumulative total death attributable to AIDS over the period 1992-1996 =										-318			
Sukhothai													
Observed deaths	1,084	1,149	1,094	1,194	1,241	1,126	1,111	1,112	1,162	1,144	1,264	1,237	1,693
Expected deaths	1,133	1,134	1,136	1,138	1,140	1,141	1,143	1,145	1,147	1,148	1,150	1,152	1,153
Excess deaths	-49	15	-43	56	102	-16	-33	-33	16	-4	115	86	540
Cumulative total death attributable to AIDS over the period 1992-1996 =										751			
Zone 09													
Observed deaths	7,376	7,602	7,360	7,847	7,345	7,604	7,618	8,222	8,674	8,461	8,788	9,435	10,698
Expected deaths	7,362	7,436	7,510	7,585	7,659	7,733	7,807	7,881	7,956	8,030	8,104	8,178	8,252
Excess deaths	14	165	-151	263	-314	-129	-189	340	719	432	684	1,257	2,446
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,536			
Uttaradit													
Observed deaths	1,008	1,067	1,072	1,155	1,106	1,173	1,169	1,187	1,315	1,231	1,311	1,498	1,383
Expected deaths	1,033	1,057	1,081	1,105	1,129	1,153	1,177	1,201	1,225	1,250	1,274	1,298	1,322
Excess deaths	-25	10	-9	50	-23	20	-9	-14	89	-19	38	200	62
Cumulative total death attributable to AIDS over the period 1992-1996 =										370			
Phrae													
Observed deaths	1,126	1,507	1,432	1,630	1,547	1,586	1,543	1,772	1,936	1,793	1,729	1,675	2,040
Expected deaths	1,306	1,367	1,427	1,488	1,548	1,608	1,669	1,729	1,790	1,850	1,910	1,971	2,031
Excess deaths	-180	141	5	143	-1	-23	-126	42	147	-57	-181	-296	9
Cumulative total death attributable to AIDS over the period 1992-1996 =										-378			
Nan													
Observed deaths	1,356	1,195	897	1,035	862	931	920	995	1,025	951	1,073	1,397	1,446
Expected deaths	1,189	1,142	1,095	1,048	1,000	953	906	859	811	764	717	670	622
Excess deaths	167	53	-198	-13	-138	-22	14	137	214	187	356	727	824
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,307			
Phitsanulok													
Observed deaths	1,493	1,555	1,468	1,621	1,457	1,621	1,657	1,858	2,006	2,023	1,999	1,991	2,029
Expected deaths	1,451	1,491	1,531	1,571	1,611	1,651	1,691	1,731	1,771	1,811	1,851	1,891	1,931
Excess deaths	42	63	-63	50	-154	-30	-34	127	234	212	148	99	98
Cumulative total death attributable to AIDS over the period 1992-1996 =										791			
Phichit													
Observed deaths	1,270	882	888	1,005	918	896	948	961	845	924	907	1,039	1,658
Expected deaths	1,050	1,027	1,005	982	960	937	914	892	869	847	824	802	779
Excess deaths	220	-146	-117	23	-41	-41	33	69	-24	77	83	237	879
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,253			
Phetchabun													
Observed deaths	1,124	1,396	1,604	1,401	1,454	1,396	1,382	1,449	1,547	1,539	1,768	1,835	2,141
Expected deaths	1,332	1,352	1,371	1,391	1,410	1,430	1,449	1,469	1,488	1,508	1,527	1,547	1,566
Excess deaths	-209	44	232	10	44	-34	-67	-20	59	31	240	289	574
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,193			
Zone 10													
Observed deaths	10,255	11,879	10,990	11,542	11,545	11,872	11,561	12,347	12,357	12,224	13,628	15,502	18,045
Expected deaths	10,845	11,032	11,219	11,406	11,593	11,780	11,967	12,154	12,341	12,528	12,715	12,902	13,088
Excess deaths	-590	848	-229	136	-48	92	-405	194	16	-304	913	2,601	4,957
Cumulative total death attributable to AIDS over the period 1992-1996 =										8,183			
Chiang Mai													
Observed deaths	4,095	4,532	3,547	3,810	4,117	4,029	3,990	4,108	4,093	3,832	4,155	5,100	6,102
Expected deaths	4,064	4,054	4,044	4,034	4,023	4,013	4,003	3,992	3,982	3,972	3,962	3,951	3,941
Excess deaths	30	478	-497	-224	94	16	-13	116	111	-140	193	1,149	2,161
Cumulative total death attributable to AIDS over the period 1992-1996 =										3,475			
Lamphun													
Observed deaths	966	1,211	1,121	1,230	1,218	1,140	1,025	1,135	1,166	1,195	1,226	1,342	1,558
Expected deaths	1,118	1,122	1,125	1,129	1,132	1,136	1,139	1,143	1,147	1,150	1,154	1,157	1,161
Excess deaths	-152	89	-4	101	86	4	-115	-8	19	44	73	185	397
Cumulative total death attributable to AIDS over the period 1992-1996 =										718			
Lampang													
Observed deaths	1,902	2,181	2,196	2,166	2,121	2,166	2,163	2,280	2,304	2,304	2,491	2,708	2,859
Expected deaths	2,046	2,075	2,104	2,133	2,161	2,190	2,219	2,247	2,276	2,305	2,334	2,362	2,391
Excess deaths	-144	106	93	34	-41	-24	-56	32	28	-1	157	345	468
Cumulative total death attributable to AIDS over the period 1992-1996 =										997			

Table 41 Adjusted estimates of excess female deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Phayao													
Observed deaths	1,212	1,277	1,236	1,350	1,254	1,385	1,335	1,567	1,519	1,583	1,687	2,060	2,237
Expected deaths	1,197	1,234	1,271	1,308	1,346	1,383	1,420	1,457	1,494	1,532	1,569	1,606	1,643
Excess deaths	15	43	-35	42	-92	2	-85	110	25	51	118	454	594
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,241			
Chiang Rai													
Observed deaths	1,668	2,277	2,473	2,612	2,444	2,819	2,676	2,884	2,881	2,976	3,700	4,039	4,791
Expected deaths	2,007	2,143	2,278	2,414	2,549	2,685	2,820	2,956	3,091	3,227	3,362	3,497	3,633
Excess deaths	-339	134	195	198	-105	134	-144	-72	-210	-251	338	542	1,158
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,577			
Mae Hong Son													
Observed deaths	412	402	417	375	391	334	373	374	394	335	369	253	498
Expected deaths	412	404	396	388	381	373	365	358	350	342	335	327	319
Excess deaths	1	-2	20	-14	11	-39	7	16	43	-8	34	-74	179
Cumulative total death attributable to AIDS over the period 1992-1996 =										175			
Southern Region													
Observed deaths	17,188	16,476	15,053	13,953	13,327	14,120	14,701	13,874	13,899	16,523	13,617	13,133	14,685
Expected deaths	16,315	15,893	15,470	15,048	14,625	14,202	13,780	13,357	12,934	12,512	12,089	11,667	11,244
Excess deaths	873	583	-417	-1,095	-1,297	-82	921	517	964	4,011	1,528	1,467	3,441
Cumulative total death attributable to AIDS over the period 1992-1996 =										11,411			
Zone 11													
Observed deaths	7,372	7,013	6,336	6,609	6,548	6,813	6,733	5,578	6,314	8,459	5,892	5,843	7,321
Expected deaths	7,150	7,000	6,850	6,700	6,550	6,401	6,251	6,101	5,951	5,801	5,651	5,501	5,352
Excess deaths	222	13	-514	-91	-2	412	482	-523	363	2,658	240	342	1,970
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,573			
Nakhon Sri Thammarat													
Observed deaths	3,090	2,865	2,508	2,574	2,720	2,933	2,841	1,756	2,503	2,200	2,297	2,151	2,948
Expected deaths	2,995	2,900	2,804	2,709	2,613	2,517	2,422	2,326	2,230	2,135	2,039	1,943	1,848
Excess deaths	94	-35	-296	-134	107	416	419	-570	273	65	258	208	1,100
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,904			
Krabi													
Observed deaths	480	352	448	478	503	522	406	492	535	2,698	492	474	583
Expected deaths	435	442	449	456	464	471	478	485	492	499	507	514	521
Excess deaths	45	-90	-2	22	40	51	-72	7	43	2,199	-14	-39	62
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,250			
Phangnga													
Observed deaths	454	504	406	423	426	370	383	451	361	333	298	270	461
Expected deaths	458	449	440	431	423	414	405	396	388	379	370	362	353
Excess deaths	-4	55	-34	-9	4	-44	-23	54	-26	-47	-72	-92	108
Cumulative total death attributable to AIDS over the period 1992-1996 =										-129			
Phuket													
Observed deaths	486	473	458	433	474	489	475	473	471	883	346	408	474
Expected deaths	467	468	469	470	470	471	472	472	473	474	474	475	476
Excess deaths	18	5	-11	-37	3	18	3	1	-2	410	-129	-67	-2
Cumulative total death attributable to AIDS over the period 1992-1996 =										211			
Surat Thani													
Observed deaths	1,660	1,747	1,678	1,708	1,548	1,407	1,490	1,469	1,298	1,235	1,391	1,391	1,661
Expected deaths	1,738	1,695	1,653	1,610	1,567	1,524	1,482	1,439	1,396	1,353	1,311	1,268	1,225
Excess deaths	-78	51	26	98	-19	-117	9	30	-98	-119	80	123	435
Cumulative total death attributable to AIDS over the period 1992-1996 =										422			
Ranong													
Observed deaths	209	158	113	184	162	202	243	195	271	248	182	245	250
Expected deaths	159	166	173	180	187	193	200	207	214	221	227	234	241
Excess deaths	50	-9	-60	4	-24	8	42	-12	57	27	-46	10	9
Cumulative total death attributable to AIDS over the period 1992-1996 =										59			
Chumphon													
Observed deaths	994	916	725	809	714	891	896	742	874	862	886	903	945
Expected deaths	897	880	862	845	827	810	793	775	758	740	723	706	688
Excess deaths	97	37	-137	-35	-113	81	104	-33	117	121	163	198	257
Cumulative total death attributable to AIDS over the period 1992-1996 =										856			
Zone 12													
Observed deaths	9,816	10,141	9,406	7,604	6,999	7,544	8,178	8,431	7,745	8,268	7,921	7,440	8,652
Expected deaths	9,586	9,280	8,974	8,668	8,362	8,056	7,750	7,444	7,138	6,832	6,526	6,220	5,914
Excess deaths	230	861	432	-1,064	-1,363	-512	429	987	607	1,436	1,395	1,221	2,738
Cumulative total death attributable to AIDS over the period 1992-1996 =										7,398			
Songkhla													
Observed deaths	3,555	3,741	3,748	2,268	2,020	2,531	2,813	3,133	2,608	3,038	2,591	2,196	2,791
Expected deaths	3,455	3,318	3,182	3,045	2,908	2,771	2,634	2,497	2,360	2,223	2,086	1,949	1,813
Excess deaths	100	422	567	-776	-887	-240	179	636	248	815	505	246	978
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,793			
Satun													
Observed deaths	495	570	508	452	437	448	397	434	431	426	449	433	444
Expected deaths	529	512	494	476	459	441	423	406	388	370	353	335	317
Excess deaths	-35	58	14	-24	-22	7	-27	29	43	55	97	98	126

Table 41 Adjusted estimates of excess female deaths by province based on the death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Cumulative total death attributable to AIDS over the period 1992-1996 =										419		
Trang													
Observed deaths	1,249	1,242	1,119	1,107	839	1,043	1,126	1,079	1,073	1,139	1,183	1,299	1,239
Expected deaths	1,195	1,168	1,141	1,114	1,087	1,060	1,033	1,006	979	952	925	898	871
Excess deaths	54	74	-22	-7	-248	-17	93	73	94	187	257	401	368
	Cumulative total death attributable to AIDS over the period 1992-1996 =										1,307		
Phatthalung													
Observed deaths	920	956	757	775	708	694	837	802	746	812	760	751	808
Expected deaths	876	856	836	816	796	776	756	736	717	697	677	657	637
Excess deaths	44	100	-79	-41	-88	-82	81	66	29	115	83	94	171
	Cumulative total death attributable to AIDS over the period 1992-1996 =										492		
Pattani													
Observed deaths	1,404	1,371	1,295	1,113	1,160	1,120	1,163	1,135	1,232	1,120	1,180	1,148	1,338
Expected deaths	1,362	1,321	1,281	1,240	1,200	1,159	1,119	1,078	1,038	998	957	917	876
Excess deaths	42	50	14	-128	-40	-39	44	57	194	123	223	231	462
	Cumulative total death attributable to AIDS over the period 1992-1996 =										1,233		
Yala													
Observed deaths	821	757	714	722	681	634	724	688	598	580	581	543	779
Expected deaths	775	758	742	726	709	693	677	660	644	628	611	595	578
Excess deaths	46	-1	-28	-4	-29	-59	47	28	-46	-47	-30	-52	200
	Cumulative total death attributable to AIDS over the period 1992-1996 =										25		
Narathiwat													
Observed deaths	1,373	1,485	1,240	1,139	1,131	1,062	1,101	1,141	1,039	1,147	1,171	1,065	1,090
Expected deaths	1,379	1,331	1,282	1,233	1,185	1,136	1,088	1,039	990	942	893	845	796
Excess deaths	-6	154	-42	-94	-54	-74	14	102	49	205	278	220	294
	Cumulative total death attributable to AIDS over the period 1992-1996 =										1,045		

Table 42 Adjusted estimates of male and female excess deaths by province based on death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Whole Country													
Observed deaths	300,190	301,844	282,086	292,983	283,646	295,828	296,185	303,265	309,087	333,475	330,780	342,660	371,290
Expected deaths	293,457	293,756	294,055	294,354	294,653	294,953	295,252	295,551	295,850	296,149	296,448	296,747	297,046
Excess deaths	6,733	8,088	-11,969	-1,371	-11,007	875	934	7,715	13,237	37,327	34,333	45,913	74,244
	Cumulative total death attributable to AIDS over the period 1992-1996 =										205,054		
Central Region													
Observed deaths	98,371	96,637	89,444	96,771	96,020	103,849	104,985	110,393	111,599	123,118	120,577	121,292	118,971
Expected deaths	92,544	94,549	96,553	98,557	100,561	102,566	104,570	106,574	108,578	110,583	112,587	114,591	116,596
Excess deaths	5,826	2,089	-7,108	-1,786	-4,541	1,284	416	3,819	3,020	12,536	7,990	6,700	2,376
	Cumulative total death attributable to AIDS over the period 1992-1996 =										32,622		
Bangkok Metropolis													
Observed deaths	27,433	31,241	27,018	30,677	29,581	32,363	31,682	34,777	33,574	34,844	35,657	34,468	27,095
Expected deaths	27,740	28,556	29,372	30,188	31,004	31,821	32,637	33,453	34,269	35,085	35,901	36,717	37,533
Excess deaths	-307	2,685	-2,354	489	-1,424	542	-955	1,325	-695	-241	-244	-2,249	-10,438
	Cumulative total death attributable to AIDS over the period 1992-1996 =										-13,867		
Zone 01													
Observed deaths	14,726	13,411	13,712	14,428	13,426	15,393	15,500	16,361	17,728	18,615	19,382	19,475	22,242
Expected deaths	13,539	13,848	14,156	14,465	14,774	15,083	15,391	15,700	16,009	16,318	16,627	16,935	17,244
Excess deaths	1,187	-437	-445	-38	-1,348	310	109	661	1,719	2,297	2,756	2,540	4,998
	Cumulative total death attributable to AIDS over the period 1992-1996 =										14,310		
Samut Prakan													
Observed deaths	2,787	2,763	3,017	3,113	3,241	3,492	3,886	4,019	4,300	4,598	4,907	4,861	4,775
Expected deaths	2,632	2,820	3,008	3,196	3,384	3,572	3,760	3,948	4,136	4,324	4,512	4,700	4,888
Excess deaths	155	-57	9	-83	-142	-80	126	72	164	274	395	161	-113
	Cumulative total death attributable to AIDS over the period 1992-1996 =										882		
Nonthaburi													
Observed deaths	3,998	2,776	3,203	3,526	3,096	3,822	3,959	3,961	4,379	4,596	5,222	5,147	4,503
Expected deaths	3,248	3,332	3,416	3,501	3,585	3,669	3,753	3,838	3,922	4,006	4,090	4,175	4,259
Excess deaths	750	-556	-213	25	-489	153	206	123	457	590	1,132	972	244
	Cumulative total death attributable to AIDS over the period 1992-1996 =										3,394		
Pathum Thani													
Observed deaths	1,742	1,626	1,575	1,490	1,464	2,093	2,025	2,333	2,469	2,620	2,345	2,460	4,369
Expected deaths	1,474	1,566	1,657	1,748	1,839	1,930	2,021	2,113	2,204	2,295	2,386	2,477	2,569
Excess deaths	268	61	-82	-258	-375	163	4	220	265	325	-41	-17	1,800
	Cumulative total death attributable to AIDS over the period 1992-1996 =										2,332		
Ayutthaya													
Observed deaths	4,189	3,750	3,774	3,954	3,605	3,721	3,468	3,670	4,247	4,445	4,497	4,357	5,556
Expected deaths	3,998	3,932	3,866	3,799	3,733	3,667	3,601	3,535	3,469	3,403	3,337	3,271	3,205
Excess deaths	191	-182	-91	154	-128	54	-133	135	779	1,042	1,161	1,086	2,352
	Cumulative total death attributable to AIDS over the period 1992-1996 =										6,419		
Ang Thong													
Observed deaths	1,423	1,910	1,600	1,816	1,534	1,730	1,644	1,849	1,814	1,843	1,926	2,182	2,505
Expected deaths	1,615	1,636	1,657	1,678	1,699	1,720	1,741	1,761	1,782	1,803	1,824	1,845	1,866
Excess deaths	-192	274	-57	138	-164	11	-97	88	31	39	102	337	639
	Cumulative total death attributable to AIDS over the period 1992-1996 =										1,148		
Zone 02													
Observed deaths	17,042	15,080	14,575	16,134	16,559	16,771	17,651	18,028	18,343	20,034	21,323	20,802	20,576
Expected deaths	15,364	15,683	16,002	16,321	16,639	16,958	17,277	17,595	17,914	18,233	18,551	18,870	19,189
Excess deaths	1,678	-603	-1,427	-187	-80	-187	374	433	429	1,801	2,772	1,932	1,387
	Cumulative total death attributable to AIDS over the period 1992-1996 =										8,321		
Lopburi													
Observed deaths	2,949	2,830	2,916	3,010	3,174	3,301	3,392	3,576	3,318	3,542	3,630	3,258	4,659
Expected deaths	2,789	2,890	2,991	3,093	3,194	3,296	3,397	3,498	3,600	3,701	3,802	3,904	4,005
Excess deaths	161	-60	-75	-82	-21	5	-5	78	-281	-159	-172	-646	654
	Cumulative total death attributable to AIDS over the period 1992-1996 =										-604		
Singburi													
Observed deaths	1,692	1,474	1,289	1,288	1,702	1,813	1,993	1,987	1,861	1,671	1,709	1,987	1,938
Expected deaths	1,378	1,457	1,536	1,615	1,694	1,773	1,852	1,931	2,011	2,090	2,169	2,248	2,327
Excess deaths	314	17	-247	-327	8	39	141	55	-150	-419	-460	-260	-388
	Cumulative total death attributable to AIDS over the period 1992-1996 =										-1,677		
Chainat													
Observed deaths	1,976	1,923	1,719	1,975	1,871	1,963	1,878	1,979	1,988	2,002	2,122	2,308	2,492
Expected deaths	1,893	1,898	1,903	1,908	1,913	1,918	1,923	1,928	1,933	1,938	1,943	1,948	1,953
Excess deaths	83	25	-184	67	-42	45	-45	50	55	64	179	360	539
	Cumulative total death attributable to AIDS over the period 1992-1996 =										1,196		
Saraburi													
Observed deaths	3,965	2,524	2,506	3,425	3,707	3,938	4,171	4,146	4,710	6,085	6,983	5,490	3,750
Expected deaths	2,961	3,128	3,296	3,464	3,632	3,799	3,967	4,135	4,302	4,470	4,638	4,805	4,973
Excess deaths	1,004	-605	-790	-39	75	138	204	12	408	1,615	2,345	685	-1,223
	Cumulative total death attributable to AIDS over the period 1992-1996 =										3,831		
Nakhonnayok													
Observed deaths	1,344	1,261	1,204	1,226	1,152	1,192	1,273	1,268	1,331	1,499	1,471	1,469	1,708
Expected deaths	1,264	1,257	1,250	1,243	1,236	1,230	1,223	1,216	1,209	1,202	1,195	1,188	1,181
Excess deaths	80	4	-47	-18	-84	-37	50	52	122	298	276	281	527
	Cumulative total death attributable to AIDS over the period 1992-1996 =										1,504		
Suphanburi													
Observed deaths	4,499	4,509	4,430	4,697	4,472	4,092	4,494	4,633	4,733	4,836	5,026	5,942	5,622
Expected deaths	4,494	4,489	4,485	4,480	4,476	4,472	4,467	4,463	4,458	4,454	4,449	4,445	4,440
Excess deaths	5	20	-55	217	-4	-379	27	170	275	382	577	1,497	1,182
	Cumulative total death attributable to AIDS over the period 1992-1996 =										3,913		

Table 42 Adjusted estimates of male and female excess deaths by province based on death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Zone 03													
Observed deaths	16,144	14,459	14,066	14,485	14,757	17,165	17,418	18,137	17,998	24,242	18,253	20,005	22,210
Expected deaths	14,232	14,689	15,145	15,601	16,057	16,513	16,969	17,426	17,882	18,338	18,794	19,250	19,706
Excess deaths	1,912	-230	-1,079	-1,116	-1,300	652	449	711	116	5,904	-541	755	2,503
Cumulative total death attributable to AIDS over the period 1992-1996 =										8,737			
Chonburi													
Observed deaths	5,260	4,335	4,045	3,850	4,187	5,545	5,808	6,135	5,939	10,903	5,204	5,812	6,258
Expected deaths	4,132	4,350	4,568	4,787	5,005	5,223	5,441	5,659	5,878	6,096	6,314	6,532	6,750
Excess deaths	1,128	-15	-523	-936	-818	323	367	476	61	4,807	-1,110	-720	-493
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,546			
Rayong													
Observed deaths	2,064	2,035	2,094	2,094	2,127	2,451	2,330	2,389	2,382	2,395	2,483	2,720	2,999
Expected deaths	1,996	2,053	2,111	2,169	2,227	2,285	2,342	2,400	2,458	2,516	2,574	2,631	2,689
Excess deaths	68	-19	-17	-74	-100	166	-12	-12	-76	-121	-91	89	309
Cumulative total death attributable to AIDS over the period 1992-1996 =										111			
Chanthaburi													
Observed deaths	3,110	3,119	2,838	2,820	2,817	3,006	3,145	3,135	3,075	3,276	3,480	3,757	3,243
Expected deaths	2,965	2,975	2,984	2,994	3,004	3,013	3,023	3,033	3,042	3,052	3,062	3,071	3,081
Excess deaths	145	144	-146	-174	-187	-7	122	103	33	224	419	685	162
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,523			
Trat													
Observed deaths	1,111	1,005	1,022	1,101	1,101	1,155	1,157	1,078	1,080	1,013	1,015	1,662	1,346
Expected deaths	1,052	1,063	1,075	1,086	1,097	1,108	1,119	1,130	1,142	1,153	1,164	1,175	1,186
Excess deaths	58	-59	-53	16	4	47	38	-52	-61	-139	-149	487	160
Cumulative total death attributable to AIDS over the period 1992-1996 =										297			
Chachoengsao													
Observed deaths	3,138	2,749	2,749	2,754	2,893	2,876	3,023	3,044	2,783	2,393	2,502	2,447	3,712
Expected deaths	2,852	2,866	2,881	2,896	2,911	2,925	2,940	2,955	2,969	2,984	2,999	3,014	3,028
Excess deaths	286	-118	-132	-142	-18	-49	83	90	-187	-591	-497	-567	684
Cumulative total death attributable to AIDS over the period 1992-1996 =										-1,157			
Prachinburi													
Observed deaths	2,495	2,084	2,094	2,584	2,347	2,910	2,725	3,102	3,412	5,150	2,554	2,090	2,623
Expected deaths	2,140	2,255	2,370	2,485	2,600	2,715	2,830	2,945	3,060	3,175	3,290	3,406	3,521
Excess deaths	355	-171	-276	99	-253	195	-105	156	352	1,975	-736	-1,316	-898
Cumulative total death attributable to AIDS over the period 1992-1996 =										-624			
Sakeaw													
Observed deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,660	2,185	2,729
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cumulative total death attributable to AIDS over the period 1992-1996 =										n.a.			
Zone 04													
Observed deaths	17,053	16,653	15,146	16,014	16,934	17,272	18,116	18,484	19,649	20,859	21,949	22,734	23,507
Expected deaths	15,933	16,226	16,519	16,812	17,105	17,399	17,692	17,985	18,278	18,571	18,864	19,158	19,451
Excess deaths	1,120	427	-1,373	-798	-172	-127	424	499	1,371	2,288	3,085	3,576	4,056
Cumulative total death attributable to AIDS over the period 1992-1996 =										14,376			
Ratchaburi													
Observed deaths	4,938	4,898	4,708	4,524	4,528	4,761	4,744	4,837	5,211	5,418	5,719	6,016	5,688
Expected deaths	4,797	4,781	4,766	4,750	4,734	4,719	4,703	4,688	4,672	4,656	4,641	4,625	4,610
Excess deaths	141	117	-57	-226	-207	42	41	149	539	762	1,078	1,391	1,078
Cumulative total death attributable to AIDS over the period 1992-1996 =										4,848			
Kanchanaburi													
Observed deaths	2,042	2,398	1,955	2,225	2,475	2,309	2,656	2,488	3,316	2,884	3,416	3,393	3,616
Expected deaths	2,080	2,148	2,216	2,284	2,352	2,421	2,489	2,557	2,625	2,693	2,762	2,830	2,898
Excess deaths	-38	250	-261	-60	122	-112	167	-69	691	191	655	563	718
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,818			
Nakhon Pathom													
Observed deaths	3,855	3,631	3,418	3,777	3,934	3,838	4,157	3,925	4,121	4,811	4,878	4,916	4,943
Expected deaths	3,627	3,682	3,736	3,790	3,844	3,898	3,952	4,006	4,060	4,114	4,168	4,222	4,277
Excess deaths	227	-51	-318	-13	91	-60	205	-81	61	697	710	694	666
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,828			
Samut Sakhon													
Observed deaths	1,614	1,547	1,523	1,577	1,609	1,796	1,935	2,362	2,045	2,274	2,447	2,700	2,400
Expected deaths	1,411	1,507	1,602	1,698	1,793	1,889	1,984	2,080	2,175	2,271	2,366	2,462	2,557
Excess deaths	203	41	-79	-120	-184	-93	-49	282	-130	3	81	238	-157
Cumulative total death attributable to AIDS over the period 1992-1996 =										37			
Samut Songkhram													
Observed deaths	1,313	1,347	1,193	1,323	1,160	1,105	1,088	1,161	1,157	1,308	1,332	1,051	1,591
Expected deaths	1,327	1,294	1,261	1,228	1,195	1,162	1,129	1,095	1,062	1,029	996	963	930
Excess deaths	-15	53	-68	95	-35	-56	-41	66	95	279	336	88	661
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,458			
Phetchaburi													
Observed deaths	2,356	1,899	1,647	1,657	2,170	2,330	2,429	2,451	2,469	2,669	2,568	2,947	3,161
Expected deaths	1,872	1,942	2,012	2,082	2,152	2,222	2,292	2,362	2,432	2,502	2,572	2,642	2,712
Excess deaths	483	-43	-366	-425	17	107	137	89	37	167	-4	305	449
Cumulative total death attributable to AIDS over the period 1992-1996 =										954			
Phachuap Khiri Khan													
Observed deaths	2,025	1,937	1,580	1,803	1,889	1,927	1,868	1,981	2,043	2,232	2,303	2,386	2,766
Expected deaths	1,857	1,862	1,868	1,874	1,879	1,885	1,890	1,896	1,902	1,907	1,913	1,918	1,924
Excess deaths	169	75	-288	-70	9	42	-22	85	141	325	390	468	842
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,166			

Table 42 Adjusted estimates of male and female excess deaths by province based on death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
North-Easteru Region													
Observed deaths	105,470	106,040	101,206	104,098	96,974	96,993	94,775	95,123	96,410	101,641	98,804	103,279	114,626
Expected deaths	106,273	104,505	102,737	100,969	99,201	97,433	95,665	93,897	92,129	90,361	88,593	86,825	85,057
Excess deaths	-803	1,535	-1,531	3,129	-2,227	-440	-890	1,227	4,281	11,281	10,211	16,454	29,570
Cumulative total death attributable to AIDS over the period 1992-1996 =										71,796			
Zone 05													
Observed deaths	32,395	32,754	30,890	33,458	30,582	31,221	30,076	30,458	30,786	31,400	32,915	34,258	38,485
Expected deaths	32,681	32,337	31,994	31,651	31,308	30,964	30,621	30,278	29,935	29,591	29,248	28,905	28,561
Excess deaths	-285	416	-1,104	1,807	-726	257	-545	180	851	1,809	3,667	5,353	9,924
Cumulative total death attributable to AIDS over the period 1992-1996 =										21,603			
Nakhon Ratchasima													
Observed deaths	11,160	11,575	11,383	11,626	11,453	11,336	11,456	11,194	11,550	12,094	12,459	12,892	13,063
Expected deaths	11,426	11,418	11,410	11,402	11,394	11,386	11,378	11,370	11,362	11,354	11,346	11,338	11,330
Excess deaths	-266	157	-27	224	59	-50	78	-176	188	740	1,114	1,554	1,734
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,330			
Buriram													
Observed deaths	6,212	6,654	6,561	6,911	6,030	6,107	5,670	5,883	6,085	5,946	6,356	6,947	7,234
Expected deaths	6,648	6,535	6,423	6,310	6,197	6,084	5,972	5,859	5,746	5,633	5,521	5,408	5,295
Excess deaths	-436	119	138	601	-167	23	-302	24	338	313	835	1,539	1,939
Cumulative total death attributable to AIDS over the period 1992-1996 =										4,964			
Surin													
Observed deaths	5,601	5,647	4,504	5,508	4,186	4,911	4,796	4,860	4,415	3,822	5,410	6,678	7,264
Expected deaths	5,399	5,285	5,172	5,058	4,945	4,831	4,718	4,604	4,490	4,377	4,263	4,150	4,036
Excess deaths	202	361	-668	450	-759	80	79	256	-75	-555	1,147	2,528	3,228
Cumulative total death attributable to AIDS over the period 1992-1996 =										6,273			
Chaiyaphum													
Observed deaths	4,329	4,058	3,700	4,715	4,498	4,374	3,911	4,319	4,279	4,790	3,857	2,900	5,672
Expected deaths	4,197	4,208	4,220	4,232	4,244	4,256	4,268	4,279	4,291	4,303	4,315	4,327	4,339
Excess deaths	132	-150	-520	483	254	118	-357	39	-12	487	-458	-1,427	1,333
Cumulative total death attributable to AIDS over the period 1992-1996 =										-76			
Maharakham													
Observed deaths	5,092	4,819	4,742	4,699	4,415	4,494	4,243	4,202	4,457	4,747	4,832	4,840	5,252
Expected deaths	5,011	4,890	4,770	4,649	4,528	4,407	4,287	4,166	4,045	3,924	3,803	3,683	3,562
Excess deaths	81	-71	-27	50	-113	87	-44	36	412	823	1,028	1,157	1,690
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,111			
Zone 06													
Observed deaths	39,717	39,179	37,334	38,194	35,849	35,296	34,382	34,370	34,342	33,948	35,225	36,511	39,785
Expected deaths	39,702	38,870	38,038	37,206	36,375	35,543	34,711	33,879	33,047	32,215	31,383	30,551	29,719
Excess deaths	15	309	-704	988	-526	-246	-329	491	1,295	1,733	3,841	5,960	10,065
Cumulative total death attributable to AIDS over the period 1992-1996 =										22,894			
Nongbua Lamphu													
Observed deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	138	1,995	2,094	2,498
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cumulative total death attributable to AIDS over the period 1992-1996 =										n.a.			
Khon Kaen													
Observed deaths	10,022	9,085	8,529	8,768	8,881	9,013	8,789	9,181	9,516	9,688	9,842	10,373	9,744
Expected deaths	9,276	9,206	9,137	9,068	8,999	8,930	8,861	8,792	8,723	8,654	8,585	8,516	8,446
Excess deaths	747	-121	-608	-300	-118	83	-72	389	793	1,034	1,257	1,857	1,298
Cumulative total death attributable to AIDS over the period 1992-1996 =										6,240			
Udon Thani													
Observed deaths	9,226	9,392	9,378	9,372	8,595	8,311	7,927	7,884	7,627	7,588	6,054	6,884	7,837
Expected deaths	9,623	9,377	9,130	8,884	8,637	8,391	8,145	7,898	7,652	7,405	7,159	6,912	6,666
Excess deaths	-397	15	248	488	-42	-80	-218	-14	-24	183	-1,105	-29	1,171
Cumulative total death attributable to AIDS over the period 1992-1996 =										196			
Loei													
Observed deaths	2,990	3,215	3,226	3,036	2,881	2,941	2,895	2,595	2,607	2,653	2,778	2,823	3,278
Expected deaths	3,197	3,133	3,069	3,005	2,941	2,877	2,813	2,749	2,685	2,621	2,557	2,492	2,428
Excess deaths	-207	83	158	32	-60	65	82	-154	-78	32	222	331	849
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,356			
Nong Khai													
Observed deaths	4,745	4,574	4,512	4,911	4,121	4,244	4,076	4,043	3,965	3,863	4,186	4,099	4,580
Expected deaths	4,778	4,671	4,564	4,457	4,350	4,242	4,135	4,028	3,921	3,814	3,707	3,599	3,492
Excess deaths	-33	-97	-52	454	-228	1	-60	15	44	49	480	499	1,088
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,160			
Kalasin													
Observed deaths	6,011	5,701	5,094	5,265	5,152	5,030	4,874	4,843	4,946	4,817	5,059	4,999	5,653
Expected deaths	5,772	5,622	5,472	5,321	5,171	5,021	4,871	4,721	4,570	4,420	4,270	4,120	3,969
Excess deaths	239	79	-377	-56	-19	9	4	122	376	397	789	879	1,683
Cumulative total death attributable to AIDS over the period 1992-1996 =										4,124			
Sakonnakhon													
Observed deaths	6,723	7,212	6,595	6,842	6,218	5,758	5,821	5,825	5,680	5,202	5,310	5,239	6,195
Expected deaths	7,057	6,862	6,667	6,472	6,277	6,082	5,887	5,692	5,497	5,302	5,107	4,912	4,717
Excess deaths	-334	351	-71	370	-59	-324	-66	133	183	-100	203	327	1,478
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,092			
Zone 07													
Observed deaths	33,357	34,107	32,982	32,446	30,543	30,475	30,317	30,296	31,283	36,293	30,664	32,511	36,356
Expected deaths	33,890	33,297	32,704	32,112	31,519	30,926	30,333	29,740	29,147	28,554	27,962	27,369	26,776
Excess deaths	-533	810	277	335	-975	-451	-16	556	2,136	7,739	2,702	5,142	9,580
Cumulative total death attributable to AIDS over the period 1992-1996 =										27,300			

Table 42 Adjusted estimates of male and female excess deaths by province based on death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Srisaket													
Observed deaths	6,792	6,328	5,902	6,378	5,789	5,871	5,720	5,570	5,929	5,629	5,680	6,098	8,024
Expected deaths	6,555	6,409	6,263	6,117	5,970	5,824	5,678	5,532	5,386	5,239	5,093	4,947	4,801
Excess deaths	237	-81	-361	261	-182	46	42	38	543	390	587	1,151	3,224
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,894			
Ubon Ratchathani													
Observed deaths	8,488	9,793	9,813	8,947	9,180	9,653	9,494	9,948	10,083	10,172	8,743	9,197	8,981
Expected deaths	9,061	9,162	9,263	9,364	9,465	9,566	9,667	9,768	9,868	9,969	10,070	10,171	10,272
Excess deaths	-574	631	550	-417	-285	87	-172	180	214	203	-1,327	-974	-1,291
Cumulative total death attributable to AIDS over the period 1992-1996 =										-3,175			
Yasothon													
Observed deaths	3,376	3,207	3,416	3,187	2,983	2,908	2,975	2,927	3,047	3,014	2,991	3,070	3,318
Expected deaths	3,374	3,302	3,230	3,158	3,087	3,015	2,943	2,871	2,799	2,728	2,656	2,584	2,512
Excess deaths	3	-95	186	29	-103	-107	32	56	248	286	335	485	806
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,160			
Amnat Cheorn													
Observed deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	319	1,728	1,898	2,065
Expected deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Excess deaths	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cumulative total death attributable to AIDS over the period 1992-1996 =										n.a.			
Roi Et													
Observed deaths	7,850	7,996	7,834	7,768	7,037	6,674	6,980	6,880	7,074	6,954	6,560	6,977	8,064
Expected deaths	8,048	7,856	7,665	7,473	7,282	7,090	6,899	6,707	6,516	6,324	6,133	5,941	5,750
Excess deaths	-197	140	169	295	-245	-416	81	172	558	630	427	1,036	2,314
Cumulative total death attributable to AIDS over the period 1992-1996 =										4,964			
Nakhomphanom													
Observed deaths	5,078	5,075	4,493	4,586	4,145	3,935	3,721	3,626	3,703	8,819	3,618	3,887	4,120
Expected deaths	5,126	4,899	4,673	4,446	4,219	3,992	3,765	3,539	3,312	3,085	2,858	2,632	2,405
Excess deaths	-48	176	-180	141	-74	-57	-44	87	391	5,734	760	1,255	1,715
Cumulative total death attributable to AIDS over the period 1992-1996 =										9,855			
Mukdahan													
Observed deaths	1,772	1,708	1,525	1,579	1,410	1,435	1,426	1,346	1,448	1,386	1,344	1,384	1,784
Expected deaths	1,726	1,669	1,611	1,554	1,496	1,439	1,381	1,324	1,266	1,209	1,151	1,094	1,036
Excess deaths	46	39	-87	25	-87	-4	45	23	182	177	193	291	748
Cumulative total death attributable to AIDS over the period 1992-1996 =										1,590			
Northern Region													
Observed deaths	56,294	59,807	55,444	57,906	57,346	58,684	58,977	62,162	65,717	67,013	76,535	83,468	96,394
Expected deaths	56,408	56,956	57,505	58,053	58,602	59,151	59,699	60,248	60,796	61,345	61,894	62,442	62,991
Excess deaths	-113	2,851	-2,060	-147	-1,256	-467	-722	1,914	4,921	5,668	14,642	21,026	33,403
Cumulative total death attributable to AIDS over the period 1992-1996 =										79,660			
Zone 08													
Observed deaths	14,271	14,403	13,217	14,079	13,861	14,169	14,244	14,134	15,041	15,329	18,225	17,292	19,984
Expected deaths	14,010	14,021	14,032	14,042	14,053	14,063	14,074	14,084	14,095	14,106	14,116	14,127	14,137
Excess deaths	260	382	-814	37	-192	106	170	50	946	1,224	4,109	3,166	5,847
Cumulative total death attributable to AIDS over the period 1992-1996 =										15,291			
Nakhon Sawan													
Observed deaths	5,338	5,216	4,590	4,991	4,967	5,203	5,247	5,070	5,756	6,117	6,519	6,735	7,135
Expected deaths	5,074	5,075	5,076	5,077	5,078	5,079	5,080	5,082	5,083	5,084	5,085	5,086	5,087
Excess deaths	264	141	-486	-86	-111	124	166	-12	674	1,033	1,434	1,649	2,048
Cumulative total death attributable to AIDS over the period 1992-1996 =										6,838			
Uthai Thani													
Observed deaths	1,477	1,473	1,499	1,486	1,495	1,545	1,477	1,526	1,768	1,778	1,846	2,115	2,219
Expected deaths	1,476	1,482	1,488	1,494	1,500	1,506	1,512	1,519	1,525	1,531	1,537	1,543	1,549
Excess deaths	1	-9	11	-8	-5	38	-36	8	243	247	309	572	670
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,042			
Kam Phaeng Phet													
Observed deaths	2,983	3,055	2,783	3,025	2,787	2,884	2,950	3,045	3,226	3,116	5,303	3,775	4,145
Expected deaths	2,940	2,940	2,939	2,939	2,939	2,939	2,938	2,938	2,938	2,938	2,937	2,937	2,937
Excess deaths	43	116	-157	86	-152	-54	12	107	288	178	2,365	838	1,208
Cumulative total death attributable to AIDS over the period 1992-1996 =										4,878			
Tak													
Observed deaths	1,746	1,879	1,794	1,926	1,807	2,055	1,998	1,881	1,628	1,745	1,728	1,916	2,353
Expected deaths	1,794	1,820	1,846	1,873	1,899	1,925	1,951	1,977	2,004	2,030	2,056	2,082	2,109
Excess deaths	-48	59	-53	53	-91	130	47	-97	-375	-285	-328	-167	245
Cumulative total death attributable to AIDS over the period 1992-1996 =										-911			
Sukhothai													
Observed deaths	2,728	2,780	2,553	2,652	2,804	2,483	2,573	2,612	2,662	2,573	2,829	2,751	4,132
Expected deaths	2,727	2,705	2,682	2,659	2,637	2,614	2,591	2,569	2,546	2,524	2,501	2,478	2,456
Excess deaths	1	75	-129	-7	167	-131	-19	44	116	50	328	273	1,676
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,443			
Zone 09													
Observed deaths	17,773	18,309	16,955	18,025	17,083	17,600	17,918	18,799	20,133	19,994	21,440	23,216	26,622
Expected deaths	17,548	17,622	17,696	17,770	17,844	17,918	17,992	18,066	18,140	18,215	18,289	18,363	18,437
Excess deaths	225	687	-741	254	-761	-318	-75	732	1,993	1,779	3,151	4,854	8,186
Cumulative total death attributable to AIDS over the period 1992-1996 =										19,962			
Uttaradit													
Observed deaths	2,545	2,648	2,572	2,666	2,578	2,640	2,677	2,635	2,986	2,964	3,066	3,451	3,187
Expected deaths	2,583	2,593	2,604	2,615	2,625	2,636	2,647	2,658	2,668	2,679	2,690	2,700	2,711
Excess deaths	-38	54	-32	51	-47	4	30	-22	318	285	376	751	476
Cumulative total death attributable to AIDS over the period 1992-1996 =										2,207			

Table 42 Adjusted estimates of male and female excess deaths by province based on death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Phrae													
Observed deaths	2,406	3,331	3,292	3,529	3,497	3,669	3,419	3,906	4,380	4,215	4,309	4,368	4,976
Expected deaths	2,879	3,023	3,166	3,310	3,453	3,596	3,740	3,883	4,027	4,170	4,314	4,457	4,600
Excess deaths	-473	308	126	219	44	73	-320	23	353	45	-4	-89	376
Cumulative total death attributable to AIDS over the period 1992-1996 =										681			
Nan													
Observed deaths	3,224	2,617	1,911	2,096	1,788	1,887	1,915	2,061	2,138	2,058	2,364	3,263	3,423
Expected deaths	2,688	2,545	2,402	2,259	2,116	1,973	1,829	1,686	1,543	1,400	1,257	1,114	971
Excess deaths	535	71	-491	-163	-327	-85	86	374	594	658	1,107	2,149	2,452
Cumulative total death attributable to AIDS over the period 1992-1996 =										6,960			
Phitsanulok													
Observed deaths	3,816	3,959	3,675	4,011	3,619	3,923	4,175	4,515	4,824	4,832	5,160	5,158	5,295
Expected deaths	3,698	3,773	3,848	3,924	3,999	4,074	4,150	4,225	4,300	4,376	4,451	4,527	4,602
Excess deaths	118	186	-174	87	-380	-151	25	290	524	456	709	632	693
Cumulative total death attributable to AIDS over the period 1992-1996 =										3,013			
Phichit													
Observed deaths	2,885	2,186	1,835	2,334	2,000	2,033	2,112	2,048	1,914	1,937	2,183	2,412	3,988
Expected deaths	2,428	2,357	2,286	2,215	2,143	2,072	2,001	1,930	1,859	1,788	1,717	1,646	1,574
Excess deaths	457	-171	-451	120	-144	-40	111	117	55	149	467	767	2,413
Cumulative total death attributable to AIDS over the period 1992-1996 =										3,850			
Phetchabun													
Observed deaths	2,897	3,569	3,670	3,389	3,600	3,448	3,618	3,634	3,891	3,989	4,357	4,563	5,754
Expected deaths	3,272	3,331	3,390	3,449	3,508	3,567	3,625	3,684	3,743	3,802	3,861	3,920	3,979
Excess deaths	-375	238	280	-60	93	-119	-7	-50	148	187	496	643	1,775
Cumulative total death attributable to AIDS over the period 1992-1996 =										3,250			
Zone 10													
Observed deaths	24,251	27,095	25,273	25,802	26,402	26,914	26,816	29,229	30,544	31,690	36,870	42,960	49,788
Expected deaths	24,849	25,313	25,777	26,241	26,705	27,169	27,633	28,097	28,561	29,025	29,489	29,953	30,417
Excess deaths	-598	1,782	-504	-439	-303	-255	-817	1,132	1,983	2,665	7,381	13,007	19,371
Cumulative total death attributable to AIDS over the period 1992-1996 =										44,408			
Chiang Mai													
Observed deaths	9,603	10,157	7,992	8,364	9,207	9,312	9,371	10,185	10,611	10,617	11,811	14,395	17,066
Expected deaths	9,068	9,127	9,186	9,245	9,304	9,363	9,421	9,480	9,539	9,598	9,657	9,716	9,775
Excess deaths	535	1,031	-1,193	-880	-97	-50	705	705	1,072	1,018	2,154	4,678	7,291
Cumulative total death attributable to AIDS over the period 1992-1996 =										16,213			
Lamphun													
Observed deaths	2,362	2,710	2,566	2,638	2,624	2,448	2,385	2,575	2,757	3,012	3,264	3,681	4,431
Expected deaths	2,559	2,553	2,547	2,541	2,535	2,530	2,524	2,518	2,512	2,506	2,500	2,494	2,488
Excess deaths	-197	156	19	96	88	-81	-139	57	245	506	764	1,187	1,943
Cumulative total death attributable to AIDS over the period 1992-1996 =										4,646			
Lampang													
Observed deaths	4,478	4,935	5,071	4,848	4,944	4,810	4,815	5,137	5,387	5,612	6,306	6,907	7,416
Expected deaths	4,741	4,781	4,820	4,860	4,900	4,939	4,979	5,018	5,058	5,098	5,137	5,177	5,217
Excess deaths	-263	154	251	-12	44	-129	-164	119	328	515	1,169	1,730	2,199
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,941			
Phayao													
Observed deaths	2,803	2,989	2,920	3,034	2,925	3,113	2,985	3,477	3,584	3,948	4,348	5,676	6,203
Expected deaths	2,815	2,877	2,938	3,000	3,061	3,123	3,184	3,246	3,307	3,369	3,430	3,492	3,554
Excess deaths	-12	112	-18	34	-137	-10	-199	231	277	579	917	2,184	2,649
Cumulative total death attributable to AIDS over the period 1992-1996 =										6,606			
Chiang Rai													
Observed deaths	4,037	5,346	5,763	6,088	5,858	6,467	6,380	6,883	7,236	7,653	10,249	11,641	13,415
Expected deaths	4,729	5,050	5,371	5,692	6,013	6,335	6,656	6,977	7,298	7,619	7,940	8,262	8,583
Excess deaths	-692	296	392	395	-155	133	-275	-94	-62	33	2,308	3,380	4,832
Cumulative total death attributable to AIDS over the period 1992-1996 =										10,492			
Mae Hong Son													
Observed deaths	968	960	959	831	844	763	880	971	969	848	892	659	1,257
Expected deaths	937	926	914	903	891	880	869	857	846	835	823	812	800
Excess deaths	31	34	45	-71	-47	-117	111	114	123	14	69	-153	456
Cumulative total death attributable to AIDS over the period 1992-1996 =										509			
Southern Region													
Observed deaths	42,986	39,895	36,352	34,715	33,491	36,577	37,710	35,613	35,242	41,815	34,473	34,389	39,464
Expected deaths	39,796	39,045	38,294	37,543	36,792	36,041	35,290	34,539	33,788	33,037	32,286	31,535	30,783
Excess deaths	3,190	851	-1,942	-2,828	-3,301	536	2,420	1,075	1,454	8,779	2,187	2,855	8,680
Cumulative total death attributable to AIDS over the period 1992-1996 =										23,955			
Zone 11													
Observed deaths	19,516	17,725	16,213	17,064	16,645	18,103	17,619	14,820	16,328	21,429	15,403	15,922	19,701
Expected deaths	18,386	18,051	17,716	17,381	17,046	16,711	16,376	16,040	15,705	15,370	15,035	14,700	14,365
Excess deaths	1,129	-327	-1,503	-317	-400	1,392	1,243	-1,221	623	6,059	368	1,222	5,336
Cumulative total death attributable to AIDS over the period 1992-1996 =										13,608			
Nakhon Sri Thammarat													
Observed deaths	8,038	7,158	6,122	6,424	6,721	7,511	6,979	4,484	6,227	5,354	5,761	5,768	7,660
Expected deaths	7,567	7,314	7,060	6,807	6,553	6,299	6,046	5,792	5,539	5,285	5,031	4,778	4,524
Excess deaths	471	-156	-938	-382	168	1,212	934	-1,308	688	69	730	990	3,135
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,613			
Krabi													
Observed deaths	1,232	962	1,070	1,284	1,234	1,303	1,098	1,242	1,385	6,632	1,341	1,353	1,531
Expected deaths	1,120	1,137	1,153	1,170	1,186	1,203	1,219	1,236	1,253	1,269	1,286	1,302	1,319
Excess deaths	112	-175	-83	114	48	100	-122	5	132	5,362	55	50	212
Cumulative total death attributable to AIDS over the period 1992-1996 =										5,811			

Table 42 Adjusted estimates of male and female excess deaths by province based on death trends over the period 1984-1991

Province	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Phangnga													
Observed deaths	1,370	1,292	1,082	1,035	992	1,012	1,062	1,228	886	806	722	760	1,323
Expected deaths	1,234	1,205	1,177	1,148	1,120	1,091	1,063	1,034	1,005	977	948	920	891
Excess deaths	136	86	-95	-113	-128	-79	-1	194	-119	-171	-226	-160	431
Cumulative total death attributable to AIDS over the period 1992-1996 = -245													
Phuket													
Observed deaths	1,240	1,097	1,144	1,153	1,192	1,412	1,407	1,348	1,300	2,278	962	1,124	1,249
Expected deaths	1,118	1,156	1,193	1,230	1,268	1,305	1,343	1,380	1,418	1,455	1,493	1,530	1,568
Excess deaths	122	-58	-49	-77	-76	107	64	-32	-118	822	-531	-406	-319
Cumulative total death attributable to AIDS over the period 1992-1996 = -552													
Surat Thani													
Observed deaths	4,508	4,592	4,657	4,705	4,172	3,942	3,997	3,862	3,370	3,323	3,711	3,750	4,472
Expected deaths	4,728	4,607	4,486	4,365	4,244	4,123	4,002	3,881	3,760	3,639	3,517	3,396	3,275
Excess deaths	-220	-15	170	340	-72	-181	-4	-18	-390	-315	194	353	1,196
Cumulative total death attributable to AIDS over the period 1992-1996 = 1,039													
Ranong													
Observed deaths	572	461	328	474	429	526	752	613	830	694	547	738	715
Expected deaths	424	451	478	506	533	560	588	615	642	670	697	724	751
Excess deaths	148	10	-151	-31	-104	-35	165	-2	188	24	-150	14	-36
Cumulative total death attributable to AIDS over the period 1992-1996 = 40													
Chumphon													
Observed deaths	2,555	2,163	1,811	1,989	1,905	2,397	2,323	2,043	2,330	2,343	2,359	2,429	2,752
Expected deaths	2,195	2,182	2,168	2,155	2,142	2,128	2,115	2,102	2,089	2,075	2,062	2,049	2,035
Excess deaths	360	-18	-357	-166	-236	268	208	-59	241	268	297	380	717
Cumulative total death attributable to AIDS over the period 1992-1996 = 1,903													
Zone 12													
Observed deaths	23,470	23,708	21,690	18,452	17,491	19,071	20,671	21,199	19,327	21,058	19,633	18,965	22,508
Expected deaths	22,382	21,907	21,432	20,957	20,482	20,007	19,532	19,057	18,582	18,107	17,632	17,157	16,682
Excess deaths	1,088	1,801	257	-2,505	-2,991	-936	1,139	2,142	745	2,951	2,001	1,808	5,826
Cumulative total death attributable to AIDS over the period 1992-1996 = 13,332													
Songkhla													
Observed deaths	7,967	7,959	8,202	5,513	5,184	6,340	7,139	8,005	6,486	7,981	6,518	5,670	7,208
Expected deaths	7,445	7,329	7,213	7,097	6,980	6,864	6,748	6,632	6,516	6,400	6,284	6,168	6,052
Excess deaths	522	630	989	-1,583	-1,796	-525	390	1,373	-30	1,581	234	-498	1,156
Cumulative total death attributable to AIDS over the period 1992-1996 = 2,441													
Satun													
Observed deaths	1,181	1,286	1,215	1,184	1,081	1,087	1,033	1,065	1,085	1,081	1,097	1,155	1,240
Expected deaths	1,248	1,217	1,187	1,157	1,126	1,096	1,065	1,035	1,004	974	944	913	883
Excess deaths	-67	68	28	27	-45	-9	-32	30	81	107	153	242	357
Cumulative total death attributable to AIDS over the period 1992-1996 = 940													
Trang													
Observed deaths	3,247	3,113	2,861	2,567	2,057	2,690	2,765	2,676	2,724	2,968	3,075	3,455	3,315
Expected deaths	3,029	2,949	2,868	2,787	2,707	2,626	2,546	2,465	2,385	2,304	2,224	2,143	2,063
Excess deaths	218	165	-7	-220	-650	64	219	211	339	664	851	1,312	1,252
Cumulative total death attributable to AIDS over the period 1992-1996 = 4,418													
Phatthalung													
Observed deaths	2,170	2,362	1,755	1,670	1,825	1,810	2,182	1,896	1,860	1,975	1,763	1,883	2,194
Expected deaths	2,063	2,033	2,004	1,974	1,944	1,914	1,885	1,855	1,825	1,795	1,766	1,736	1,706
Excess deaths	107	329	-248	-303	-119	-104	298	41	34	179	-3	147	487
Cumulative total death attributable to AIDS over the period 1992-1996 = 845													
Pattani													
Observed deaths	3,502	3,317	2,921	2,602	2,570	2,718	2,742	2,761	2,795	2,712	2,817	2,711	3,283
Expected deaths	3,254	3,151	3,047	2,943	2,840	2,736	2,633	2,529	2,425	2,322	2,218	2,114	2,011
Excess deaths	248	166	-126	-341	-270	-18	109	232	370	390	599	597	1,272
Cumulative total death attributable to AIDS over the period 1992-1996 = 3,227													
Yala													
Observed deaths	2,002	2,022	1,795	1,892	1,836	1,755	1,832	1,831	1,564	1,483	1,433	1,446	2,040
Expected deaths	1,967	1,940	1,912	1,884	1,857	1,829	1,801	1,774	1,746	1,719	1,691	1,663	1,636
Excess deaths	34	82	-117	7	-20	-74	30	57	-182	-236	-258	-217	404
Cumulative total death attributable to AIDS over the period 1992-1996 = -489													
Narathiwat													
Observed deaths	3,402	3,601	2,876	2,942	2,885	2,632	2,919	2,927	2,781	2,836	2,909	2,622	2,900
Expected deaths	3,336	3,247	3,157	3,068	2,978	2,889	2,799	2,710	2,620	2,531	2,441	2,352	2,262
Excess deaths	66	354	-282	-126	-93	-256	120	218	161	305	468	271	638
Cumulative total death attributable to AIDS over the period 1992-1996 = 1,842													

Table 43 Numbers and rates of cumulative excess deaths over the period 1992-1996 based on the 1984-1991 death trends by sex and province

	Male + Female		Male		Female							
	Number	Per 1000	Number	Per 1,000	Number	Per 1,000						
1	Chiang Mai	16213	Krabi*	18.216	Chiang Mai	12738	Krabi*	21.916	Nakhomphanom*	3991	Krabi*	14.375
2	Chiang Rai	10492	Nan	15.920	Chiang Rai	8915	Nan	20.826	Chiang Mai	3475	Nakhomphanom*	11.915
3	Nakhomphanom*	9855	Nakhomphanom*	14.667	Nakhomphanom*	3568	Phayao	20.720	Nakhon Sawan	2940	Nan	10.793
4	Nan	6960	Phayao	13.181	Phayao	5365	Lamphun	17.656	Songkhla	2793	Ayutthaya	7.445
5	Nakhon Sawan	6838	Chiang Mai	11.145	Lampang	4944	Nakhomphanom*	17.405	Ayutthaya	2772	Mukdahan	5.932
6	Phayao	6606	Lamphun	10.638	Nan	4653	Chiang Mai	17.133	Surin	2607	Phachuap Khiri Khan	5.412
7	Ayutthaya	6419	Chiang Rai	9.471	Srisaket	4242	Chiang Rai	15.607	Khon Kaen	2551	Kam Phaeng Phet	5.334
8	Surin	6273	Ayutthaya	8.847	Lamphun	3927	Lampang	12.473	Nan	2307	Nakhon Sawan	5.278
9	Khon Kaen	6240	Lampang	7.647	Nakhon Sawan	3898	Trang	10.328	Krabi*	2250	Samut Songkhram	5.254
10	Lampang	5941	Trang	7.296	Nakhon Ratchas	3859	Ayutthaya	10.325	Mahasarakham	2079	Phayao	5.123
11	Srisaket	5894	Kam Phaeng Phet	7.256	Ratchaburi	3709	Saraburi*	9.672	Roi Et	2075	Chiang Mai	4.886
12	Krabi*	5811	Saraburi*	7.243	Nakhon Sri Thai	3709	Ratchaburi	9.636	Buriram	1969	Saraburi*	4.817
13	Nakhon Sri Thammar	5613	Phichit	6.618	Khon Kaen	3690	Kam Phaeng Phet	9.161	Kalasin	1943	Uthai Thani	4.683
14	Nakhon Ratvasima	5330	Uthai Thani	6.609	Surin	3666	Phichit	9.145	Nakhon Sri Thamu	1904	Songkhla	4.374
15	Mahasarakham	5111	Nakhon Sawan	6.202	Ayutthaya	3647	Nakhonnayok	9.109	Kam Phaeng Phet	1785	Mahasarakham	4.341
16	Roi Et	4964	Samut Songkhram	6.181	Krabi*	2561	Uthai Thani	8.580	Srisaket	1652	Kalasin	4.325
17	Buriram	4964	Ratchaburi	6.146	Trang	3111	Nonthaburi	8.202	Chiang Rai	1577	Trang	4.295
18	Kam Phaeng Phet	4878	Nakhonnayok	5.999	Kam Phaeng Phet	3093	Uttaradit	8.010	Nakhon Ratvhasin	1471	Phichit	4.209
19	Ratchaburi	4848	Mukdahan	5.612	Mahasarakham	3033	Nakhon Sawan	7.146	Chonburi*	1346	Pattani	4.142
20	Lamphun	4646	Pattani	5.397	Buriram	2995	Samut Songkhram	6.955	Trang	1307	Surin	3.991
21	Trang	4418	Mahasarakham	5.368	Nonthaburi	2992	Ang Thong	6.894	Saraburi*	1276	Chumphon	3.989
22	Kalasin	4124	Phachuap Khiri Khan	4.971	Roi Et	2889	Suphanburi	6.727	Phichit	1253	Satun	3.421
23	Suphanburi	3913	Surin	4.789	Suphanburi	2784	Pattani	6.642	Phayao	1241	Roi Et	3.416
24	Phichit	3850	Uttaradit	4.785	Phichit	2597	Mahasarakham	6.408	Pattani	1233	Lamphun	3.350
25	Saraburi*	3831	Suphanburi	4.577	Saraburi*	2554	Chainat	6.317	Phetchabun	1193	Narathiwat	3.329
26	Nonthaburi	3394	Nonthaburi	4.535	Phitsanulok	2222	Srisaket	6.149	Phachuap Khiri Ki	1172	Pathum Thani	3.184
27	Phetchabun	3250	Kalasin	4.533	Kalasin	2182	Sukhothai	5.844	Ratchaburi	1139	Nakhonnayok	2.995
28	Pattani	3227	Pathum Thani	4.389	Phetchabun	2057	Pathum Thani	5.614	Suphanburi	1129	Chiang Rai	2.939
29	Phitsanulok	3013	Chumphon	4.385	Pattani	1994	Surin	5.582	Narathiwat	1045	Khon Kaen	2.907
30	Nakhon Pathom*	2828	Srisaket	4.260	Kanchanaburi	1898	Kanchanaburi	5.566	Lampang	997	Ratchaburi	2.821

Table 43 Numbers and rates of cumulative excess deaths over the period 1992-1996 based on the 1984-1991 death trends by sex and province

	Male + Female		Male		Female							
	Excess deaths Number	Per 1000	Excess deaths Number	Per 1,000	Excess deaths Number	Per 1,000						
31	Kanchanaburi	2818	Ang Thong	4.217	Nakhon Pathom*	1851	Phitsanulok	5.563	Nakhon Pathom*	977	Chonburi*	2.820
32	Chonburi*	2546	Sukhothai	4.146	Uttaradit	1837	Chanthaburi	5.395	Kanchanaburi	919	Yasothon	2.724
33	Sukhothai	2443	Kanchanaburi	4.145	Sukhothai	1691	Mukdahan	5.306	Nong Khai	897	Kanchanaburi	2.712
34	Songkhla	2441	Roi Et	4.070	Pathum Thani	1479	Phetchaburi	4.981	Chumphon	856	Buriram	2.711
35	Pathum Thani	2332	Satun	3.806	Yasothon	1384	Yasothon	4.849	Pathum Thani	853	Phetchabun	2.649
36	Uttaradit	2207	Yasothon	3.788	Uthai Thani	1310	Chumphon	4.772	Sakonkakhon	843	Lampang	2.620
37	Phachuap Khiri Khan	2166	Phitsanulok	3.780	Nong Khai	1263	Kalasin	4.738	Mukdahan	822	Suphanburi	2.560
38	Yasothon	2160	Phetchabun	3.566	Sakonkakhon	1249	Nakhon Pathom*	4.721	Phitsanulok	791	Sukhothai	2.505
39	Nong Khai	2160	Khon Kaen	3.541	Chanthaburi	1205	Roi Et	4.719	Yasothon	776	Nakhon Pathom*	2.385
40	Sakonkakhon	2092	Nakhon Pathom*	3.527	Chonburi*	1200	Nakhon Sri Thammarat	4.606	Sukhothai	751	Srisaket	2.381
41	Uthai Thani	2042	Nakhon Sri Thammarat	3.496	Loei	1159	Phachuap Khiri Khan	4.530	Uthai Thani	732	Nakhon Sri Thamma	2.379
42	Chumphon	1903	Chanthaburi	3.465	Chainat	1134	Phetchabun	4.462	Lamphun	718	Phuket*	2.178
43	Narathiwat	1842	Buriram	3.388	Nakhonnayok	1122	Satun	4.185	Samut Songkhram	564	Mae Hong Son	2.169
44	Mukdahan	1590	Chainat	3.224	Phrae	1060	Khon Kaen	4.171	Phatthalung	492	Nong Khai	2.116
45	Chanthaburi	1523	Mae Hong Son	3.016	Chumphon	1047	Phrae	4.083	Surat Thani	422	Phitsanulok	1.989
46	Nakhonnayok	1504	Narathiwat	2.884	Phetchaburi	1046	Buriram	4.055	Satun	419	Phatthalung	1.926
47	Samut Songkhram	1458	Chonburi*	2.636	Phachuap Khiri Khan	993	Loei	3.890	Nonthaburi	402	Ang Thong	1.766
48	Loei	1356	Nong Khai	2.503	Ang Thong	897	Mae Hong Son	3.793	Nakhonnayok	382	Sakonkakhon	1.673
49	Chainat	1196	Loei	2.345	Samut Songkhra	894	Nakhon Ratvhasima	2.975	Uttaradit	370	Uttaradit	1.596
50	Ang Thong	1148	Phetchaburi	2.219	Narathiwat	797	Nong Khai	2.878	Chanthaburi	318	Trat	1.512
51	Surat Thani	1039	Nakhon Ratvhasima	2.066	Mukdahan	768	Bangkok Metropolitan	-1.988	Samut Prakan	270	Chanthaburi	1.471
52	Phetchaburi	954	Sakonkakhon	2.061	Surat Thani	616	Chonburi*	2.457	Ang Thong	251	Nakhon Ratvhasima	1.146
53	Satun	940	Songkhla	1.916	Samut Prakan	612	Narathiwat	2.455	Phuket*	211	Nonthaburi	1.048
54	Samut Prakan	882	Phatthalung	1.669	Udon Thani	594	Sakonkakhon	2.443	Loei	197	Surat Thani	0.979
55	Phatthalung	845	Trat	1.544	Satun	521	Trat	1.575	Mae Hong Son	175	Ranong	0.916
56	Phrae	681	Phrae	1.325	Phatthalung	352	Surat Thani	1.428	Trat	141	Loei	0.703
57	Mae Hong Son	509	Surat Thani	1.205	Mae Hong Son	334	Phatthalung	1.404	Chainat	62	Bangkok Metropolitan	0.613
58	Trat	297	Samut Prakan	0.909	Samut Sakhon*	256	Samut Sakhon*	1.294	Ranong	59	Samut Prakan	0.547
59	Udon Thani	196	Ranong	0.297	Chaiyaphum	221	Samut Prakan	1.284	Yala	25	Chainat	0.324
60	Rayong	111	Rayong	0.218	Rayong	158	Udon Thani	0.818	Rayong	-47	Yala	0.127

Table 43 Numbers and rates of cumulative excess deaths over the period 1992-1996 based on the 1984-1991 death trends by sex and province

	Male + Female		Male		Female			
	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000		
61	Ranong	40	Udon Thani	0.137	Rayong	-92	Rayong	-0.187
62	Samut Sakhon*	37	Samut Sakhon*	0.091	Lopburi	98	Phetchaburi	-0.418
63	Chaiyaphum	-76	Chaiyaphum	-0.070	Ranong	-18	Phangnga	-0.518
64	Phangnga	-245	Bangkok Metropolitan	-0.666	Phangnga	-115	Samut Sakhon*	-0.563
65	Yala	-489	Lopburi	-0.805	Songkhla	-351	Prachinburi*	-0.995
66	Phuket*	-552	Phangnga	-1.011	Prachinburi*	-389	Chaiyaphum	-1.056
67	Lopburi	-604	Yala	-1.225	Ubon Ratchathani	-496	Tak	-1.083
68	Prachinburi*	-624	Prachinburi*	-1.304	Phangnga	-514	Phrae	-1.487
69	Tak	-911	Chachoengsao	-1.888	Chachoengsao	-547	Tak	-1.856
70	Chachoengsao	-1157	Ubon Ratchathani	-1.909	Yala	-593	Lopburi	-1.882
71	Singburi	-1677	Tak	-2.602	Phuket*	-762	Singburi	-1.982
72	Ubon Ratchathani	-3175	Phuket*	-2.842	Singburi	-847	Ubon Ratchathani	-3.265
73	Bangkok Metropolitan	-13867	Singburi	-6.971	Bangkok Metro	-6892	Bangkok Metro	-6.575
74	Sakeaw*	na	Sakeaw*	na	Sakeaw*	na	Sakeaw*	na
75	Nongbua Lamphu*	na	Nongbua Lamphu*	na	Nongbua Lamphu*	na	Nongbua Lamphu*	na
76	Amnat Cheorn*	na	Amnat Cheorn*	na	Amnat Cheorn*	na	Amnat Cheorn*	na

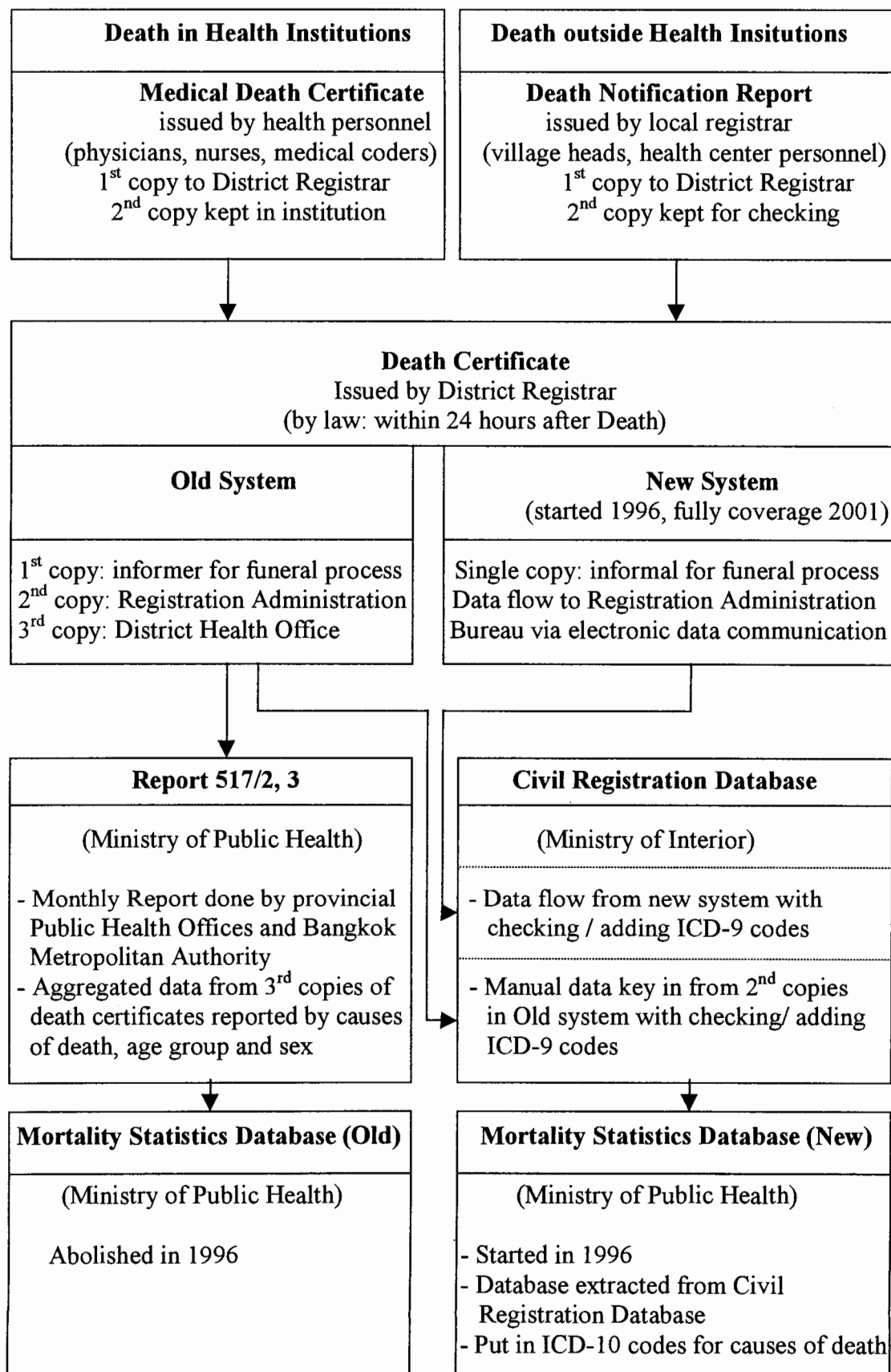
Table 44 Estimates of excess deaths from the 1984-1991 trends of death rates based on 1991, 1995 Population Projections

Whole Country	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>1991 Population Projection</i>													
Deaths with AIDS corrected for incomplete													
1991 Population projection	300,190	301,844	282,086	292,983	283,646	295,828	296,185	303,265	309,087	333,475	330,780	342,660	371,290
Death rates with AIDS	50,637,000	51,580,000	52,511,000	53,427,000	54,326,000	55,214,000	56,082,000	56,923,000	57,760,000	58,584,000	59,396,000	60,206,000	61,005,000
Death rates without AIDS (1984-1991 trend)	5.9283	5.8520	5.3719	5.4838	5.2212	5.3578	5.2813	5.3276	5.3512	5.6923	5.5691	5.6915	6.0862
Excess death rates	5.7847	5.6970	5.6093	5.5216	5.4339	5.3462	5.2585	5.1708	5.0831	4.9954	4.9077	4.8200	4.7323
Excess deaths	0.1436	0.1550	-0.2374	-0.0378	-0.2127	0.0116	0.0228	0.1568	0.2681	0.6969	0.6614	0.8715	1.3539
	7,270	7,993	-12,464	-2020	-11,556	643	1,278	8,928	15,487	40,825	39,283	52,467	82,596
	Cumulative excess deaths over the period 1992-1996 =230,659												
<i>1995 Population Projection</i>													
Deaths with AIDS corrected for incomplete													
1995 Population Projection	300,190	301,844	282,086	292,983	283,646	295,828	296,185	303,265	309,087	333,475	330,780	342,660	371,290
Death rates with AIDS	48,823,237	49,567,449	50,354,482	51,186,086	52,064,116	52,990,535	53,912,037	54,862,936	55,837,061	57,237,992	57,927,748	58,596,116	59,183,009
Death rates without AIDS (1984-1991 trend)	6.1485	6.0896	5.6020	5.7239	5.4480	5.5827	5.3742	5.4287	5.4670	5.8261	5.7102	5.8478	6.2736
Excess death rates	6.0476	5.9411	5.8346	5.7281	5.6216	5.5151	5.4086	5.3021	5.1956	5.0891	4.9826	4.8761	4.7696
Excess deaths	0.1009	0.1485	-0.2326	-0.0042	-0.1736	0.0676	-0.0344	0.1266	0.2714	0.7370	0.7276	0.9717	1.5040
	4926	7359	-11,712	-216	-9038	3580	-1,894	7074	15,343	42,186	42,150	56,940	89,011
	Cumulative excess deaths over the period 1992-1996 =245,630												

Appendix C

Data Flow of National Mortality Information

Data flow of National Mortality Information



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