



# CHAPTER I

## INTRODUCTION

### 1.1 Background and Rationale

In Thailand death information population has been used as an index to demonstrate health problems and its significance in prioritizing the problems, to forecast the trend of health problems in the country, and to indicate people's health status which were affected by various factors such as age, gender, genetic, social status, economic and behavior of individuals. Many environmental aspects include physicality, social economic, political policy, as well as the existing medical and health service system in the areas of coverage and quality. In every economical development plan, there are indicators of health status of the Thai population, such as, life expectancy at birth, annual total death rate, and death rate of significant groups such as maternal mortality and infant mortality.

The crude death rate of Thai population decreased from 12 per 1,000 population in 1960 to 4.9 per 1,000 population in 1995. According to a study from the Health Statistic Division, the main causes of death in the past were from communicable diseases, such as, diarrhea, tuberculosis, and pneumonia, which became less significant. While non – communicable diseases, such as, accidents, heart disease, and vascular disease have become dominant. Similar to the causes of death in Phayao, the trend has

shifted from communicable diseases to non-communicable diseases, according to the analysis of data, which was obtained from death certificates in Phayao Province in 2001 (total population of 511,604). The main causes of death in Phayao, in sequence include, 712 heart and vascular disease cases (139.17/100,000 population), 439 AIDS cases (85.81/100,000 population), and 395 cancer cases (77.21/100,000 population).

**Table 1: Causes of death in Phayao Province, 1999-2001**

Causes of death	1999			2000			2001		
	Rank	Number	Rate	Rank	Number	Rate	Rank	Number	Rate
Heart diseases	1	1304	251.87	1	1014	196.84	1	712	139.17
Human immune deficiency virus (HIV)	2	790	152.59	2	816	158.41	2	439	85.81
Carcinoma	3	418	80.74	3	455	88.33	3	395	77.21
Lung diseases	4	199	38.44	4	311	60.37	4	281	54.92
Nephritic syndrome	6	139	26.85	5	159	30.87	5	149	29.12
Diseases of the blood	7	116	22.41	8	121	23.49	6	133	26.00
Certain infectious and parasitic diseases	5	177	34.19	7	138	26.79	7	102	19.94
Suicide	8	112	21.63	9	91	17.67	8	78	15.25
Hypertension and Cerebra vascular diseases	10	68	13.13	10	68	13.20	9	74	14.46
Traffic accidents	9	97	18.74	6	149	28.92	10	72	14.07

However, in determining the reliability of the death reporting system, there is still some question whether information really reflects the actual health status. The main doubts surrounding the information concerns its quality, accuracy, and

completion. Utilizing this information may led to improper planning and policy setting which would not correspond to the needs concerning health care. Resource spending based on this information would be wasted. Currently, the existing death report system uses information from death certificates, which were reported to the Registration Office, at the Ministry of Interior Affairs. The procedures are: when a person has died, the death and the document certified by a professional medical caretaker is reported to the registration officer within 24 hours. The person who does the report is either the head of a household or the one who finds the body in the house. In the case of finding the deceased outside of the house, the one who goes with the decedent or who finds the body will have to report it to the registration officer. After the death has been reported, a registration officer will issue the death certificate, and once the death certificate is issued, and it is by law that the body will kept or buried or cremated at the place stated on the certificate.

Due to the excess of unreliable information, Hathai Singhsanga and his group studied the accuracy of the causes of death reported on the death certificates in Namphong District, Khonkan Province (1994). The descriptive study focused on the previous information of death population by simply random sampling from death certificate for those who domiciled in Namphong District. It was composed of 115 samples from 394 decedents, in a target area of 61 villages in 12 sub-districts. The information collection was completed by interviewing persons who were most familiar, by observation, with the symptoms causing the decedents death. The questionnaire was adapted from the Death Investigation Manual of Health Statistic Division, Permanent Secretary Office, The Ministry of Health. The data of 93 cases were collected, plus 13 death cases that were certified by physicians or hospitals, for a total of 106 samples.

The research found the causes of death recorded from the interviews matched those reported on the death certificate only 59.43 % of the time. Similar to the study of Chayanthorn Phatumanont, Chamaiporn Thawitchsri and Phakphoom Thawong in 1999 that studied the accuracy of AIDS death from information recorded on the death certificate, (descriptive cross-sectional study) in 4 sub districts, Maewang District, Chiangmai Province. The information on the death certificates were collected from October 1996 through September 1998 and their health conditions before their death were collected by in-depth interviews of close relatives. Data was revised, concluded, and given opinion by a group of physicians.

The analysis on the completion and accuracy were compared with the causes of death identified on the death certificates. It was found that in the causes of death classified by group of diseases, 42 AIDS cases were reported (20.9%). The causes of death was classified by age groups in the opinion of the physician and found 64 AIDS cases (31.8 %). The accuracy of the report on AIDS deaths was 89.1%. There were 22 cases (34.4%) that had died from AIDS, but their deaths were identified on the death certificate as caused by other illnesses, for instance, 1 case died from blood circulatory system (4.6%), 8 cases from respiratory system (36.4 %), 1 case from nervous system (4.6%), 3 cases from digestive system (13.6 %) 1 case from genitourinary system (4.6 %), 5 cases from allergy (22.7 %), 3 cases from suicidal (13.6%).

In Phayao, the current death reporting system derived from the death certificate has been found to be unreliable in many aspects. The first major aspect was the completion of death report, since the reported deaths were specifically those who had

their names registered in the house registration. In 1999, the province received reports from various health services and found 54 infant fatalities and 60 cases of stillbirths; however, these cases were not recorded with death certificate.

Secondly, from the study of Preeyanooch Chertchoolao (2000), causes of death reported on death certificates and causes of death assessed from the interview of close relatives found only 47.16 % conformity.

We can see that the above researches agree on the unreliability of information on the death certificate. Some researches emphasize some specific diseases or age group, and the researchers have commented that the study to find the actual causes of death of the population for every age group and for any illness is interesting if it could be implemented in every area, in order to obtain the most accurate information. However, this study could not implement the whole area of Phayao Province, due to the time limitation, therefore, one target district was selected, Maejai District. This was done to obtain a guideline in adjusting information system in Phayao Province, especially the information on causes of death, a significant indicator in measuring people's health status.

## 1.2 Objective

The study was initiated objectively to explore the causes of death of the population in Maejai District, Phayao Province, of people who died from October 1, 2000 through September 30, 2001. The specific objective was to compare causes of death specified on death certificates and causes of death diagnosed by physician. These

were collected from hospital records, and by interviewing close relatives of the decedents. The results of this study will further be utilized in setting up a health policy in response to actual problems, on a local level, and as a guideline to develop a provincial information system.