CHAPTER V

CONCLUSION, DISCUSSION AND RECOMMENDATION

The objective of this study was to compare causes of death specified on the death certificate and causes of death diagnosed by physicians, which concluded from the interview of decedents' relatives and review of medical records. The collection of death information of those who died from October 1, 2000 through September 30, 2001, with a total of 250 decedents of population in Maejai District, Phayao Province from death certificate and the interview of decedents' relatives and review of medical records, the results of study are as followed:

5.1 Conclusions

General information of decedents found male 54.0 % at the age of 30-34 years old 13.31 %, as farmer 58.26 % and as employee 16.54 %. 77.60 % of the decedents were treated at government hospitals before their death, while 58.72 % died at home. 41.28 % of the decedents died during the hours of 08.00-16.00. Death condition, 94.40 % died from natural cause. Persons who notified death were children of decedents 37.21 %, and physicians opinioned the death on the death certificate 58.40 %.

The comparison of causes of death specified on the death certificate and causes of death diagnosed by physicians based on disease coding ICD-10 found the most cause of death on the death certificate was diseases of the circulatory system 39.83 %, certain infectious and parasitic diseases was 26.14 % and neoplasm's was 9.96 % respectively. Causes of death diagnosed by physicians found certain infectious and parasitic diseases 40.40 %, neoplasm's 15.20 %, and diseases of the circulatory system 11.60 % respectively.

The comparison of causes of death specified on the death certificate and causes of death diagnosed by physicians as each disease found the most cause of death was heart attack 37.76 %, AIDS 23.24 %, senility 9.13 % respectively, while, the diagnosis of physicians found the most cause was AIDS 37.60 %, senility 7.60 %, and acute renal failure 6.80 % respectively.

The analysis of the correspondence of causes of death specified on the death certificate to causes of death diagnosed by physicians by comparing causes of death information as mentioned above and tested by kappa found the correspondence 55.38 % and kappa coefficient was 0.461 ($p<.01$) which is considered low correspondence.

5.2 Discussion

Results of the study revealed the differences of causes of death specified on the death certificate and causes of death opinioned by physicians, obviously, the sequence of causes of death was different from the causes of death specified on the death certificate, heart disease was the first cause, 91 people died from heart failure, and

second to it was AIDS which caused 56 deaths. However, when studying causes of death opinioned by physicians, found the first cause was AIDS with 94 deaths, which has increased 39.5 %, while, heart disease has decreased from 91 to 6 deaths only. Moreover, when measuring statistical test to measure the correspondence, it was found the correspondence of disease groups had caused death only 55.38% which is considered low. As for the sequence of cause of death which was different from the previous ones shown, the utilization of causes of death specified on the death certificate as source of information was very much lacking in accuracy. Which then affected the inefficient health development plan at every level, since, cause of death information is the significant indicator with present health problems and in utilizing it as information to plan for health development.

The differences between causes of death specified on the death certificate and causes of death diagnosed by physicians, it is obvious that death notifying system depended on the person who reported the death to a registration officer as he/she decided what the cause of death was. Realistically, a registration officer is not authorized to receive medical death certification from physician in all cases, the study showed that only 58.40 per cent of decedents were opinioned the death by physicians. As for the opinion on cause of death by community leaders, who act as registration officers, according to the study of Planning and Policy Department, the Ministry of Health, it was shown that community leaders have less knowledge on causes of death due to lack of training. Once they have to opinion the cause of death, they tend to make the conclusion of cause of death from the condition appearing before the death without asking questions for additional details. Therefore, they filled causes of death, such as

heart failure and respiratory failure, while these were considered the form of death, not the actual cause of death according to the standard of WHO.

According to the results of study, causes of death diagnosed by physicians found AIDS was the first cause with 94 cases that died from it, but only appeared on the death certificate in 56 cases, though, the cause of death as AIDS can be the explicit cause due to its conditions and the appeared symptoms, the reason that persons who notified death did not specify AIDS as a cause of death was because they might be afraid it would effect the decedent's family, therefore, they notified the registration officer of other diseases, such as heart failure, and this should be an issue for further study.

Even though, the physicians have opinions on cause of death, there was no confirmation that physician's diagnosis are always correct. The Planning and Policy Department, the Ministry of Health concluded in detail in the manual of filling in causes of death that physician who gave the diagnosis on cause of death did not autopsy the body by him/herself, therefore, he/she did not know the definite cause of death or there were various diseases that can cause death which they were unable to diagnosis the actual cause of death in every case.

5.3 Problems and Limitations

This research aimed to study the actual cause of death in population and compare causes of death on the death certificate, therefore, information collection was based on the collaboration of various sectors including group of physicians, nurses at

hospital, health personnel from health centers as the interviewers, including decedents' relatives who provided information, therefore, the complications during the preparation phase and making common understanding is the most concern in order to obtain the complete information and for physician to be able to diagnosis causes of death at the most accurate level. However, the study focussed on past information, decedents' relatives or information providers may not have memorized all important information which resulted in incomplete information and caused complication for physicians to give diagnosis if a decedent had no medical records in any medical care facility.

5.4 Utilization of Study's Results

According to the results of the study, it is confirmed that utilizing death information from death certificate alone may not be enough to obtain accurate information to use in planning for local problem solving Therefore, in utilizing death information, the system to obtain causes of death can be established by compiling the decedents' histories from the hospital and some can be collected/recorded by the health centers' personnel who are the closest to the people in the community, however, there must be an indication of methodology to establish a manual concerning the investigation on causes of death from health personnel in order to obtain death information most accurately. This study has evidence indicating that the system can be done and can collect the most accurate death information for the utilization of planning for future health problems.

5.5 Recommendation

According to the National Death Information Development Plan, the Ministry of Health has an agreement with the Ministry of Interior in developing a death information system. The first phase started in March 2001, and has experimented in 18 pilot provinces, and in 2003, it would be implemented in every province. This implementation is the important change. In that a physician must diagnose each death in and out of the hospital, especially, if they died at home. After a relative notified the death to community leaders/sub-district physician/ municipal, he/she will receive a death notice form and then go to a physician at the nearest hospital, except the area where there is no hospital. A person can go to a health center for diagnosing the cause of death, bring the death notified form, which has already been filled in with the cause of death, to the District Office to receive a death certificate. This system will enable us to obtain accurate death information as the standard set up of WHO suggests and will be able to utilize it in health plans properly and effectively.

Moreover, the Ministry of Health has been developing a death information system at the provincial level. The implementation will improve the quality of death information by medical and public health personnel for the coverage of each decedent in their responsible areas. This will be done by adding a death report form along with various processes of the regular population registration system, such as, issuing medical death certification and death notified form from local Mastery Section in cases of death at other places outside the hospital. Once there is a development on death information system of the province, it will enhance accurate death information and acknowledge

health problems at provincial, regional, district, sub-district level, and for a total picture of the country, hence, the set up of health planning at the right direction.

The development of a death information system as discussed, above has many keys to success. Firstly, the health insurance program, which has been implement in every province, enables each population to have a personal family hospital, so when there is a death, either natural or unnatural, a responsible physician will be the one to diagnose the death; this can have a very high potentiality. Secondly, health insurance programs must keep the standard of care high, as well as other factors relevant to the program, for instance, the standard of morbidity and mortality report, and DRGs (Diagnosis Related Groups) system. These will enable physicians to know the criteria needed to diagnose the cause of death by using ICD-10 through training and practices. This will enhance their confidence and enable them to work regularly with the set criteria. Furthermore, in the long run, there is the development of medical records filing system, information records system, and the involved personnel that have to be considered. Thirdly, every involved sector, especially, at the policy level, can see the important of cause of death information and the important of the development of a death information system. Obtaining accurate causes of death is considered fundamental for the set up of a health development policy and population quality at every age group.