CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This research aimed to study factors related to quality of epidemiologic surveillance data (Report Form 506) from health centers in Muang District, Nakhonsithammarat Province. The subjects for study to study patient characteristics, health center characteristics, location and time which relate with quality of data in epidemiologic surveillance report at health centers in Muang District, Nakhonsrithammarat Province. Data were collected using an interview questionnaire designed by the researcher. Results are summarized below.

Patient and Health Center Characteristics;

This general information of patient characteristics considered all of the 506 Report Forms that the District Public Health Office received from health centers in Muang District for one year, starting January 1, 2004, and ending December 31, 2004. During this year, a total of 831 report forms were received at the District Health Office from the 25 health centers in the district. Among these, 47.2% of patients were male and 52.8% were female, 46.5% were 0-10 years old, and 63.2% were sick with diarrhea.

Fifty-two percent of persons responsible for completing epidemiology forms were male aged 29-55 years old with an average age of 36.5 years. The period of time have been working in the Ministry of Public Health 8-29 years, the period of time

responsible for completing and sending report forms 506 is 2-10 years. Most of them (60%) not ever been trained in the epidemiologic surveillance reporting systems. Income 8,870 – 25,180 Baht per month average 14,606 Baht. There used computer to process the data on epidemiologic surveillance and method in submitting report forms 506 by floppy disk is only 36.0%. Supporting activities in implementation and receiving supervision on epidemiology from health district 56.0% and transportation and communication system is good 76.0%. Knowledge on epidemiology reporting higher correct 60.0% of health center had moderate knowledge towards to knowledge on epidemiology, while 16.0% had poor knowledge. Attitudes towards epidemiology reporting 64.0% of health center had moderate attitudes towards to attitudes on epidemiology, while 36.0% had good knowledge.

Characteristics by sub district (tumbol);

46.1% of sub-districts had moderate completeness, while 38.5% had poor and 15.4% had good completeness. No sub-district had good accuracy 92.3% of sub-districts had moderate accuracy, while 7.7% had poor accuracy 76.9% of sub-districts had moderate promptness, while 15.4% had poor and 7.7% had good promptness.

Characteristics by month

October had the highest completion rate (65.6%) while the lowest completion (7.7%) was in November 55.4 % in March had higher accuracy, while 25.4% in January had lower 93.7% in January had higher promptness, while 19.6% in March had lower.

Quality of data in surveillance report;

Quality of data in surveillance report was quite low. The completeness rate is 60.6% accuracy rate 39.4% promptness rate 64.4% and overall quality report forms 506 62.7% of data in surveillance report.

Interrelationships Quality of data in surveillance report

Factors significantly associated with quality of epidemiologic surveillance data from health centers, completeness, accuracy had quality better at younger patient age, ($p<0.001$), and experience with completing the report forms 506 was positively and significantly associated with completeness ($p<0.001$) and overall quality ($p=0.001$), but was not associated with accuracy or promptness. Submission of forms by diskette was associated with significantly better completeness ($p=0.003$) and overall quality ($p=0.007$) than was submission as hard copy. Method of submission was not associated with promptness or accuracy. A similar pattern was observed for receipt of support/feedback in implementation of job responsibilities and for receiving supervision in epidemiology-related activities completeness ($p=0.009$) and overall quality ($p=0.002$), and location of health center was a highly significant difference among sub-districts in the completeness ($p<0.001$), accuracy ($p<0.001$) and promptness ($p<0.001$) of report forms, and calendar time was a highly significant difference among month in the accuracy ($p=0.004$) and promptness ($p<0.001$) of report forms.

Discussion of the Results

Gender:

The results this study found personnel responsible for completing report from 506 in health center most had gender is male and found gender was not relate to completion accuracy promptness and overall quality. This finding was consistent with that by Nalinee Chuaydamronk (1998) who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998.She found gender was not related to completion accuracy promptness and overall quality. This study can complain is epidemiologic surveillance report is not crucified by gender every gender can work activity this job.

Age:

The results from this study found personnel responsible for completing report from 506 in health center 29-55 year old. This study found age was not related to completion accuracy promptness and overall quality. This finding was consistent with that by Nalinee Chuaydamronk (1998) who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998, Prapatsorn Sunsanapittayakorn (1998) who studies the effectual result of making the Epidemiologic Surveillance by Sub-district Public Health staff in Ubonratchatanee Province in 1997 and Nulprang Pratoomsri (2000) who studied the completion and the accuracy of the disease report under the Surveillance with the patient report (form 506) at Health Station Level in Lopburi Proince in 2000. There found age was not related to completion accuracy promptness and overall quality. This study can complain is personnel responsible for

completing report from 506 in health center age is not problem activity in health center.

Marital Status

Marital status was not related to completion accuracy promptness and overall quality. This finding was consistent with that by Nalinee Chuaydamronk (1998) who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998, Prapatsorn Sansanapittayakom (1997) who studies the effectual result of making the Epidemiologic Surveillance by Sub-district Public Health staff in Ubonratchatanee Province in 1997 and Nulprang Pratoomsri (2000) who studied the completion and the accuracy of the disease report under the Surveillance with the patient report (form 506) at Health Station Level in Lopburi Proince in 2000. They found married status not related to completion accuracy promptness and overall quality.

The Highest Educational Certificate in Public Health

The results from this study found personnel responsible for completing report from 506 in health center had bachelor's degrees 100% disagree with study by Nalinee Chuaydamronk (1998) who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998, Prapatsorn Sunsanapittayakorn (1998) who studied the effectual result of making the Epidemiologic Surveillance by Sub district Public Health staff in Ubonratchatanee Province in 1997 and Nulprang Pratoomsri (2000) who studied the completion and the accuracy of the disease report under the

Surveillance with the patient report (form 506) at Health Station Level in Lopburi
Proince in 2000. There found most level lower bachelor's degrees.

**The period of time have been working in the Ministry of Public Health 8-29
years**

The results from this study found the period of time have been working in
the Ministry of Public Health mean 14.7 year and not relate to completion accuracy
promptness and overall quality. This finding was consistent with that by Nalinee
Chuaydamronk (1998) who studied the factors which is related to the quality of the
disease report from the Epidemiologic Surveillance at the health station level in
Songkhla Province in 1998, Prapatsorn Sunsanapittayakorn (1998).who studies the
effectual result of making the Epidemiologic Surveillance by Sub-district Public
Health staff in Ubonratchatanee Province in 1997 and Nulprang Pratoomsri (2000)
who studied the completion and the accuracy of the disease report under the
Surveillance with the patient report (form 506) at Health Station Level in Lopburi
Province in 2000. There found the period of time have been working in the Ministry
of Public Health was not relate to completion accuracy promptness and overall
quality.

The period of time responsible for completing and sending report forms 506.

The results from this study found the period of time responsibility for
completing and sending report forms 506 was 2-10 year and period of time
responsibility for completing and sending report forms 506 not relate to accuracy and
promptness but related to completeness and overall quality. This finding was

consistent and inconsistent with that by Nalinee Chuaydamronk (1998) who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998, Prapatsorn Sunsanapittayakorn (1998) who studies the effectual result of making the Epidemiologic Surveillance by Sub-district Public Health staff in Ubonratchatanee Province in 1997 and Nulprang Pratoomsri (2000) who studied the completion and the accuracy of the disease report under the Surveillance with the patient report (form 506) at Health Station Level in Lopburi Province in 2000. There found the period of time responsibility for completing and sending report from 506s related to was related to completion accuracy promptness and overall quality.

Training in the epidemiologic surveillance reporting systems

The results from this study found most of personnel responsible for completing report from 506 in health center had ever been trained in the epidemiologic surveillance reporting systems and not relate to completion accuracy promptness and overall quality. This finding was consistent with that by Nalinee Chuaydamronk (1998). Who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998, Prapatsorn Sunsanapittayakorn (1998), who studies the effectual result of making the Epidemiologic Surveillance by Sub district Public Health staff in Ubonratchatanee Province in 1997 and Nulprang Pratoomsri (2000), who studied the completion and the accuracy of the disease report under the Surveillance with the patient report (form 506) at Health Station Level in Lopburi Provinces in 2000. There founds trained in the epidemiologic surveillance reporting

systems was not related to completion accuracy promptness and overall quality.

Knowledge

The results from this study found knowledge on epidemiology reporting higher correct 60.0% of health center had moderate knowledge towards to knowledge on epidemiology, average 9.72 from total 15 and was not related to completion accuracy and promptness. This finding was consistent with that by Nalinee Chuaydamronk (1998). She found personnel responsible for completing report from 506 in health center had moderate knowledge towards to knowledge on epidemiology 69.1 and study by Prapatsorn Sunsanapittayakorn (1998) and study by Nuanprang Pratoomsri 2000. There found personnel responsible for completing report from 506 in health center had moderate knowledge towards to knowledge on epidemiology 63.5 and 72.3 and knowledge was not related to completion accuracy and promptness.

Attitude

The results from this study found attitude to wards epidiology most moderated 64.9 and average 56.04 from 75 and related to Promptness rate but not related to completeness accuracy and overall quality. This finding was consistent and inconsistent with that by Nalinee Chuaydamronk (1998) who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998. She found attitude was not related to completeness accuracy and overall quality. Prapatsorn Sunsanapittayakorn (1998) who studies the effectual result of making the Epidemiologic Surveillance by sub district Public Health staff in Ubonratchatanee Province in 1997and Nulprang Pratoomsri (2000) who studied the completion and the

accuracy of the disease report under the Surveillance with the patient report (form 506) at Health Station Level in Lopburi Proince in 2000. There found attitude to wards epidemiology not related to completeness accuracy and overall quality.

Process the data on epidemiologic Surveillance and method in submitting report 506

The results from this study found process the data on epidemiologic Surveillance and method in submitting report 506 was not used computer 64.0% and when there used computer was related to completeness and overall quality.

Quality of data in surveillance report

The results from this study found quality of data in surveillance report was lest more thane 80%. This refer to not good completeness rate is 60.6% accuracy rate 39.4% promptness rate 64.4% and overall quality report forms 506 62.7% of data in surveillance report. This finding was consistent with that by Nalinee Chuaydamronk, (1998), who studied the factors which is related to the quality of the disease report from the Epidemiologic Surveillance at the health station level in Songkhla Province in 1998. She found that the completion and the promptness 71.1% and 52.0% respectively, but inconsistent Tassanee Donsamer studied the completion and accuracy of the processed data on Epidemiologic Surveillance with microcomputer in 6 provinces of the north-eastern region, where the computer was used to process the data continuously from April to July 1990. By checking the patient report (form 506) with print out, it is found that the completion rate of the processing was very high, 99.91% and accuracy of the data processing has 89.45%.

Recommendations

Based on the results of this study, the researcher's main recommendations are as follows:

1. Generally, quality was low, and should be improved.

2. Strengthen support/feedback and supervision in epidemiology.

3. Encourage computerized data entry and report submission.

4. Experience is important. The health system should try to keep personnel with experience in completing epidemiologic surveillance forms.

5. Educate health workers that surveillance is important not only for young children, but also for other age groups.

6. Improve health workers' attitudes and understanding of the importance of epidemiologic surveillance.

Suggestions for Further Study

1. Study factors related to quality of epidemiologic surveillance data from hospitals and the private sector.

2. Study accuracy about diagnosis communicable disease in health centers.

3. Implement measures to improve quality of epidemiologic surveillance, for example increased support and feedback, increased computerization. Conduct follow-up studies to ascertain the effectiveness of these measures.