CHAPTER 5
RESULT OF THE STUDY

In this study the investigator used the Delphi technique. The experts were selected through purposive sampling to answer three rounds of questionnaires. The experts were only those who met the criteria for recruitment and willing to participate. The total numbers of experts in this study was 50. To acquire data from the first round-questionnaire 17 experts were interviewed, other 32 experts answered a self administrative questionnaire. (One expert did not answer the questionnaire.) In the second round, 46 experts answered a self administrative questionnaire. Three experts, were on study leave, did not answer the questionnaire. In the third round, 44 experts answered a self administrative questionnaire. The rest who did not answer the questionnaire attended Junior Health Administrator Training for 45 days.

The result of the study is divided into four parts

1. General information and elements which maintain the existing DHCCs according to the experts' opinion.
2. Opinion of the experts towards the feasibility of DHCCs.
3. Reasons given by the experts about the feasibility of DHCCs, only the statements which the experts have different opinion from the group.
4. The experts' opinion towards present situation of DHCCs and its prospective feasibility.

Part 1 : General information and elements which maintain the existing DHCCs according to the experts' opinion.

Table 1 : Demographic data

Items	Number (N)	Percent (%)
1. Sex		
Male	41	93.20
Female	3	6.80
2. Place of work		
Provincial Health Office	8	18.20
District Health Office	19	43.20
Community Hospital	17	38.60
3. Education		
Master	20	45.45
Bachelor	11	25.00
Certificate	13	29.55
4. Years of government service		
< 5 years	6	13.63
6-10 years	9	20.46
11-15 years	7	15.91
16-20 years	1	2.27
21-25 years	5	11.36
Over 26 years	16	36.36

The majority of the experts are males (93.2 percent) and are the directors of the Community Hospitals, the chiefs of District Health Offices and officers from the Provincial Health Office. Up to 45.45 percent of the experts hold Master degrees, some of the directors of Community Hospitals, Experts of the Provincial Health Office also hold Thai board of preventive medicine which is actually equivalent to Ph.D. Up to 29.55 percent of the experts, the chiefs of District Health Offices, hold certificates.

Table 2 : Present situation of the existing DHCCs according to the experts' opinion.

STATEMENT	CH[1] Mean	CH[1] SD	DHO[2] Mean	DHO[2] SD	PHO[3] Mean	PHO[3] SD
Mission of DHCC						
1. improve efficiency of public health at district level and downward.	4.00		4.00	0.88	4.00	0.93
2. Co-ordinate the activities at district level for the benefit of good quality of life of public.	3.26	1.06	4.05	0.77	3.64	0.93
Operational Strategy of DHCC						
Organization						
3. Committee composes of chairperson, vice-chairperson, secretary, vice-secretary and other members	4.62	0.74	4.57	0.60	4.88	0.33
4. Members are from District Health Office and Community Hospital	4.50	0.75	4.57	0.60	4.70	0.98
5. Ratio of members from District Health Office to Community Hospital is 1:1	4.11	1.05	4.42	0.60	4.00	0.75
6 Each term of committee lasts 1 year.	4.75	0.46	4.73	0.73	4.88	0.33
7 Chairperson and Vice-chairperson annually alternate between chief of District Health Office and director of Community Hospital.	4.75	0.46	4.21	1.03	4.05	1.51
8. Members of the committee are officially posted by the provincial governor.	4.25	1.03	4.84	0.37	4.88	0.33

STATEMENT	CH[1]		DHO[2]		PHO[3]	
	Mean	SD	Mean	SD	Mean	SD
9. Secretary and Vice-secretary annually alternate between technical officers of District Health Office and Community Hospital (Depend on a chairperson of the respective year)	4.50	0.75	4.31	1.00	4.11	1.53
10. The office of DHCC is located in either District Health Office or Community Hospital.	4.00	1.06	4.60	0.68	4.47	1.32
11. Committee can form working groups to solve specific problems or to improve specific issues.	3.25	0.88	3.52	1.07	4.11	0.85
12. The meeting is hold monthly.	4.17	1.13	3.73	1.09	3.25	1.03
Information System						
13. The same data collecting system is used for the whole district.	3.12	0.83	4.21	0.91	3.82	0.95
14. There is a public health information circulating system among tambol, district and provincial levels.	2.78	1.12	3.78	0.78	3.64	0.86
15. Data are always updated.	3.12	0.83	3.78	0.85	3.52	0.79
16. Having systems or channels to distribute health information (annual report, etc.)	2.16	1.18	3.31	0.94	2.94	1.24

STATEMENT	CH[1] Mean	CH[1] SD	DHO[2] Mean	DHO[2] SD	PHO[3] Mean	PHO[3] SD
Planning It is the responsibility of the DHCC to plan for an improvement of public health related issues at district level. 17. Make a district development plan to defense for budget allocation (Using data from BMN[4] and HSSD[5]).	3.87	0.83	4.42	0.83	3.82	0.88
18. Make an operational plan to manage the allocated resources.	3.37	1.18	4.15	0.89	3.70	0.98
19. Plan special projects to solve urgent health problems at district level.	3.75	1.03	3.89	1.04	4.11	0.69
Co-ordination 20. Provide monthly academic training for health personnel from health centers by officers from community hospital.	3.00	1.19	2.89	0.73	2.82	1.07
21. Community Hospital provides /supports medicine and medical supplies to health centers	4.00	0.53	3.57	1.34	4.00	1.00
22. Sharing office equipment and other resources among District Health Office, Community Hospital and Health Centers.	4.00	0.53	3.63	1.38	3.76	1.09
23. manage and share some parts of budget together between District Health office and Community Hospital.	3.20	0.88	3.10	0.31	3.58	1.32

STATEMENT	CH[1] Mean	CH[1] SD	DHO[2] Mean	DHO[2] SD	PHO[3] Mean	PHO[3] SD
24. District Health Office and Community Hospital co-present the performance of DHCC in the provincial meeting.	3.37	1.30	3.84	1.06	3.05	1.29
Following Up, Supervising, Monitoring and Evaluating 25. Supervising health centers will be done by health team of DHCC.	3.50	0.92	3.68	1.15	4.00	0.93
26. Evaluate the progression of the performance of DHCC, conclude obstacles and suggest possible solution annually.	3.37	1.06	3.52	0.96	3.47	1.00
Role of PHO in Supporting DHCCs 27. The development of DHCC is one element of provincial development plan.	3.50	1.06	3.73	1.04	3.58	0.87
28. All sections in PHO know/understand mission and importance of DHCC.	3.75	0.70	3.36	0.95	3.41	0.79
29. Present activities/ performance of DHCC in monthly meeting.	3.00	1.06	2.89	1.10	2.70	0.68
30. Allocate budget to support special projects created by DHCC.	3.12	0.99	3.42	0.96	3.29	0.68
Authority of DHCC 31. Set criteria for budget allocation to improve/develop health related issues at district level downward.	3.25	1.03	3.63	0.95	2.82	1.46
32. Set criteria to allocate personnel to each health center	3.37	1.30	3.21	0.97	2.05	1.19

STATEMENT	CH[1] Mean	SD	DHO[2] Mean	SD	PHO[3] Mean	SD
33. Involve in moving/ circulating personnel at Tombol level in order for the goals of health services to be achieved	3.00	1.41	2.94	1.22	2.00	1.36
34. Set criteria for medical equipments allocation.	3.00	1.19	3.52	0.96	2.64	1.57
35. Set criteria to select health personnel at Tombol and district level to participate in the training.	2.50	1.19	3.10	0.87	1.88	1.05
36. Involve in promoting health personnel at district level downward.	3.00	1.41	2.78	1.35	1.70	0.77

1 The directors of Community Hospital 2 The chiefs of District Health Office
3 The officers of Provincial Health Office
4 BMN : Basic Minimum Needs
5 HSSD : Health Service System Development
One-Way Anova and Kruskal Wallis One-way Analysis of Variance

From table 2, the investigator compares average scores of opinion among director of Community Hospitals, Chiefs of District Health Offices and Officers of Provincial Health Office. A statistical significant difference was found(One-Way Anova and Kruskal Wallis One-way Analysis of Variance at P-value < 0.05) in statement No.7 and statement No.8 which deal with formality of DHCC. Moreover a statistic significant difference was found in statement No.22, 31 and 36 which deal with the efficiency of resources allocation and the authority of DHCC.

In additional, there was a trend for differences the opinions between the directors of Community Hospital (and the chiefs of District Health Office) versus the officers of the Provincial Health Office for statement No. 32, 33 and 35 which deals with the authority of DHCC and for statement No.14 addressing the issue of information sharing.

Part 2. Opinion of the experts towards the feasibility of DHCC.

Table 3 : Mission of DHCC

STATEMENT	Median	Interquartile Range	Different of Median and Mode
1. improve efficiency of public health at district level and downward.	4	1	1
2. Co-ordinate the activities at district level for the benefit of good quality of life of public.	4	1	1

From table 3, the experts think that it is feasible to assign the DHCCs to be responsible for public health development. The impact of this mission is the quality of life of the public. This opinion is agreeable among the experts.

Table 4 : Organization

STATEMENT	Median	Interquartile Range	Different of Median and Mode
3. Committee composes of chairperson, vice-chairperson, secretary, vice-secretary and other members	5	1	0
4. Members are from District Health Office and Community Hospital	5	1	0
5. Ratio of members from District Health Office to Community Hospital is 1:1	5	1	0
6 Each term of committee lasts 1 year.	5	1	0

STATEMENT	Median	Interquartile Range	Different of Median and Mode
7 Chairperson and Vice-chairperson annually alternate between chief of District Health Office and director of Community Hospital.	5	1	0
8. Members of the committee are officially posted by the provincial governor.	5	1	0
9. Secretary and Vice-secretary annually alternate between technical officers of District Health Office and Community Hospital (Depend on a chairperson of the respective year)	5	1	0
10. The office of DHCC is located in either District Health Office or Community Hospital.	5	1	0
11. Committee can form working groups to solve specific problems or to improve specific issues.	4	1	0
12. The meeting is hold monthly.	4	1	0

From table 4, The experts strongly agree to the organizational structure of DHCCs as set by the MOPH. The opinion is agreeable.

Table 5 : Information System

STATEMENT	Median	Interquartile Range	Different of Median and Mode
13. The same data collecting system is used for the whole district.	4	1	0
14. There is a public health circulating system among tambol, district and provincial levels.	4	1	0
15. Data are always updated.	4	1	0

STATEMENT	Median	Interquartile Range	Different of Median and Mode
16. Having system or channel to distribute health information (annual report, etc.)	4	0	0

From table 5. The experts think that there is a high feasibility for the DHCCs to have information system. This is to collect, circulate, up date and distribute data. All experts' opinion is agreeable.

Table 6 : Planning

STATEMENT	Median	Interquartile Range	Different of Median and Mode
It is the responsibility of the DHCC to plan for an improvement of public health related issues at district level. 17. Make a district development plan to defense for budget allocation (Using data from BMN and HSSD).	4	1	0
18. Make an operational plan to manage the allocated resources.	4	1	0
19. Plan special projects to solve urgent health problems at district level.	4	1	0

From table 6, the experts think that it is feasible for the DHCCs to design public health plans based on data from BMN and HSSD. Then operational plans and budget allocation and other special projects shall be designed. The experts' opinion is agreeable.

Table 7 : Co-ordination

STATEMENT	Median	Interquartile Range	Different of Median and Mode
21. Community Hospital provides / supports medicine and medical supply to health centers	4.5	1	0.5
22. Sharing office equipment and other resources among District Health Office, Community Hospital and Health Centers.	4	1.5	0
23. manage and share some parts of budget together between District Health office and Community Hospital.	4	1.75	0
24. District Health Office and Community Hospital co-present the performance of DHCC in the provincial meeting.	4	2	0

From table 7, the experts think that it is feasible for the DHCCs to support each other in resources such as medicine, medical supply, etc. should be co-utilized. However, the experts' opinion is not quite agreeable in issue concerning managing and sharing some parts of budget together, and co-presenting of the performances between District Health office and Community Hospital.

Table 8 : Following up, supervising, monitoring and evaluating

STATEMENT	Median	Interquartile Range	Different of Median and Mode
25. Supervising health centers will be done by health team of DHCC.	4	1	0
26. Evaluate the progression of the performance of DHCC, conclude obstacles and suggest possible solution annually.	4	0	0

From table 8, the experts think that it is feasible for the DHCCs to perform supervision to health centers and the performance of DHCCs should be evaluated the progressive of the DHCCs' performance annually.

Table 9 : Roles of Provincial Health Office in supporting DHCCs

STATEMENT	Median	Interquartile Range	Different of Median and Mode
27. The development of DHCC is one element of provincial development plan.	4	1.75	0
28. All sections in PHO know/understand missions and importance of DHCC.	4	1	0
29. Present activities/ performance of DHCC in monthly meeting.	4	1	1
30. Allocate budget to support special projects created by DHCC.	4	0.75	0

From table 9, the experts' opinion is not agreeable in issue concerning the development of DHCC is one element of provincial development plan. But the experts think that it is feasible for the Provincial Health Office to support activities of DHCCs. It should be a policy of the PHO that all sections in PHO know/understand mission and importance of DHCCs, and the DHCCs should present their activities/ performance in PHO monthly meeting. Furthermore, the PHO should allocate budget to support special projects created by DHCCs. The experts' opinion is agreeable.

Table 10 : Authority of DHCC

STATEMENT	Median	Interquartile Range	Different of Median and Mode
31. Set criteria for budget allocation to improve/develop health related issues at district level downward.	4	1.75	0

STATEMENT	Median	Interquartile Range	Different of Median and Mode
32. Set criteria to allocate personnel to each health center	4	1	0
34. Set criteria for medical equipment allocation.	4	1	0
35. Set criteria to select health personnel at Tombol and district level to participate in the training.	4	1	0

To construct the second round-questionnaire, according to process of Delphi technique, any statements with the Median less than 3.25 were be eliminated. After the responses from the second round-questionnaire were analyzed , it was found that the opinion of experts toward personnel management issues concerning involving in moving/ circulating personnel at Tombol level in order for the goals of health services to be achieved and involving in promoting health personnel at district level downward had Median less than 3.25. Therefore, these statements were eliminated when the third round-questionnaire was constructed. However, the responds of the experts to the third round-questionnaire showed that, from the experts points of view, the DHCCs should gain authority in their respective districts to set criteria for budget allocation to improve/develop health related issues at district level downward, to set criteria to allocate personnel to each health center, to set criteria for medical equipment allocation, and to set criteria to select health personnel at Tombol and district level to participate in the training .

Table 3 to table 10 showed a relative agreement between experts from the three organization (directors of Community Hospitals, The Chiefs of District Health Office and the officers of the provincial Health Office) when considered together. Such apparent agreement was supported by the score of opinions of the three expert groups for most statements. However, table 2 showed a trend for disagreement between DHCC and PCMO in statement No.14 (information sharing) and Statement 31 to 36 which reflect the perception about the authority of DHCC. This will have a significant implication to the future role of DHCC.

Part 3 : Reasons given by the experts about the feasibility of DHCCs, only the statements which the experts have different opinion from the group.

Reasons given by the experts who differed with the group's opinion can be classified as follow:

Mission of DHCCs

Issue concerning co-ordinate the activities at district level for the benefit of good quality of life of public : The experts think that some chiefs of the offices take the benefit of the offices into their concerns rather than the benefit of the public.

Organization

Issue concerning ratio of members from District Health Office to Community Hospital is 1:1 : The experts think that this may not be suitable for all districts. The number of potential personnel in each district may vary from office to office. The administrators should have the authority to adjust this ratio.

Issue concerning the annual alternation of secretary and vice-secretary : The experts think that, in practice, it is not suitable because it may effect the continuity of mission. However, the secretary and vice-secretary must work together. They are from the same group of persons, hence, there is no difference whether they are alternated or not.

Issue concerning specific working groups : The experts think that it is less feasible as members of the committee are already loaded. The difference between having or not having specific working groups may not be significant. It is better to add this mission into routine system.

Issue concerning the frequency of meeting (once a month) : The experts think that it is less feasible because members of the committee are busy due to their over overload tasks.

Information System

According to the experts' point of view, the function and purpose of the information system at the provincial level is not yet clarified. Data collection is done only to report to the PHO. The collectors do not utilize

this data to solve problems in their respective areas. Therefore the quality of data collected is not of their major concerns.

Planning

Issue concerning planning special projects to solve urgent health problems at district level : The experts think that it is less feasible because all problems can use DHCC meeting as a floor for discussion and specific activities can be assigned to members of DHCC accordingly.

Co-ordination of activities

Issue concerning academic training : The experts think that it is less possible to held the training monthly as the health personnel are busy with their routine work. It may be more feasible if the training is hold every 3 months instead.

Issue concerning managing and sharing some parts of budget together : The experts think that it is less possible because the budget management system at both the central and the provincial levels does not provide the flexibility for many worthwhile management.

Issue concerning co-presenting of activities/ performance of DHCC : The experts think that it is less possible because there is no certain direction for DHCC development. Hence, there is no specific activities to promote and strengthen DHCC.

Following up, supervising, monitoring and evaluating

Issue concerning evaluation the progression of the performance of DHCC to conclude obstacles annually : The experts think that it is less possible because it is not a part of the activities to support/respond to the policy.

Authority of DHCC

It is less feasible for DHCC to involve in budget management and personnel management. Because these issues must strictly follow the regulation from the central level. Furthermore they are sensitive issues. DHCC should act as an information provider not an actor. PHO must state a clear policy as far as the authority of DHCC is concerned.

Parts 4. :The experts' opinion towards present DHCCs and its prospective feasibility.

Table 11: The comparative of the experts' opinion towards present situation of DHCCs and its prospective feasibility.

STATEMENT	Present Mean	Present SD	Trends Mean	Trends SD	T-test P-value
Mission of DHCC					
1. improve efficiency of public health at district level and downward.	3.97	0.84	4.25	0.78	0.02
2. Co-ordinate the activities at district level for the benefit of good quality of life of public.	3.86	0.90	4.27	0.84	0.00
Operational Strategy of DHCC					
Organization					
3. Committee composes of chairperson, vice-chairperson, secretary, vice-secretary and other members.	4.75	0.48	4.65	0.52	0.32
4. Members are from District Health Office and Community Hospital	4.65	0.74	4.65	0.52	1.00
5. Ratio of members from District Health Office to Community Hospital is 1:1	4.20	0.90	4.38	0.81	0.28
6 Each term of committee lasts 1 year.	4.88	0.32	4.61	0.54	0.00
7 Chairperson and Vice-chairperson annually alternate between chief of District Health Office and director of Community Hospital.	4.36	1.23	4.56	0.54	0.22
8. Members of the committee are officially posted by the provincial governor.	4.77	0.56	4.45	0.73	0.08

STATEMENT	Present		Trends		T-test
	Mean	SD	Mean	SD	P-value
9. Secretary and Vice-secretary annually alternate between technical officers of District Health Office and Community Hospital (Depend on a chairperson of the respective year)	4.36	1.12	4.45	0.76	0.61
10. The office of DHCC is located in either District Health Office or Community Hospital.	4.77	1.02	4.40	0.84	0.70
11. Committee can form working groups to solve specific problems or to improve specific issues.	3.79	1.24	4.25	0.83	0.00
12. The meeting is hold monthly.	3.88	1.14	4.13	0.85	0.14
Information System 13. The same data collecting system is used for the whole district.	3.88	0.99	4.18	0.11	0.07
14. There is a public health circulating system among tambol, district and provincial levels.	3.52	0.90	4.18	0.78	0.00
15. Data are always updated.	3.61	1.14	4.00	0.71	0.02
16. Having system or channel to distribute health information (annual report, etc.)	3.09	1.09	3.84	0.80	0.00

STATEMENT	Present Mean	Present SD	Trends Mean	Trends SD	T-test P-value
Planning It is the responsibility of the DHCC to plan for an improvement of public health related issues at district level. 17. Make a district development plan to defense for budget allocation (Using data from BMN and HSSD).	4.09	0.88	4.25	0.61	0.25
18. Make an operational plan to manage the allocated resources.	3.81	1.01	4.06	0.90	0.11
19. Plan special projects to solve urgent health problems at district level.	3.97	0.90	4.18	0.78	0.18
Co-ordination 20. Provide monthly academic training for health personnel's from health centers by officers from community hospital.	2.88	0.94	3.45	0.99	0.00
21. Community Hospital provides /supports medicine and medical supply to health centers	3.86	1.11	4.27	0.84	0.43
22. Sharing office equipment and other resources among District Health Office, Community Hospital and Health Centers.	3.75	1.12	3.88	0.94	0.51
23. manage and share some parts of budget together between District Health office and Community Hospital.	3.34	1.23	3.65	1.09	0.17

STATEMENT	Present		Trends		T-test
	Mean	SD	Mean	SD	P-value
24. District Health Office and Community Hospital co-present the performance of DHCC in the provincial meeting.	3.56	1.20	3.48	1.01	0.11
Following up, supervising, monitoring and evaluating 25. Supervising health centers will be done by health team of DHCC.	3.81	1.06	4.11	0.81	0.06
26. Evaluate the progression of the performance of DHCC, conclude obstacles and suggest possible solution annually.	3.45	1.30	4.00	0.71	0.02
Roles of PHO in DHCCs supporting 27. The development of DHCC is one element of provincial development plan.	3.61	0.99	4.00	0.83	0.00
28. All sections in PHO know/understand mission and importance of DHCC.	3.47	1.82	3.81	0.87	0.01
29. Present activities/ performance of DHCC in monthly meeting.	2.84	0.98	3.54	0.90	0.00
30. Allocate budget to support special projects created by DHCC.	3.34	0.96	3.81	0.75	0.01
Authority of DHCC 31. Set criteria for budget allocation to improve/develop health related issues at district level downward.	3.25	1.22	3.68	1.02	0.03
32. Set criteria to allocate personnel's to each health center	2.79	1.26	3.54	1.13	0.00

STATEMENT	Present		Trends		T-test
	Mean	SD	Mean	SD	P-value
34. Set criteria for medical equipments allocation.	3.06	1.35	3.63	1.05	0.01
35. Set criteria to select health personnel's at Tombol and district level to participate in the training.	2.52	1.15	3.40	1.12	0.00

Pairs T-test at P-value <0.05

Table 11, the comparison of experts' opinion about the present and future showed the following statistically significant differences :

1. High feasibility to perform missions of DHCCs as compare to that of the present.
2. Less feasibility for each term of committee to last only 1 year.
3. High feasibility for the DHCCs to appoint specific working group to solve specific problems in their respective areas.
4. High feasibility to organize a systemic data circulation with up dated data, and to widely distribute data to be utilized.
5. High feasibility for the community Hospital to organize academic training.
6. High feasibility for the performance of DHCCs to be evaluated.
7. High feasibility for the Provincial Health Office to support DHCCs in term of policy clarifying, presentation of DHCCs performance and budget allocation for special projects created by DHCCs.
8. High feasibility for DHCCs to involve in budget management and personnel management.