

CHAPTER 3

RESEARCH PROCEDURES

The procedures of this research study, researcher has proceeded the followed steps: determined objectives of the study, scope of study, study limitation, defined meaning of technical terms in the study, identified study samples, formulated questionnaire by explaining questionnaire formulation process and find its quality, hereafter, data collection and analysis, details are as followed:

3.1 Objectives of Study

3.1.1 General objective :To evaluate health supervisors training project in Chun District.

3.1.2 Specific objective :

3.1.2.1 To evaluate knowledge and understanding on supervision principle and technical knowledge on problem solving process of supervisors.

3.1.2.2 To evaluate technical skills on problem solving process and assess supervised staffs' satisfaction with supervision.

3.2 Scope of Study

3.2.1 Sample group: There are 2 groups of study samples whom obtained by purposive sample, as:

- 10 supervisors: 4 from Chun District Health Office, and 6 from Chun Hospital, these supervisors worked as a district level supervision team.
- 18 supervised staff: 3 health staffs of each of 6 health station, due to the requirement to have similarity in roles and responsibilities of health staff.

3.2.2 Study Period: October 1, 2000 – September 30, 2001

3.3 Study Limitation

3.3.1 The study aimed at outcomes of supervisors training program with the sample size of 10, which is considered small, therefore, study outcomes may not able to be any references to other groups outside Chun District.

3.3.2 Budget used in the study was allocated from the government, therefore, there was the time period limitation. The evaluation of the training program was conducted only once in a short period of time.

3.3.3 There was only I study sample group without a comparison group, therefore, results of study may be less reliable.

3.3.4 Researcher was the chief of supervised staff, filling in and returning questionnaire may be done with reverse, therefore, questionnaires were received 100 per cent.

3.4 Defining Meaning of Used Technical Terms in the Study

Supervisor Qualification means personality of a supervisor and how he/she acts out during supervising.

Supervision Format means specific direction used in supervision.

Supervision Method means processes of supervision.

Supervision Period means the time used for supervision and its frequency.

Supervised Contents means contents of each work task which supervisors will supervise health centers by according to manual and monitoring form at health center.

Satisfaction with Supervision means the satisfaction of supervised staff with 5 aspects of supervision, such are, characteristic of supervisor, format, process, time period, and contents of supervision.

Supervision Qualities means the supervision consequent changes as:

1. Supervision enhances supervised staffs' technical knowledge and skills on health solution procedure, hence, adopt into responsible jobs.
2. Supervision brings about most of supervised staffs' satisfaction toward supervision.

The Supervision Qualities Improvement Committee means the committee selected from District Health Committee which assemble of Chief of District Health Office; Health Technician; Health Promotion Officer; technician officer from Human Development Sector of Phayao Provincial Health Office. Roles and responsibilities of the committee are to analyze health problems; supervision problems, find needs of supervisors and supervised staffs, strategies designation for improvement according to the occurrences, formulate plans; projects, control, supervise, monitor, and evaluate projects.

Health problem Solving Procedures means technical procedures utilize in health solution which consisted of data collection, data analysis, problems identification, problems prioritization, objectives determination, strategies designation for problem solving, plans and projects formulation, and evaluation.

Special Clinics at Health Center means service provision on health promotion at health center which scheduled for services as: Monday – Antenatal Care Clinic, Tuesday – Family Planning Clinic, The second Wednesday of the month – Elderly Health Clinic, The second Thursday of the month – Immunization for children age 0-5 year old, Friday afternoon – School Health Service.

3.5 Study Beneficial

3.5.1 The obtained information (results of evaluation on supervisors training program) will be utilized as based information for knowledge enhancement for supervised staffs.

3.5.2 The utilization of results of supervision evaluation (evaluation on knowledge and skill and supervised staff's satisfaction toward supervision) as a direction to improve qualities of supervision in Chun District.

3.5.3 Chun District Health Committee is able to adopt project evaluation knowledge as a guideline to further evaluate other projects in the district.

3.6 Study Samples

Population sample for this research consisted of 2 groups:

3.6.1 10 supervisors whom selected by purposive sample and by Chun District Health Committee, 4 supervisors from Chun District Health Office, and 6 from Chun Hospital. Since, this is a District Supervisor Team, team member must required specific knowledge and capability.

3.6.2 18 supervised staffs whom selected by purposive sample from 6 health centers where there are 3 health staff on duty. The reason to choose this specific selection was because health center where having equal numbers of health staff, responsible areas are closed to others, similar responsibilities, the study required the most similarities.

3.7 Questionnaire Formulation

Procedures of questionnaire formulation

3.7.1 Review related documents and literatures

3.7.2 Review questionnaire formulation procedures from text book, documents, and related literatures

3.7.3 Consult and interview those who have related experiences on formulating questionnaire

3.7.4 Formulate questionnaire to coverage the needed contents for study

3.8 Examination on Questionnaire's Qualities

3.8.1 Content validity: examine by advisors, hence, the improvement of questionnaire

3.8.2 Reliability: the examined and improved questionnaire was pretest in population group who had similar qualities with study samples, those were, 20 health staffs who work at health centers in Pong District, Phayao Province, then, reliability tested by alpha reliability, the reliability of questionnaire was 0.82 and the questionnaire was further actually using in study sample

3.9 Questionnaire used for the study

There were 3 sets of questionnaire which formulated by researcher. Questions covered contents based on training objectives:

Questionnaire set 1

The questionnaire aimed at test knowledge and understanding of supervisors for pre and post training test. The questionnaire was designed as true or false checking, and divided into 2 parts:

Part 1: 25 questions covering contents on supervision, score 1 point each, the total score is 25, 1 point for each correct answer, scores are set into 3 level, as, high = 20-25 points, moderate = 14-20 points, low = 0-14 points.

Part 2: questions covering technical contents on problem solving process (data collection and analysis, problems seeking, problems analysis, problems prioritization, objectives determination, problems solving activities plans, and writing projects for problems solving). Part 2 has 25 questions, 4 points each, a total score is 100 points, scores are set into 3 level: high = 80-100 points, moderate = 60-79 points, low = <60 points.

Questionnaire set 2

This set of questionnaire aimed at evaluate knowledge and skills on problem solving process of health staffs or supervised staffs, the evaluation divided into 2 parts.

Part 1: The evaluation committee has assigned health staffs at every health center to prepare annual report on work performance, 2001 and submit to evaluation committee during annual technical conference at Chun District Health Office. Points of this part was given as a total score of health center based on the evaluation form and checking list with 10 major questions and 28 sub-questions, a total of 100 points as: 1. Data collection (4 items 8 points), 2. Data analysis (2 items 8 points), 3. Problems identification (2 items 8 points), 4. Problems analysis (2 items 8 points), 5 objectives (5 items 10 points), 6. Strategies designation (1 item 8 points), 7. Target setting (1 item 8 points), 8. Project preparation (7 items 42 points), 9. Implementation (1 item 8 points),

10. Evaluation (3 items 6 points). Scores were ranked as, high = 80-100 points, moderate = 60-79 points, low = <60 points.

Part 2: The evaluation committee has given points on the basis of the presentation on problem solving project for each responsible health staff, questions covered contents of problem solving process, with 10 major questions and 28 sub-questions, a total of 100 points. Points of this part were given to each supervised staff.

Questionnaire set 3

This set of questionnaire explored the satisfaction toward supervision, to measure supervision effectiveness. The question was a mixture of closed end questions as rating scale and opened end questions. As for data collection, this method would increase reliability, because, answers of opened end questions would give the explanation and can also examine the closed end questions. This questionnaire was divided into 2 parts as:

Part 1: Questioning general characteristic of target group and work operation, a closed end question by indicating true symbol in parenthesis where the content is true to the responder.

Part 2: Questioning the satisfaction of health center staffs toward supervision. Questions were divided into 5 aspects, with 33 items, at the end of each question would leave blank for the responder to give further opinions or suggestion about supervision. The 5 aspects of the questions are:

- | | |
|--------------------------------|-------------|
| 1. Supervisor's characteristic | 6 items |
| 2. Supervision methods | 9 items |
| 3. Supervision procedures | 6 items |
| 4. Time period of supervision | 4 items |
| 5. Work tasks for supervision | 8 questions |

Type of questionnaire was a rating scale measurement questions with 3 levels, responder indicated his/her satisfaction toward supervision by select the answer: much, average, few. Questions were designed into positive contents and score was given as:

High = 3 points

Moderate = 2 points

low = 1 point

Standard for score calculation

Since the lowest score did not begin from 0 (zero), therefore, the score was compared for its base at 100 % as the standard of Seri Rachroj as followed:

1. numbers of question x the highest score
2. numbers of question x the lowest score
3. find 100 % score by taking multiply results from 1 and 2
4. comparison for standard of score:

high	=	80-100
moderate	=	60-79
low	=	0-59

3.10 Data Collection

Researcher has conducted the meeting to inform objectives of handing out questionnaire and ask for cooperation in responding to questionnaire. Questionnaire was given out during the meeting and ask to return it within 1 week. 18 questionnaires was given out and returned altogether 18 sets which was equal to 100 per cent.

3.11 Data Analysis and the used of Statistic for Analysis

3.11.1 Data analysis, researcher has examined the completion of questionnaire by manual editing and set up the coding book then computerized compiling by SPSS program.

3.11.2 Analyze general data of responders: the assessment on supervisors' knowledge, supervised staffs' knowledge and skills, and supervised staffs' satisfaction by percentage, mean, and standard deviation.

3.11.3 The analysis on differences of the supervisors' test scores during pre and post test by Wilcoxon signed rank test.

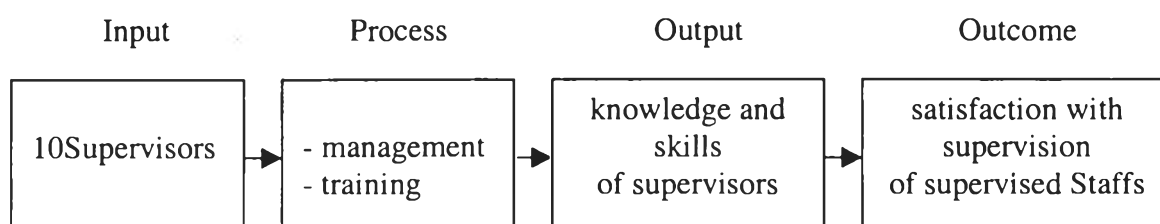


Figure 1: Conceptual Framework

- **Input meaning:**
 1. Numbers of trainers of training, 4 instructors were recruited for the training:
 - 2 persons who positioned as health Technician and supervisor from Health Technical Center, Region 10, Chiangmai,
 - 2 persons from Phayao Provincial Health Office.
 2. Training curriculum was a short course workshop, 4 days focussed on methodologies and 1 day for practical training.
 3. The utilized equipment were overhead projector and microphones.
 4. Training budget came from the government , the total of 38,000 baht.
 5. 10 supervisors selected by Chun District Health Committee (4 from Chun District Health Office and 6 from Chun Hospital) enrolled the training.

- **Process meaning** activities of the training which were lecturing, group activity, practicing. During practicing, trainees were divided into 2 groups, each group practiced on conducting problem solving project by using problem solving process which consisted of data collection, data analysis, problems identification, problems analysis, problems prioritization, objectives determination, finding directions to solve problems, setting up plans and projects to solve problems, and evaluation.

- **Output** meaning the trained supervisors gained knowledge and skills on supervision and problems solving process and able to supervise more effectively.
- **Outcome** meaning the supervised staffs are satisfied with the supervision.

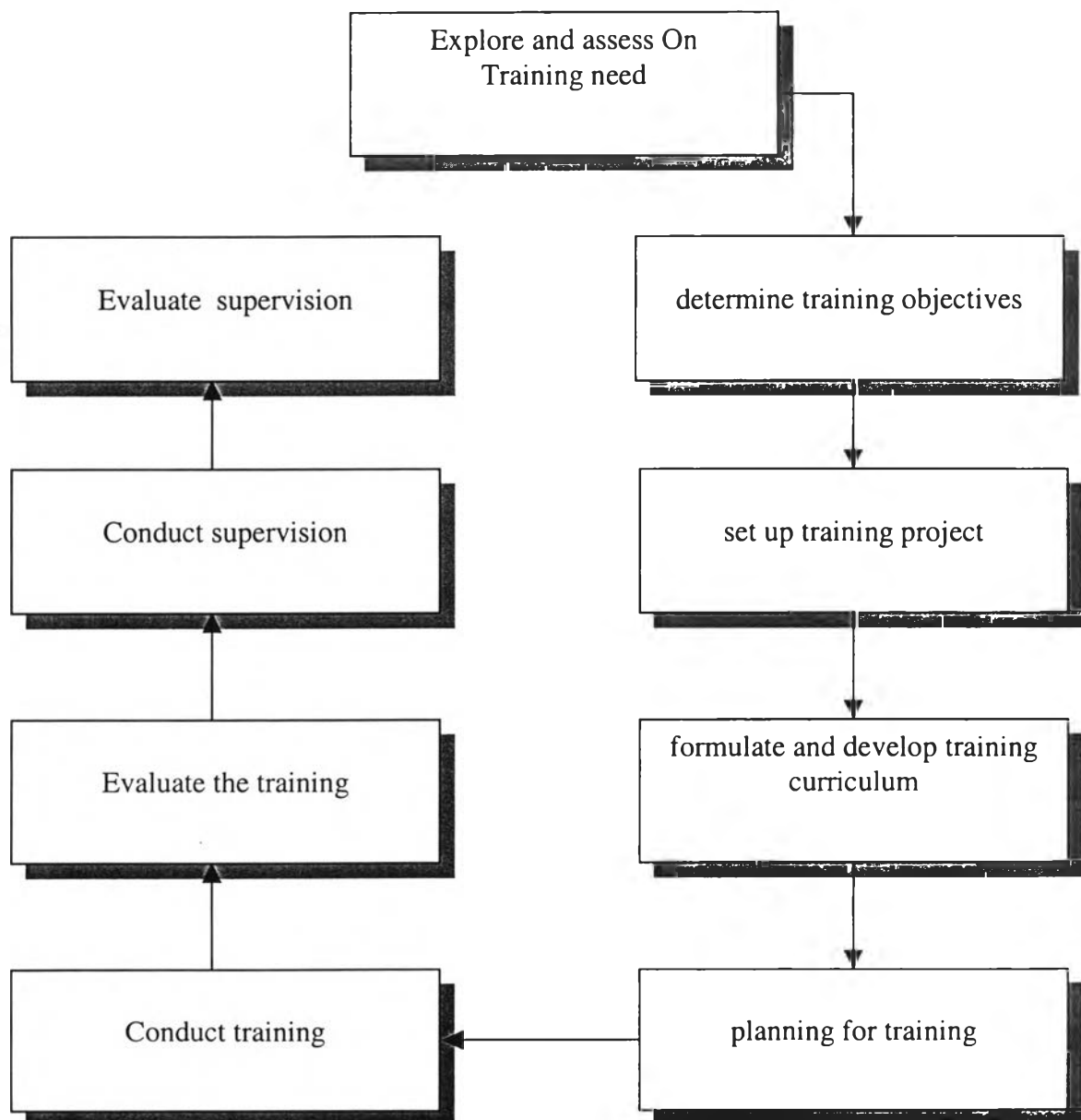


Figure 2 Illustration on training process

3.12 Intervention

Activities of supervisors training project, researcher has divided the intervention into 3 phases as of: preparation, training process, and project evaluation.

3.12.1 Preparation Phase

To obtain actual problems from previous implementation on the aspect of supervision and problems on work operation of health center staffs, researcher together with Chun District Health Committee had conducted the initial study by collecting and analyzing data, as followed:

3.12.1.1 Training needs assessment

a. Problems identification on supervision

Problems identification was done by researcher and Chun District Health Committee interviewed 6 supervisors based on the interview form which consisted of opened end questionnaire covering contents of age, years of work, education level, current work position, areas of supervision, problems and limitation found from previous supervision, and suggestions. After collecting and analyzing data, found that, the previous supervision team composed of 5-7 persons, all of them were health staffs who work in Chun District Health Office, the average age was 28 year old, the average years of work was 10.14 years, most of supervisors (5 persons) received education certificate, the characteristic of supervisors; the selection of supervision was done purposively sampling which was to select health staffs who worked at Chun District Health Office and never been trained on supervision; hence; some supervisors had improper characteristic; for instance; lack of technical knowledge on supervision or lack of teaching skills, the supervision on work tasks based on supervision manual and

the monitoring form of health center; however; there was no monitoring and supervision on problems solving of health center, supervision proceeded as a team and replacement was done if there was one person absent, objectives of supervision were to examine outcomes of work have achieve the set goals and to accelerate the low performance of work, supervision was scheduled as a year plan by supervising twice a year; each time was 6 months apart (March and September); however; the actual supervision were not on schedule due to load of work of each supervisor and their time availability was not matched.

Additional suggestions learned from supervisors are orderly listed below:

- Provincial Health Office or District Health Office should provide short course training workshop for supervisors and continual training in every 2 years (6 persons responded).
- Provincial Health Office or District Health Office should provide training workshop on technical knowledge on problems solving process, project evaluation, monitoring and evaluation on health center performance (4 persons responded)
- Chief of District Health Office should accompany the supervision team each time (4 persons responded).
- There should not be any replacement done among supervision team, because, a replaced person does not know as much as a responsible person. (3 persons responded).
- Prefer not to be a supervisor, because of the younger age than supervised staff (2 persons responded).

Supervision Limitation

According to supervision data analysis, problems found were:

- Supervisors lacked of knowledge and understanding and supervision skills.
- Supervisors lacked of technical knowledge and understanding on problem solving process, monitoring, and evaluation of health centers.
- Supervisors lacked of certain suitable qualities, for instance, lacked experiences on supervision and technical knowledge on supervised tasks.

The attribution of the 3 problems, Chun District Health Office should essentially develop supervisors' competent by providing training for supervisors.

- b. Problems identification concerning work operation of health center staffs.

In order to learned that whether or not problems on supervision would be of any relation to work operation of health center staffs, researcher has analyze epidemic data of Chun District and explore 30 health staffs' satisfaction towards supervision.

(1) The analysis on epidemic data

Retrospective analysis was done for the past 3yearsdata, between 1998 – 2000, finding were that, numbers of epidemic diseased were still unable to control or prevent as the set goals of the ministry and the province, for instance, diarrhea, TB lung, liver fluke, and there is the trend of continuing of higher incidence as seen from the following statistic:

- The prevalence rate of liver fluke in 1998 = 28 %, 1999 = 34.80 %, 2000 = 38.10 %
- The incidence rate of diarrhea, per 100,000 population in 1998 = 3031.90, 1999 = 3131.30, 2000 = 3355.48
- The incidence rate of TB lung, per 100,000 population in 1998= 95.30, 1999 = 101.50, 2000 = 104.5

In addition to data analysis on disease epidemic, researcher has interviewed further on problem solving and found, there were plans and projects to solve the three problems every year by responsible health center staffs, however, most health center staffs did not understand that process of problem solving was a team approach. Each has solved problems by depending upon his/her own understanding, in despite of their practical training on problem solving as a team conducted by Provincial Health Office to every health staff in 1999 but the training was without any monitoring and evaluation.

Therefore, the reason for failure in problems solving would be, because of, health center staffs lacked of knowledge and skills on the process of problem solving as a team and this was the problem of supervisors and supervised staffs.

(2) The exploration on health center staffs' satisfaction towards supervision

The objectives were to learn of previous supervision qualities by exploring among 30 health staffs of 9 health centers. Questions covering contents of 5 aspects of supervision, such as, supervisors' characteristic, supervision method,

supervision process, supervision time period, and areas of work which being supervised.

According to data analysis, received that 80 per cent of health center staff satisfied with supervisors' characteristic and time period of supervision was at low level, while, supervision method and process was at median level. We found that, supervision qualities were not sufficient, and supervisors and supervision system should be considered for further improvement.

3.12.1.2 The determination on training objective

The objective of the training was to enhance knowledge, understanding, skills, and experiences on supervision and knowledge on process of problem solving as a team among supervisors.

3.12.1.3 Setting up supervisor training project

- a. Researcher has presented the problems derived from data analysis on supervision and disease epidemic to Chun District Health Committee during the meeting in December 2000.
- b. The committee has agreed for the set up of training for supervisors.
- c. Chun District Health Committee has identified selection criteria for supervisors and selecting supervisors as well.
- d. Chun District Health Committee has formulated a committee for the improvement of supervision qualities and supervision team.

3.121.4 Project presentation

Project was presented to Provincial Health Office for budget proposal by Chun District Health Committee. The proposed project was to be implemented during October 2000 – September 2001.

3.12.1.5 Training curriculum

The training curriculum was formulated by Qualities Improvement committee (the committee comprised of 5 persons who were, Chief of Chun District Health Office, 2 Technical Officers from Chun Hospital, and 2 health staffs of Chun District Health Office).

- Training curriculum was formulated on the basis of the analyzed data on supervision and disease epidemic. The formulated training curriculum was approved by a number of expert;as comprised Head of Human Development, Technical Officer at Human Development Section, Phayao Provincial Health Office, and Chun District Health Committee.
- Recruited instructors from Phayao Provincial Health Office and Technical Center, Region 10, Chiangmai.

Structure and contents of training curriculum

Training for supervisors in Chun District was conducted as a 5 days training, details as followed:

First Day

- Pre training test, the test covered a content of supervision, knowledge on process of problem solving as a team.
- The significance of training and evaluation
- Roles and responsibilities of District Health Office in accordant to the reformed structure
- Roles and responsibilities of supervision team at district level, the essential technical skills for supervisors
- Definition and significance of supervision, controlling, monitoring, and evaluation.

Second Day

- The applied of technical knowledge towards work efficiency
- Process of problem solving at health center level
- Working as a team, essential knowledge and skills for working as a team.

Third Day

- Practical training on problem solving based on technical process by utilizing the actual data of 2 sub-districts (tambon), trainees were separated into 2 groups using, data of 1 tambon for 1 group

Fourth Day

- Presentation of group work (continued from day 3)

- Techniques for health problem solving
- Techniques on building human relationship

Fifth Day

- The applied methods for population health
- Post training test
- Conclusion of training

3.12.1.6 Training schedule

- a. All equipment preparation had to mainly base on budget allocated for the project, training location, food and beverage, as well as instructor must be consistently to the allocated budget by having checking list for examination.
- b. Prepare relevant documents and texts with contents of training.
- c. Select persons and propose to chairperson of District Health Committee to appoint them in various sets of committee, and identify roles and responsibilities of committee, this mentioned committee has set into 3 groups, as followed:

(1) Supervision Quality Improvement Committee, Chun District. This committee composed of Chief of District Health Office as a chairperson, Head of Health Promotion of Chun Hospital as a Vice chairperson, 2 technical officers from Chun District Health Office, and

2 staff of Chun Hospital. Roles and responsibilities of this committee are:

- explore and assess on training needs,
- identify training objectives,
- set up training program
- develop training curriculum,
- plan for training,
- conduct the training,
- evaluate the training,
- and monitoring after the training.

Moreover, for this set of committee, supervisors were not immediate superior of operative staffs, and could not command them. Therefore, it was essential that supervisors must create trust by using 4 important skills; on work tasks, human relationship, leadership, and teaching while supervising. Hence, Supervision Quality Improvement Committee, Chun District has set up qualification of supervisors of the District as followed :

- working years were not less than 10 years and having supervision experiences not less than 2 years,
- having essential knowledge and skills at least 4 aspects as, skills on the tasks, human relationship, leadership, and teaching competency.

- a supervisor must be a person who have initiative thinking, self confidence, justice, decency, respect others' opinions, and express admiration to those who have decency,
- education level should not lower than bachelor degree.

(2) Supervision Team

Supervisors composed of Hospital Director (Chairperson), Chief of District Health Office (Vice Chairperson), Head of Nursing Section, Health Promotion Officer, Community Health Officer, rank 6 (2 persons), Head of Health Pharmacy, Financial Officer, 2 health staffs from Chun Hospital and Chun District Health Office, the total of 10 members.

Details of Supervisors

The first supervisor was a director of Chun Hospital, since, he was an executive administrator and as a chairperson of District Health Committee, he was automatically positioned as a supervisor, in addition, he had a leadership personality with sharp speaking tone and justice and having knowledge and capability on administration; disease diagnosis; treatment; and having authority on spending budget of Chun District Health Committee. Therefore, he was selected to be a supervisor on urgent government policies; health center administration; disease diagnosis; and treatment.

The second supervisor was Chief of Chun District Health Office, since, she was an immediate superior of health centers and as a supervisor by position, with a friendly personality; keenness. She was accepted by health staffs and able to authorize,

advocate on management; service provision; capable to handle at all urgent cases. Therefore, she was selected for the supervision on urgent government policies; health centers management, by alternately supervise with Director of Chun Hospital.

The third supervisor was Head of Health Pharmacy, Chun Hospital, since, he was competent in medical equipment and well managed. Therefore, he was selected for the supervision on medical equipment of health centers. He was also calm and skillful in conveying messages with good human relationship.

The fourth supervisor was Head of Nursing Section, since, she was competent in nursing care; counseling technique; and infectious control, with kindhearted personality; keenness; and skillful on conveying messages, therefore, she was selected for the supervision on nursing care provision at health centers.

The fifth and sixth supervisors were financial officers of Chun District Health Office and Chun Hospital, they were competent in accounting and inspection, with prominent personality as politely spoken; respect to others; good human relationship. Therefore, they were selected for the supervision on financing and accounting of health centers. The supervision was done one to one at a time.

The seventh and eighth supervisors were Technical Officers from Chun District Health Office and Chun Hospital, since, they were competent in technical knowledge; computerize. They were selected for the supervision on communicable

disease control; primary health care; problems solving plans and projects in local areas; project evaluation; and health information.

The ninth and tenth supervisor were Heads of Health Promotion Section, Chun Hospital and Chun District Health Office. They were competent in health promotion and non-communicable disease prevention and control, with personalities of kindhearted; calm; with teaching skills. They to supervised on all tasks concerned with health promotion of health centers, such as, maternal and child health; family planning; elderly health; non-communicable disease control and prevention; and health insurance. The supervision was carried out to each individual.

Roles and responsibilities of supervisors

- set up the supervision plans by using problem solving process which consisted of 6 steps as:
 - identify problems needed for supervision,
 - determined objectives for each supervision,
 - collected data for planning on supervision,
 - data analyzed,
 - identified supervision procedures: indicated the frequency of supervision, inform supervision schedule to health centers at least 1 month in advance,
 - identified supervision plans on the basis of problems; essentiality; objectives; reality; conclusion; supervision procedures.

- Prepared of tasks: preparation on technical knowledge on supervised tasks, manual on supervision procedures, goals, and standards.
- Reviewed and learned of supervision plans.

(3) The Evaluation Committee of Supervisors Training Program

This committee composed of 1 Technical Health Officer from Personnel Development; Phayao Provincial Health Office, 1 Officer from Technical Center; Region 10, 2 Technical Health Officers from Chun District Health Office. Their roles and responsibilities were as followed:

- Identified training objectives:
 - the assessment on knowledge of supervisors,
 - the assessment on knowledge and skills on problem solving process of supervised staff and the assessment on health staffs' satisfaction towards supervision.
- Identified scope of project evaluation the committee has identified evaluation procedures as summative, which was the evaluation after the project has finished.
- Participated in formulate questionnaire to explore health staffs' satisfaction towards supervision.
- Implemented project evaluation

3.12.2 Training Process

- Conducting the training as planned and based on the training curriculum as:

The Supervision Quality Improvement Committee scheduled April 25-29, 2001 for training course and set contents of curriculum into 18 hours for methodologies and 12 hours for practical training, at Conference room of a resort, Pan District, Chiangrai. Trainees were asked to stay over at the training location throughout the training period. Instructors of the training were recruited from Phayao Provincial Health Office and Technical Center, Region 10, Chiangmai. The training budget was provided by Phayao Provincial Health Office for the amount of 38,000 baht.

- Setting up supervision plans after the training.

The meeting was set on May 4th, 2001, for the purpose of setting up supervision plans and details were identified as, indication of supervision objectives. The objectives of each supervision was differently indicated, for instance, **objectives of the first supervision** were to learn the situation of work implementation within 6 months during fiscal year 2001, to recommend work operations which were having problems, to visit and provide willpower for health staffs, and to learn problems and limitation during at work of health center staffs. **The objectives of the second supervision** were to monitoring and problem solving in accordant to the first supervision, and to supervise and monitoring problem solving project in local area.

- Supervision Preparation: Supervisors must collected various data from each health center, analyzed the data sufficiently to answer

the questions of who; what; when; where; why; and how; for instance, supervisors must be prepared on various knowledge concerning supervision; questionnaire form and supervision manual, and distribute roles and responsibilities for supervision. While, supervised staffs must be prepared previous work performances and outcomes, information on previous work problems, vehicle for supervision team. As of supervision set goals, supervisors must recognize problems of each task that they were going to supervise, including, the ability to interpret work operation in order to compare and assess the competency of health center staffs. As for supervision procedures, Chun District Health Committee have indicated various proper integrated procedures, for instance, supervision as a team, as a group, and as an individual, as followed:

Supervision Procedures: The first and second supervision were done similarly by integrating various procedures for the most effectiveness, such as, the regular planned supervision would proceed by team and individual supervision. Team supervision is the set of 5 supervisors to supervise health centers together at the same time. Each supervisor was knowledgeable and skillful on specific issues and would supervise the distinct areas of work, especially, individual supervision. Since, each health center has 2-5 health staffs at post, each staff is responsible to many areas of work. Therefore, supervision was done individually on each work, 1 health staff might be supervised by many supervisors. The reason for choosing these 2 supervision

procedures was that supervised staff would gain their understanding, able to discuss openly. The synchronized supervision with supervisors would save travel cost. However, the particular supervision would be done in case of local disease epidemic or conflicts occurred during work operation of health staffs. In case of health center was complained on its service provision, group supervision would be conducted by Chief of District Health Office. Supervisors who responsible on communicable disease control, would conduct meeting with health center staffs who work in the incidence areas and nearby. Health center staffs would be supervised on the issues of disease epidemic; disease investigation; disease control; and cooperatively controlling the disease. The particular supervision, supervisors would access to disease incidence areas within 1 hour after being reported by hospital and disease control would be done within one day. As in the case of supervising conflicts among health center staffs or any complaint was made towards the work of health center staffs, the supervision would carry on by individual procedure, either by Chief of District Health Office or Chair person of Chun District Health Committee for proper reasons and abruptness. Chun District has set the supervision schedule in year were 2001 as: the first supervision was in January, and the second was in May, the third was in December. The supervision in fiscal year 2001 was conducted among 9 health centers and 30 health staffs, but the analysis of this study aimed to analyze data of health centers where having 3 health staffs at post in order to possess the similarity. The 5 days time period was set for each supervision (4 days and a half for supervision and half a day for conclusion).

Conclusion of the first supervision (May, 2001)

The finding problems were:

1. Most health centers (7 health centers) had no problem solving Plans and projects.
2. Work performance based on regular plans, most health centers (6 health centers) achieved the set goals during the first three month, October – December, 1999. The work which had not achieved the set plan were the coverage service on health benefits card (71.20%) and its reiteration, and low performance on non-communicable disease control.
3. health centers where having problem solving plans and projects indicated improper goals and procedures on problem solving.
4. Most health centers did not utilize the existing data for work did improvement.

Conclusion of the second supervision (September, 2001)

The trained supervisors conducted this second supervision and found

that :

1. The work of most health center achieved their set goals.
2. The coverage on health benefits card was increase (80.50%).
3. Health centers possessed at least 3 projects on problem solving.

4. Health centers adopted technical knowledge to their responsible jobs.

3.12.3 The evaluation on training project

As for evaluation, researcher focussed on outputs of training and supervision and evaluate after the implementation . The result were as followed :

3.12.3.1 Training evaluation: assessment of knowledge and standing on supervision principle, technical knowledge on problem solving process of supervisors by conducting pre and post test of the training. The mean score of pre and post test were compared.

3.12.3.2 Supervision evaluation: Once for the assessment on technical knowledge and skills on problem solving process and once for the assessment on supervised staffs' satisfaction towards supervision. The committee had analyzed the situation on supervision and epidemiology and already known of the problems, therefore, there was no need to do the assessment twice for the comparison results. The 2 evaluations did not cover factors of input and process, the attribution were:

- Qualification of Supervisors were not evaluated, since, Chun District Health Committee had selected strictly to the set criteria.
- Budgeting was not evaluated, since, it was allocated from of provincial and district level.

- Training instructors were not evaluated, because, the 4 instructors were regarded knowledge able and competent in teaching and having experiences on supervision. Some instructors were executive administrators of Phayao Provincial Health Office who were familiar with problem situations.
- Supervision procedures were not evaluated, because, Supervision Quality Improvement Committee had indicated the procedures, therefore, supervisors must followed supervision plans. Supervisors have known there own roles and responsibilities well, for instance. The integration of team and individual supervision are the part of their routine work plans, or individual supervision should be done for the case of conflicts among health staffs, and in case of local disease incidence; group supervision should be carried but promptly and abruptly.