

CHAPTER III



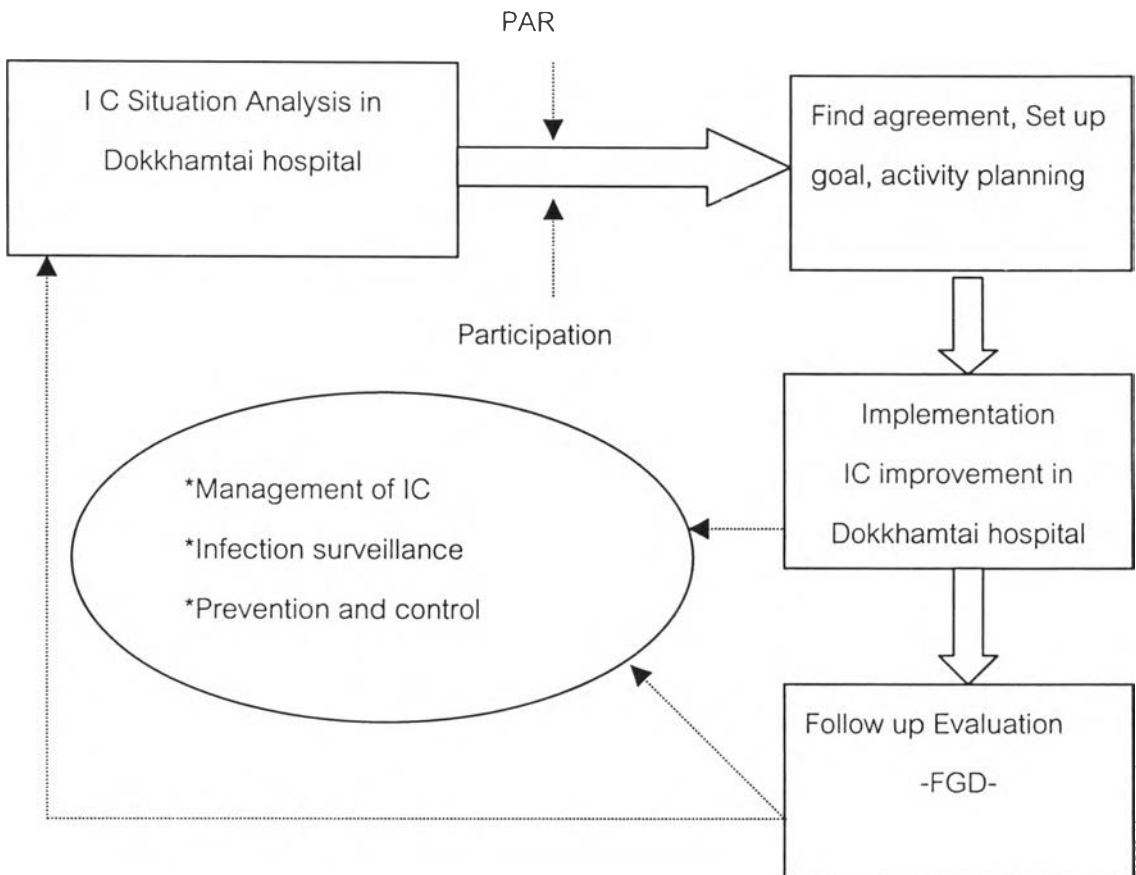
RESEARCH METHODOLOGY

3.1 Conceptual Framework

Conceptual framework of this research was formulated from the following concepts.

- 1) Infection Control (IC) situation analysis in Dokkhamtai hospital using PAR process
- 2) Set up agreement, goal, activity planning
- 3) Implementation to improve and develop IC as set. The goal was to standardize disinfection and decontamination, awareness and knowledge of staff in IC, efficient monitoring system, efficient information and public relation system, efficient waste management, clean environment, and efficient IC team. Follow up and evaluation using Focus Group Discussion

Figure 2: Conceptual framework



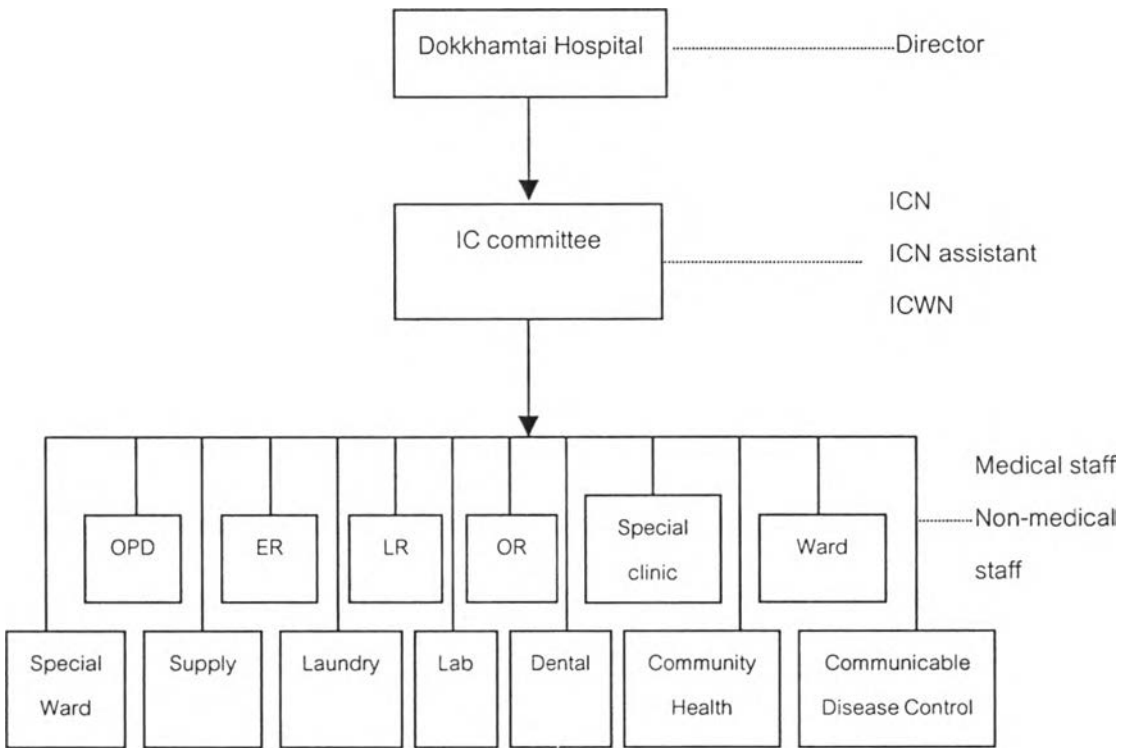
Conceptual framework demonstrates the relationship of participatory IC system development of Dokkhamtai hospital and IC improvement emphasized the participation of hospital staff. It was necessary to assess the situation and state problem then set up goal and plan activities for implementation and eventual evaluation.

3.2 Research Design

The study on participatory IC system development of Dokkhamtai hospital in Dokkhamtai district, Phayao province was a participatory action research. It was aimed to develop an effective infection control system of Dokkhamtai hospital. The hospital

staff can analyze IC work and enhance participation of hospital staff to develop IC work. It needs participation from all levels of staff to achieve the goal. The research took place in 13 service delivery points as follow.

Figure 3: Organization structure



3.3 Scope of Study and Target Population

Target area and population was purposively sampled: Dokkhamtai hospital in Dokkhamtai district, Phayao province and the staff of Dokkhamtai hospital concerning IC (62 medical staff and 23 non-medical staff) in OPD, ER, LR, OR, Special clinic, Ward, Special ward, Central supply, Laundry, Laboratory, Dental, Community health and Communicable disease control service delivery point.

3.4 Data Collection Tools

Tools for this study were as follow: questionnaire, observation form, and focus group discussion form with these 3 procedures.

3.4.1 Tools for IC assessment

1) Questionnaire

1.1) Hospital level questionnaire

Part 1 Organization and administration

Part 2 Infection surveillance

Part 3 Prevention and control

1.2) Service delivery point level questionnaire

Part 1 Prevention and control

1.3) Individual level questionnaire

Part 1 General information

Part 2 Management

Part 3 Infection surveillance

Part 4 Prevention and control

2) Observation / Questionnaire

2.1) Hospital level observation / questionnaire about trash bin and its use

3.4.2 Tools for implementation

1) Questionnaire on prevention and control

2) Observation / Questionnaire on trash bin and its use

- 3) Pre / Post-test on IC training (Medical staff 30 items, Non-medical staff 25 items)
- 4) Report on work-related accident infection surveillance, sterilization verification and water treatment verification

3.4.3 Tools for evaluation

1) Focus group discussion form

1.1) IC committee, medical and non-medical staff concerning IC

Part 1 Assessment of IC situation

- What assessment on IC was about?
- Who played the role of assessment?
- How was the assessment done?

Part 2 Planning for IC problem solution (beginning)

- How were the findings from assessment utilized?
- What are the goals of IC implementation?
- Who played role in the planning for IC?
- What are the processes of planning and implementation?

Part 3 Problem solution and obvious IC development

- How the administration was developed?
- How the administrator perceives and supports?
- What was done for the surveillance? (in clients, providers and sanitation)
- How was the information surveillance applied for the development?

- How was the IC developed? (location, equipment, cleaning, disinfecting, sterilization, service, environment, nutrition and academic)

Part 4 Follow up and evaluation on IC

- How was IC followed up and evaluated?
- Who played such role?
- What are the results?

Part 5 Problems and obstacle

3.5 Data Collection Methods and Data Analysis

Three processes were done: assessment, implementation and evaluation.

3.5.1 Data collection for assessment

- 1) Submit introduction and request to undertake a study from provincial Chief Medical Officer of Phayao Public Health Office to Director of Dokkhamtai hospital.
- 2) A presence of researcher to the director and all service delivery point chiefs and ICN.
- 3) Data collection process at hospital level (assisted by ICN and ICN assistant), service delivery point level (assisted by ICWN) and individual level (ICWN distributed questionnaires to medical and non-medical staff)
- 4) Assemble all data
- 5) Quantitative analysis of frequency, percentage and descriptive.

3.5.2 Data collection for implementation

- 1) Researcher, ICN and ICN assistant compile data from reports, surveillance, accident, sterilization and water treatment
- 2) Cognitive test by pre / post-test of staff
- 3) Supervision with questionnaire and trash bin observation
- 4) Collect and analyze quantitative analysis of frequency, percentage and descriptive and SPSS for Windows (Statistical package for social science)

3.5.3 Data collection for evaluation

Focus group discussion on topics: assessment, IC problem, planning for problem solution, IC development, follow up, evaluation and problem and obstacle. Researcher conducted a group discussion of these personnel: IC committee (13 persons). Medical staff (13 persons from OPD, ER, LR, OR, Special clinic, Ward, Special Ward, Central supply, Laundry, Laboratory, Dental, Community health, and Disease control) and non-medical staff (10 from OPD, ER, LR, OR, Ward, Special Ward, Central supply, Laundry, Laboratory, and Dental). Descriptive analysis was done.

3.6 Research Activities

The study of participatory IC system development of Dokkhamtai hospital in Dokkhamtai district, Phayao province was in 4 phases.

Phase 1 Situation analysis

Phase 2 Set up goal, planning, and implementation of activity

Phase 3 Solve problem and develop IC system

Phase 4 Follow up, supervise, and evaluate

Phase 1 Situation analysis

1. Literature review
2. Tool formulation for assessment the IC situation of community hospital. IC committee consisted of doctors, responsible person for IC in Phayao Public Health Office and ICN of all hospitals). Questionnaires and observation forms were formulated, adapted from the assessment of Mae Jai community hospital by JICA experts and IC nurse. The tools were verified and amended to suit to actual use. Tools are:
 - Questionnaire on IC (hospital, service delivery point and individual level)
 - Observation form on trash bin and its use (hospital and service delivery point level)
3. Assessment of situation, data collection was collected, at hospital level (assisted by ICN and ICN assistant), service delivery point level (assisted by ICWN) and individual level (ICWN distributes questionnaires to medical and non-medical staff) and the staff of service delivery point had meeting and ICWN brought the point to the committee later.
4. Assemble all data from each level
5. Analysis of IC problem of Dokkhamtai hospital quantitatively and qualitatively in order to know problem, where, when, how serious, etc. for planning precisely.

Phase 2 Set up goal, planning, and activity

1. Meeting of IC committee to present situation and problem of infection control to IC committee so that the committee can see the whole picture and make common agreement via discussion and brain storming. They participated in opinion sharing and problem prioritizing with these criteria:
 - Magnitude
 - Seriousness
 - Feasibility of solution
 - Needs of staff to solve problem
2. Set goals of problem solution: main goal and secondary goal, and set activity and direction of activity. Action plan was thus established.

Phase 3 Solve problem and develop IC system

1. IC committee meeting for strategy setting and implementing. ICWN would be important propulsion, assisting by collaboration of medical and non-medical staff concerning infection control.
2. Together they implement, according to the action plan, to achieve the goal. Problems found would be solved, improved, and weak points would be strengthened. Monthly meeting is held.
3. Supervise and follow up by ICN and ICN assistant in order to assure it was complete and correctly implemented, with efficiency and effectiveness. Problems are solved under direction, control, and follow up with progressive follow up, suitable alternative and assembly of reports on accident, surveillance, infection, sterilization and water treatment.

Phase 4 Follow up, supervise, and evaluate

Evaluation after the implementation to assess both outcome and impact, how the improvement was, what the obstacles were and how much the problem was reduced. The evaluation was done by focus group discussion. Researcher conducted a group discussion of these personnel: IC committee (13 persons). Medical staff (13 persons from OPD, ER, LR, OR, Special clinic, Ward, Special Ward, Central supply, Laundry, Laboratory, Dental, Community health, and Communicable disease control) and non-medical staff (10 persons from OPD, ER, LR, OR, Ward, Special Ward, Central supply, Laundry, Laboratory, and Dental). Descriptive analysis was done.

3.7 Evaluation Design

Figure 4: Evaluation design with CIPP Model

