

CHAPTER III



RESEARCH METHODOLOGY

1. Study Population

The study population was all the 30 baht patients that are either registered in Chulalongkorn hospital or other hospitals in Thailand. The latter is considered to be a self-referred group. Only outpatients included in the study population.

Selection of the subjects was based on the following criteria:

- Age - only above 15 years included
- Emergency cases - all emergency patients not considered.
- Severity of illness - Chronic patients excluded
- Willingness – only willing people included in the sample

2. Study Site

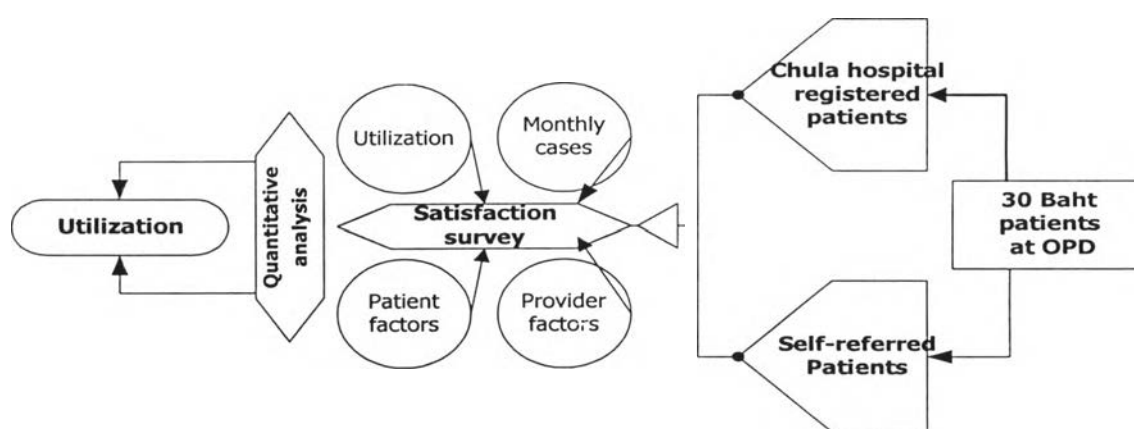
Chulalongkorn Memorial Hospital was chosen as the site of study. The research had to be hospital-based since there was involvement of patients who were coming for medical services at the Outpatient Department. This hospital is popular among people for its quality of care, specialization in certain fields and for having skilled doctors and better services. Due to all of these, patient satisfaction is high. Besides, it functions under the banner of the Red Cross Society. Thus, this study wanted to examine whether there was any change in the ways the hospital renders services to the patients in respect to the newly introduced 30-baht policy through the assessment of patient's satisfaction. The patient satisfaction survey was conducted to express the attitude of the people towards the 30-baht scheme. Basically, Chulalongkorn Memorial hospital has around 22,000 people registered through the 30-Baht scheme. But at the same time, there are other 30-baht patients registered in other hospitals but receiving services from this hospital. And normally the number of these patients visiting hospital is twice the original registered 30-baht patients. Therefore, it was one

of the objectives in this study to find the reasons why the non-registered 30-patients come to Chulalongkorn hospital.

3. Research Design

The research was a cross sectional descriptive study. The information was produced by interviewing (through structured questionnaire) 213 patients above 15 years of age who had the willingness to participate in the study. The secondary data were collected through OPD records and the 30-baht files.

Figure 7 Flow diagram for Research Design



4. Rationale of the Study Approach

The decision to apply this design was based on the purpose of this study, nature of investigation and extent of emphasis on the research questions. It had to be a hospital-based study. And descriptive study was only appropriate in consideration of limited time for a research. It may not be entirely representative of population holding gold cards, hence putting restriction for generalization.

5. Sampling

The subjects were determined purposively, as all 30-Baht patient groups were picked up for particular study reasons instead of all the patients at OPD. The study required and involved only the 30-baht patients since the research was focusing on attitudes towards and satisfaction with the 30-Baht Scheme services.

Initially, the 30-baht patients divided into two groups (Chulalongkorn Hospital registered and non-registered) were planned to have equal number of subjects in each. However, during the data collection, the survey faced some administrative and technical difficulty in collecting data from the registered group. Thus, the registered group has only 35% of total respondents, while the self-referred group has 65%.

6. Sample Size

The Lemeshow statistical formula was used to calculate the appropriate sample size.

$$n = \frac{Z^2 pq}{d^2} \quad (\text{Lemeshow, 1990})$$

n = desired sample size

d = difference between estimated proportion and true proportion in population or degree of accuracy desired in this study or relative error of estimation = 0.05

Z = standard normal deviate is set at 1.96 corresponding to 95% CI

p = proportions of patients satisfied with health care = 80% = 0.80

q = patients dissatisfied (1-p) = 0.22

$$\text{Thus, } n = \frac{1.96^2 \times 0.80 \times 0.20}{0.05^2} = 223 \text{ (sample)}$$

Although the sample size was estimated 223, due to the practical problem in the field, only 213 respondents could be managed in a sample.

7. Data Collection

Questionnaire is one of the instruments employed in the research study for collecting information. And it was important to know how to construct the questions because slight variations on wording, order and sequence can significantly affect response. Thus, long and technical questions were avoided. As far as possible questions were kept short, to the point and simple. Both interviewed and self-administered questionnaires were used depending upon the education levels of patients.

Questionnaire content: Utilization, attitude, and satisfaction (quality, access, time and providers factors)

Almost all questions were closed questions because usually the patients are not much interested in jotting down or thinking hard when they are sick. And it is often offensive to persuade the patients to complete the questionnaires.

8. Data Collection Methods

The authority of the College of Public Health, Chulalongkorn University approved my proposal for the further pursuance. The College then sent a formal letter to the Director of Chulalongkorn Memorial Hospital requesting for permission to carry out the survey at Outpatient Department. After a month of procedural formalities, finally, the researcher was consented to start this survey at OPD by the hospital authority.

8.1. Secondary data: the general information on the 30 Baht patients was obtained from the hospital records. This was aimed to get the number of the 30 Baht people registered at the Chulalongkorn hospital and the frequency of their visits to hospital. The information was obtained from the 30-baht clinic register and the 30-Baht project record.

8.2. Questionnaires: the survey was carried out in hospital with the structured questionnaire. Both kind of self-administered and interviewed questionnaire was used depending upon the education level of patients. All together 213 patients were asked questions on demography, attitudes towards the new 30-baht scheme, frequency of visits and their satisfaction with the hospital services. The sample consisted of two groups - one was the 30-baht patients registered at Chulalongkorn hospital, while the other group was the 30-baht patients registered in other hospitals. Thus, for the later group, the reasons on their choice of hospital were asked. In all, the questionnaire survey was aimed at getting information on utilization of gold card and satisfaction of using hospital services under the new 30-baht policy.

8.3. Interview: Two officers were selected for interview. One policy maker from the Ministry of Public Health and the officer from the 30-Baht Project at Chulalongkorn hospital. The issues related to government policy on health care, pros and cons of the universal health coverage policy, future trends, revenue generation, sustainability, satisfaction with and utilization of hospital services and the problems faced by the management of the 30-baht project at Chulalongkorn hospital.

8.4. Observation: Behavior of patients was observed in terms of willingness to respond to our inquiry based on their age, income and education background. The expression of satisfaction and dissatisfied feeling was also observed and noted down.

9. Measurement Method

A post-intervention evaluation on the 30-baht scheme through a one-time satisfaction survey was carried out. The survey involved two groups of people – the 30-baht scheme patients who were registered in Chulalongkorn hospital and the 30-baht scheme patients registered in other hospitals, but both of them receiving services at this hospital. Independent variables were used to compare and contrast these two groups and see the difference in their attitudes, satisfaction levels and utilization rate.

Dependent variable:

- *Utilization of gold card*
Level: Nominal
Measurement: Rate and percentage.
- *Frequency of visits* = Number of times of visits a patient made.
Level: Nominal/ordinal
Value: 1 = once, 2 = twice, 3 = thrice, 4 = more than 3 times

Independent variable:

- *Patients satisfaction*
Level: Ordinal scale
Value: 4 = Very Satisfied 3 = Satisfied 2 = Dissatisfied
1 = Very Dissatisfied (LIKERT Scale)
- *Attitude*
Level: Nominal/ordinal
Value: 4 = Strongly Agree 3 = Agree 2 = Disagree
1 = Very Disagree (LIKERT Scale)
- *Patient factor* = Age, sex, income, education, occupation
Level: Nominal/ordinal scale
- *Providers factor* = convenience, quality care, time interval, providers characteristics.
Level: Nominal/ordinal scale

10. Time frame for data collection

Study took place at Outpatient Department, Chulalongkorn hospital, Bangkok. It started from 3rd to 28 February 2003. It consists of two parts – record reviewing and satisfaction survey.

11. Interviewer Training

The hospital nurses were hired to carry out the interview and survey. To avoid any inter-interviewer variations, nurses were trained and made familiar with the questionnaires. They were not told the research questions to avoid or reduce the interviewer bias. The investigator was involved closely in monitoring the whole process of data collection. All the nurses were Thai, and the misinterpretation or misunderstanding due to language was virtually ruled out.

12. Protection of Confidentiality

All the personal information of the subjects will be stored in a file and only the investigator will have access to it. The information will be used strictly for study purpose. No part of it will be distorted or manipulated for any vested interest. All the opinions of subjects will be respected and kept confidential. The author takes the full responsibility of protecting all information from mishandling or pirating.

13. Study Ethics

Since the study will be conducted in hospital, a formal approval was sought from the hospital authority and College of Public Health before the actual data collection process begins. The ethical clearance was found not necessary.

14. Validity

For the purpose of validity, the proposed set of questions was distributed to ten academicians who were statisticians, qualitative researchers, health economist, public health professor, and other fellow researchers. Questionnaire was discussed and thoroughly checked for flaws with these experts and thesis advisor. The consistency of questions was cross-checked, and certain unnecessary statements were deleted, while filling the gap with new ideas to make the questions more understandable and meaningful. Questions were framed as simple and comprehensive as possible.

15. Reliability

A pretest sample of 30 was selected to try out the questionnaire. The principle of doing the pre-testing was to improve further and design the questionnaire better by reacting with the respondents, and through familiarizing with the whole process of questioning and receiving the comments from the sample population.

Thirty gold cardholders were pre-tested at OPD, Chulalongkorn hospital. And reliability was calculated by using Cronbach's Alpha Coefficient. But the most important lesson learnt was the generation of knowledge on how to deal with the situations and make or encourage patients more responsive and participatory.

Attitude - Reliability Coefficients = 10 items

$$\text{Alpha} = .8807$$

$$\text{Standardized item alpha} = .8831$$

Satisfaction - Reliability Coefficients = 23 items

$$\text{Alpha} = .9325$$

$$\text{Standardized item alpha} = .9348$$

The Alpha coefficient tested for attitude and satisfaction for the 30-sample population was significant (0.8 and 0.9 respectively) and proved to be highly consistent. Only minor changes had to be made in the language part to simplify the questions more.

16. Statistical Analysis

- Descriptive statistics was used for demographic features. Mean, standard deviation, median and percentages were applied as statistical tools to describe the findings.
- Scoring system was used to measure the attitude and satisfaction variables.
- Comparison of means was done to test variables like attitude and satisfaction between the two groups of the 30-baht patients.
- SPSS was the used to run the statistical analysis.
- Structured questionnaires used. They are divided into six parts containing demographic characteristics, insurance status, health service utilization, attitudes and satisfaction with services and gold card.
- OPD records and files checked.
- Interview health officials.

17. Limitations of Study

The study has several limitations that are as follows;

- 1) Due to time and resource constraint, the study looked only at the overall one-time satisfaction level among the 30-Baht patients who came to hospital. So a household survey with large sample was not feasible. Thus, the research had to be a hospital-based, not a large-scale community based.
- 2) Good quality management system in hospital might have confounded the findings of the study, as utilization of services would not be influenced just because of having a gold card.
- 3) Level of income among the gold card users could have acted as confounding factor, especially for the patients who self refer to Chulalongkorn Hospital.
- 4) Since the investigator would have to take assistance of Thai translators, there could be possibility of introducing some selection bias.
- 5) There could be possibility of recall bias and response bias either by giving perceived correct answers or wrong responses.
- 6) Due to seasonal changes, there could be more OPD cases, which may not necessarily be due to increased utilization.
- 7) Due to language barriers, the research may lack some qualitative information.

18. Expected Benefits

The study may benefit in the following ways;

- 1) The first beneficiary, hopefully, could be hospital itself. It could look into improving the services as per the feedback of satisfaction survey results and the utilization study may also show the trend of service utilization with the effect of 30-Baht Scheme and management could put more focus in the supply of the service in response to the demand.
- 2) This study also has potential to influence the decision-makers of hospital, impacting on the long term planning and financing processes.
- 3) There is scarce information at present regarding the impact of the new financing reform (30 Baht scheme) on consumers, equity and coverage. This study would provide first-hand information for further research in consumer's satisfaction; to find out whether people are satisfied with this method of payment or is the 30 Baht in any way contributing to more utilization of health care services.

- 4) It, over everything, gives an opportunity for the author to enhance his knowledge and ability in carrying out health research independently. It also helps the author to apply the skills and acquired knowledge in the field situation, and build confidence to research in the future.
- 5) Besides, the author's country (Bhutan) is undergoing major health sector reform, and it will ultimately help the author to participate and influence the process of reform in his Ministry. Satisfaction and financial sustainability in health services are the key issues in his Ministry.