CHAPTER 3

RESEARCH METHODOLOGY

Research Design

This is a survey study. It is the cross-sectional descriptive study design. The objective is to exammine the medical service utilization by the insured patients at Chulalongkorn Hospital. The study period was 6 months (May - October) in 1997. Medical service utilization were measured in terms of utilization rate, medical care cost and patient satisfaction.

Data about utilization rate were collected from the hospital records, while medical care cost were collected from the hospital records and prescriptions, and patient satisfaction were collected from questionnaires during the 6- month of study period.

The study on the medical care cost covered only the cost of direct medical cost e.g. drugs, medical supplies, laboratory tests, EKG and X-ray procedures which are incurred by the hospital.

Population and Sample

Target population :

The population were insured workers according to the Social Security Act 1990.

Sample :

The sample were the insured workers who registered with Chulalongkorn hospital as main contractor for providing medical service according to the Social Security Act 1990.

Inclusion criteria :

− Both outpatients and inpatients of insured workers who come to receive medical services at Chulalongkorn hospital during researching period (May − October 1997).

− Insured outpatients who received the medical service at outpatient department of Por Bhor Ror Building.

− Insured inpatients who were admitting on 3rd floor of Sawas -Lorm Building

For surveying the patient satisfaction by using questionnaires, the sample were insured patients who agree to participate in this study, prompted to answer the interviewing schedules, were not seriously sick or too old to answer, and had good conscious.

Sample size calculation for investigate the patient satisfaction

Since the level of insured patient satisfaction is still doubtful, sample size in this study was estimated by using the outpatient satisfaction score from the previous study of Chariyalertsak which was about 0.6. From this figure, the estimated sample size was 200

cases. Since the researcher wanted to cover more population, so the sample size was increase to 250 cases.

Outcome variables

Primary outcome :

– Utilization rate of both insured outpatients and inpatients

Secondary outcomes :

1. Medical care costs or medical service costs (considering only direct medical cost i.e. drugs, medical supply, laboratory test, X-ray procedures, Ultrasound and EKG)

    – average total service cost per patient visit

    – average total service cost per patient admission

2. Patient satisfaction and health service problems with hospital services

    – personnel

    – waiting time

    – information

    – quality of care

3. Length of stay or patient day (for inpatients)

4. Health problem, classification of illness or diseases

    (following the International Classification of Diseases 10 th revision, ICD-10)

Measurement

- Data collecting form
- Questionnaire

Data collection

There are 2 varieties of data in this study, divided by sources be collected:

Primary data :

This type of data i.e. patient's satisfaction were obtained from interviewed by using questionnaires. The source was insured patients.

Secondary data :

This type of data i.e. general information of patients, number of visits/admissions, site of utilization, items of services or procedures, and medical care cost were collected from the hospital records and prescriptions which derived from any related departments/units i.e. department of patient registration and hospital statistics, pharmacy department, X-ray units, Laboratory units, Inpatient ward etc.

For surveying patient satisfaction, the instrument was a questionnaire consisting of demographic data, satisfaction scale and opinions towards the hospital services. The subjects consisted of 252 insured patients were asked from 8.30 a.m. through 4.30 p.m. during the working days while waiting for receiving medicines at outpatient department and admitting in wards for inpatient.

Data Analysis

All the data, generated by the survey, will be extracted and the Microsoft Excel, SPSS/PC program was used for data analysis. Descriptive statistics in terms of mean, range, standard deviation, frequency and percentage were done. Chi-square will be used to see the correlation. Probably value less than 0.05 was regarded as statistical significance.

The data were presented in 3 parts as follows:

1. General information of patients were presented by descriptive statistics in percentage and mean.

2. Information about both outpatients and inpatients service utilization (site of service, medical service cost) were presented by descriptive statistics in percentage and mean.

3. Information about patient satisfaction and opinions towards hospital service was presented by descriptive statistics in percentage and mean.

Instrument Construction

The instrument of this study for surveying the patient satisfaction with hospital services was the questionnaire. The content of the questionnaire was adapted from the Techacharmreonsook's and Durongpisitkun's research.

The questionnaire were divided into 3 parts:

Part 1 : General information

      1.1 sex

      1.2 age

1.3 marital status

1.4 education

1.5 salary per month

1.6 place of residence

1.7 past experience in having contract Chulalongkorn Hospital as main contractor

1.8 past experience in receiving service from Chulalongkorn Hospital

Part 2 : Patient satisfaction with hospital services

Patient satisfaction was classified into 4 dimensions:

- patient satisfaction with convenience and waiting time
- patient satisfaction with courtesy of hospital staffs
- patient satisfaction with information
- patient satisfaction with quality of medical care i.e. drugs and treatment.

Part 3: Additional problems about hospital service provided and suggesions for improvement

Questions in the questionnaire were revised and checked by the advisor and co-advisor in regard to relating with objectives and clarity of language. The questionnaire was pretested among 20 patients. After pretest, the result showed the reliability of the questionnaire was 0.87.

Measurement of patient satisfaction

The scoring system of the satisfaction scale was as follows:

Level	Score
Highly satisfied or good	5
Moderated satisfied	4
Not sure, satisfied or not	3
Low satisfied or bad	2
Not satisfied or very bad	1

The criteria for classifying the levels of patient satisfaction was the mean. The levels were as follows:

Level	Mean
Highly	5.00 - 4.51
High	4.50 - 3.51
Farely	3.50 - 2.51
Low	2.50 - 1.51
Least	1.50 - 1.00