THE VALUE PROPOSITION ASSESSMENT OF OUTPATIENT MEDICAL SERVICE AT CHONBURI HOSPITAL

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THE VALUE PROPOSITION ASSESSMENT OF OUTPATIENT MEDICAL SERVICE AT CHONBURI HOSPITAL.

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ABSTRACT

The purposes of this study were to assess the value proposition of outpatient medical services by three groups of patients Civil Servant Medical Benefit Scheme patients, Social Security Scheme patients and self paying patients, in terms of the importance, performance and decisions in health service selection at Chonburi Hospital. An interview questionnaire was used for collecting data from 245 outpatients and 180 Chonburi hospital medical staff during March and April, 2005. The tool had a good reliability and the internal consistency reliability coefficient was of an acceptable value (α Cronbach's coefficient > 0.7). The questionnaire included importance and performance assessment, general information and factors affecting the patient's decision in selecting hospital.

Assessment of the patient's value proposition revealed that the first three leading value propositions in service dimension of outpatients were "Pharmacy service", "Medical service by physician", and "Nursing services" respectively.

Patients gave the highest importance score to "Providers" and "Pharmacy services" (IS = 3.74) which was statistically significantly different ($p < 0.05$) from the providers who chose "Pharmacy services" (IS = 3.80). Both groups gave the lowest performance score to the "Facilities and environment" dimension.

Patients who selected "Chonburi Hospital" as their service hospital (78.00%) were generally young and satisfied with the hospital services, while those who selected "other hospitals" as their service hospitals (22.00%) were generally under 35 years old with a high school diploma or undergraduate degree. Five factors that affected their decision were "Confidence in doctor and officer ability", "Modern technology equipment", "Government hospital", "Ease in communication" and "Reasonable price".

The results of this research can be used as a guideline for the hospital to improve services to meet patients' needs, which would increase the revenue and maximize resource utilization.

KEY WORDS: VALUE PROPOSITION / OUTPATIENT MEDICAL SERVICE / IMPORTANCE-PERFORMANCE ANALYSIS / SELECTION OF HEALTH SERVICE UTILIZATION

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การประเมินคุณค่างานในการบริการทางการแพทย์ผู้ป่วยนอกโรงพยาบาลชลบุรี
(THE VALUE PROPOSITION ASSESSMENT OF OUTPATIENT MEDICAL SERVICE AT CHONBURI HOSPITAL)

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คณะกรรมการควบคุมวิทยานิพนธ์: ชะอรสิน สุขศรีวงศ์, Dr.PH. (Public Health Administration), กุสาวดี เมลืองนนท์, Ph.D.

บทคัดย่อ

การศึกษาครั้งนี้มีวัตถุประสงค์ เพื่อประเมินคุณค่า ของงานบริการผู้ป่วยนอกโดยกลุ่มผู้ป่วยที่ใช้สิทธิในการรักษาพยาบาล 3 กลุ่ม (ได้แก่สิทธิสวัสดิการรักษาพยาบาลของข้าราชการ, ประกันสังคม และ ชำระเงินเอง)ในเรื่องของความสำคัญ และ ผลการดำเนินงาน และประเมินการตัดสินใจเลือกรับบริการรักษาพยาบาลที่โรงพยาบาลชลบุรีของผู้ป่วย โดยทำการสัมภาษณ์ข้อมูลจากผู้ป่วย 245 ราย และ ผู้ให้บริการทางการแพทย์ 180 ราย ตามแบบสอบถาม ระหว่างเดือนมีนาคมถึงเมษายน ปี 2548 แบบสอบถามที่ใช้มีความแม่นยำและมีค่าสัมประสิทธิความแม่นยำภายในอยู่ในเกณฑ์ที่ยอมรับได้ (อัลฟ่า ครอนบาค > 0.7) ซึ่งแบบสอบถามประกอบด้วย แบบประเมินคุณค่างานบริการทางการแพทย์ ในเรื่องของความสำคัญ และผลการดำเนินงานของแต่ละงานบริการ ข้อมูลทั่วไป และปัจจัยที่มีผลต่อการตัดสินใจเลือกสถานบริการเพื่อรักษาพยาบาล

จากการประเมินคุณค่างานบริการผู้ป่วยนอก พบว่ากลุ่มการบริการ 3 ลำดับแรกที่เป็นคุณค่าสูงสุดของงานบริการผู้ป่วยนอกได้แก่การบริการเภสัชกรรม การบริการทางการแพทย์ และการบริการทางพยาบาล

ผู้ป่วยสิทธิสวัสดิการรักษาพยาบาลของข้าราชการจะให้ความสำคัญต่อการบริการเภสัชกรรมสูงสุดแตกต่างอย่างมีนัยสำคัญทางสถิติ ($p< 0.05$) จากผู้ป่วยสิทธิประกันสังคมและผู้ป่วยที่ชำระเงินเอง ซึ่งให้ความสำคัญต่อ การบริการทางพยาบาล และ ผู้ให้บริการตามลำดับ ซึ่งผู้ป่วยทั้งสามกลุ่มเห็นร่วมกันว่า ปัจจัยด้านสิ่งแวดล้อมและสิ่งอำนวยความสะดวกมีผลการดำเนินงานต่ำสุด

ผู้ป่วยจะให้ความสำคัญต่อ ผู้ให้บริการ และการบริการเภสัชกรรมสูงสุดแตกต่างอย่างมีนัยสำคัญทางสถิติ ($p< 0.05$) จากผู้ให้บริการรักษาพยาบาลซึ่งให้ความสำคัญต่อการบริการด้านเภสัชกรรม ซึ่งทั้งสองกลุ่มเห็นร่วมกันว่า ปัจจัยด้านสิ่งแวดล้อมและสิ่งอำนวยความสะดวกมีผลการดำเนินงานต่ำสุด

ผลการสอบถามเรื่องการตัดสินใจเลือกรับบริการ รักษาพยาบาล ณ สถานพยาบาลพบว่า ร้อยละ 78.0 เลือกโรงพยาบาลชลบุรี ในขณะที่ร้อยละ 22.0 เลือกโรงพยาบาลอื่นซึ่งส่วนใหญ่เป็นผู้ป่วยอายุน้อยกว่า 35 ปี และมีการศึกษาระดับมัธยมศึกษาถึงต่ำกว่าปริญญาตรี ปัจจัยห้าลำดับแรกที่มีผลต่อการตัดสินใจเลือกสถานบริการได้แก่ เชื่อมั่นในความสามารถของแพทย์และบุคลากรของโรงพยาบาล การมีเครื่องมือแพทย์ที่ทันสมัย การที่เป็นโรงพยาบาลของรัฐ การเดินทางคมนาคมสะดวก และ ราคาค่าบริการที่สมเหตุสมผล

ผลลัพธ์จากการศึกษาในครั้งนี้สามารถใช้เป็นแนวทางสำหรับโรงพยาบาลในการปรับปรุงบริการ ให้สอดคล้องต่อความต้องการของผู้ป่วยซึ่งจะเพิ่มรายได้ และเกิดการใช้ทรัพยากรที่มีอยู่อย่างเกิดประโยชน์สูงสุด

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CHAPTER I
INTRODUCTION

Background and rationale

The major healthcare financing scheme in Thailand is categorized in to three groups, as Universal Coverage (UC), Social Security Scheme (SSS) and Civil Servant Medical Benefit Scheme (CSMBS). Thai healthcare system is changing and improving continuously. There is a tendency that Civil Servant Medical Benefit Scheme (CSMBS) will change its reimbursement system in the near future; the capitation reimbursement for outpatients like Social Security Scheme (SSS) and Universal Coverage (UC) is a possible approach, which will directly affect hospital budget management system.(1)

So the hospital must be affected by this change. It needs to solve not only the reimbursement problem, but also the specific marketing problem it will face such as; more alternatives for clients to choose the service, higher performance competitors including private hospitals, and more limited budget, etc. Hospital marketing study by analyzing clients' needs and behavior is a way to keep and increase the number of clients.

The value proposition in the clients' perspective is one factor that may influence patient's decision in selection of service hospital. Before any services can be improved, it is important to know the need and perception of clients towards present services. Then the healthcare provider can improve his services to match the clients' needs or add some services that once were ignored.

Outpatient department is the important department of the hospital which serves major of the patients. Patients spend a lot of time in each unit such as medical record service unit, physical examination unit, laboratory unit, billing unit and pharmacy unit. They expect a comfortable and fast services from all outpatients department.[(2)] The patient satisfaction should be created in order to make them impressed which is good not only for the outpatient department but also for the hospital image.

The purpose of this study is to assess the value proposition of outpatient medical service perspectives among three groups of patients (Civil Servant Medical Benefit Scheme (CSMBS), Social Security Scheme (SSS) and self payment) in terms of the importance and the performance and decision of health service selection at Chonburi hospital. Also a group of Chonburi hospital medical staff (doctors, pharmacists and nurses) will be studied. The comparison of the value proposition of outpatient medical service perspectives between groups of patient and Chonburi hospital healthcare providers will be analyzed.

Since Chonburi hospital is a public health care setting which aims to increase its revenue through improving health care service satisfaction and fulfilling patients' expectation, so it is reasonable to study the value proposition of outpatient medical service department.

General objective

To assess the value proposition of medical service at Chonburi hospital and ratio of patients' decision to select Chonburi hospital as their service hospital.

Specific objectives

1. To assess the value proposition of outpatient medical service in terms of the importance and the performance, in the perspectives of
    - Group of Civil Servant Medical Benefit Scheme patient
    - Group of Social Security Scheme patient

- Group of self payment patient
- Group of medical staff (doctors, pharmacists and nurses).

2. To compare the value proposition of outpatient medical service perspectives between patients and healthcare providers.
3. To assess factors influencing patients' decision in selecting hospital.
4. To assess ratio of patients' decision to select Chonburi hospital.

Research scope:

This study was conducted among outpatient who visited Chonburi hospital outpatient department during 8.00 am. – 4.00 pm. on the working day.

Research definition:

Outpatient is the patient who attends to receive any medical service and is not admitted to the hospital.

New patient is the patient who attends hospital to receive any medical services from outpatient department for the first time.

Old patient is the patient who had past experiences in receiving and medical services from the outpatient department.

Outpatient in Civil Servant Medical Benefit Scheme is an old outpatient who is a civil servant, pension civil servant, or his or her family members.

Outpatient in Social Security Scheme is the old outpatient who is a Social Security Scheme member.

Outpatient in self payment group is the old outpatient who is pays all expenses out of his / her pocket.

Chonburi hospital medical staffs are doctors, pharmacists and nurses who work at Chonburi hospital.

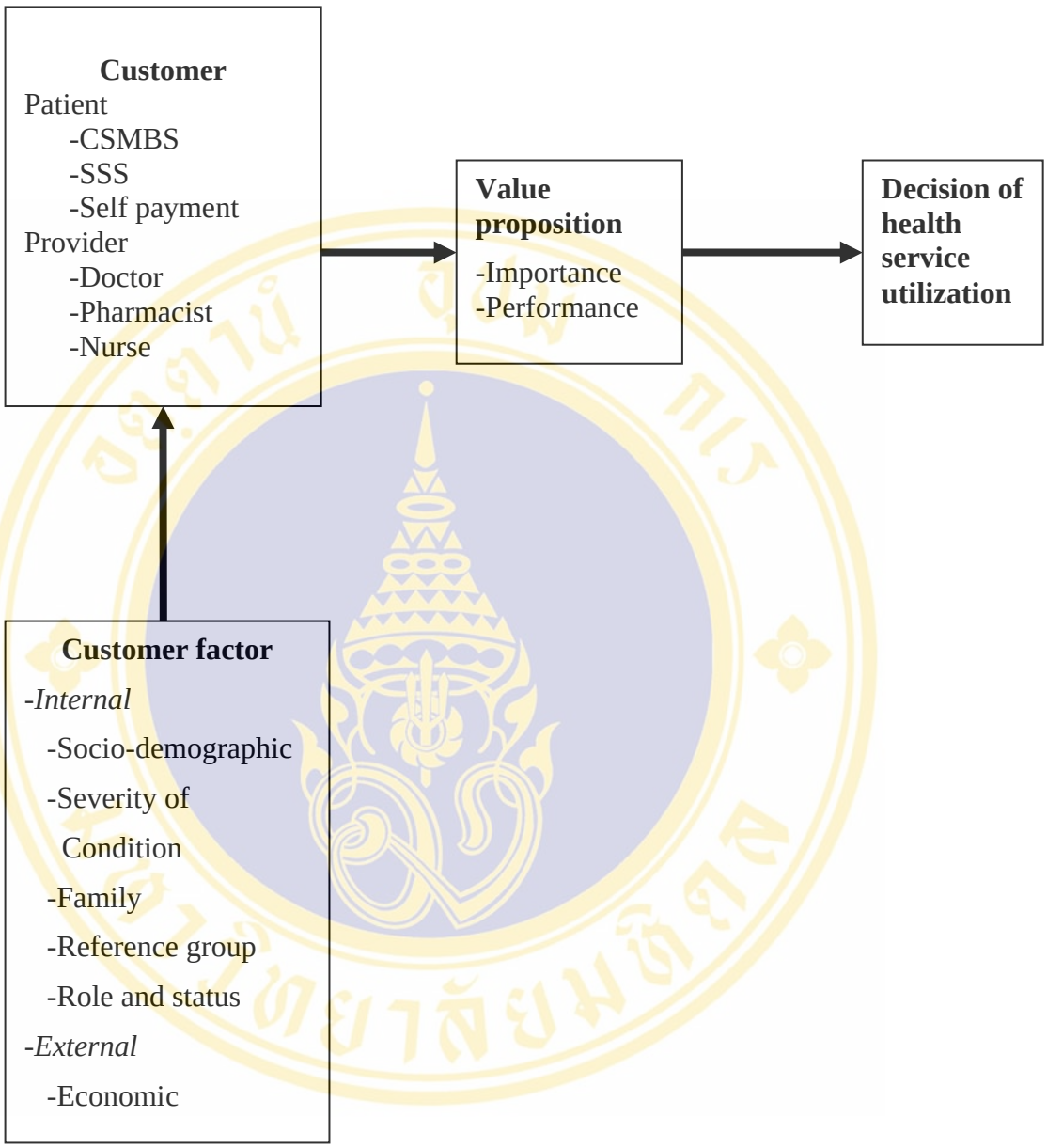
Initial customer is the patient who attends hospital to receive any medical services from outpatient department for the first time as same as new patient.

Repeat customer is the patient with past experiences in receiving any medical services from outpatient department and decides to select Chonburi hospital to be service hospital.

Customer advocate is the patient with past experiences in receiving any medical services from outpatient department and decides to select Chonburi hospital as a service hospital and recommend Chonburi hospital to other persons.

Benefit of the study

The results of this research can be used as a guideline for the hospital to improve the services which will meet the needs of the patients, which in turn would increase the revenue and bring to maximize resource utilization.



Conceptual framework

CHAPTER II

LITERATURE REVIEW

The literature review is composed of four parts:

I Chonburi Hospital Profile;

II Value Proposition;

- The Marketing Process.
- Value Proposition.

III Factors affect the use of health care service;

- Factors affect the use of health care service.
- Value proposition studied by using importance-performance analysis.
- Factors affecting decision of health service utilization from health center.

IV The customer service profile;

Part I. Chonburi Hospital Profile [3]

Chonburi Hospital is one of the biggest government province hospitals. There are 825 beds and average 2,149 outpatients per day.

The statistics of outpatients from October 1, 2003 – September 30, 2004 show that there were 528,590 outpatients and 46,726 inpatients. The outpatients of medicine clinic accounted for 26.74% of total outpatients. The number and percentage of outpatients classified by clinic or department are illustrated in table 1.

Table 1: Number and percentage of outpatients classified by department or clinic

Department/clinic	No. of outpatients	Percentage (%)
Medicine	141,326	26.74
Emergency	75,731	14.33
Social Health Insurance	41,609	7.87
Rehabilitation	36,958	6.99
Surgery	30,188	5.71
Pediatrics	29,834	5.64
Ophthalmology	28,083	5.31
Orthopedics	26,317	4.98
Dentistry	21,889	4.14
Psychiatry	21,535	4.07
Obstetrics	19,324	3.66
Gynecology	19,089	3.61
Maxilophacial	16,772	3.17
Otorhinolaryngology	13,073	2.47
Thai Massage	6,862	1.30
Total	**528,590**	**100.00**

The six main clinics include: Medicine, Surgery, Pediatrics, Ophthalmology, Orthopedics and Obstetrics providing services to more than 50 percent of overall outpatients as shown in table 2.

Table 2: Number and percentage of outpatients of six departments or clinics

Department/clinic	No.of outpatients	Percentage (%)
Medicine	141,326	51.38
Surgery	30,188	10.97
Pediatrics	29,834	10.84
Ophthalmology	28,083	10.21
Orthopedics	26,317	9.57
Obstetrics	19,324	7.03
Total	**275,072**	**100.00**

When classified outpatients by health insurance schemes, it falls into five groups (Table 3), the Universal Coverage group account for 43.07 percent of the total, but the largest group that influenced Chonburi Hospital revenue is patients in group of self payment, CSMBS and SSS which account for 55.90%. The average number of outpatients per working day is 2,149 persons. (Table 4)

Table 3: Number of outpatient classified by health insurance schemes

Health insurance scheme	Number (person)	Coverage (%)
Universal Coverage	151,224	43.07
Self payment	80,961	23.06
Civil Servant Medical Benefit Scheme (CSMBS)	74,244	21.14
Social Security Scheme (SSS)	41,093	11.70
Workmen's Compensation fund, Compulsory motor insurance and others	3,623	1.03
Total	**351,145**	**100.00**

Table 4: Number of outpatients classified by month and by average per working day

Month	Number of outpatient	Average per working day
October	45,055	2,146
November	40,863	2,044
December	43,474	2,174
January	42,198	2,010
February	43,160	2,158
March	45,995	2,091
April	42,738	2,375
May	45,349	2,387
June	44,226	2,106
July	45,775	2,081
August	44,206	2,211
September	45,551	2,071
Total	**528,590**	**2,149**

Part II. Value Proposition [4 - 7]

The Marketing Process [4]

Marketing process is the process of (1) analyzing marketing opportunities, (2) selecting target markets, (3) developing the marketing mix, and (4) managing the marketing effort.

The strategic plan defines the company's over all mission and objective. Consumers stand in the center. The goal is to build strong and profitable relationships with customers. As a first step, through market segmentation, targeting, and positioning, the company decides which customers it will serve and how. It identifies the total market, and then divides it into smaller segments. Next, the company design a marketing mix made up of factors under its control-product, price, place and promotion. To find the best marketing mix and put it into action, the company engages in marketing analysis, planning, implementation, and control. Through these activities, the company watches and adapts to the actors and forces in the marketing environment. We will now look briefly at each element in the marketing process, we will discuss each element in more depth.

Relationships with consumers

To succeed in today's competitive marketplace, companies must be customer centered, winning customers from competitors, then keeping and growing them by delivering greater value. But before it can satisfy consumers, a company must first understand their needs and wants. Thus, sound marketing requires a careful customer analysis.

Companies know that they cannot profitably serve all consumers in a given marketing - at least not all consumers in the same way. There are too many different kinds of consumers with too many different kinds of needs. And most companies are in a position to serve some segments better than others. Thus, each company must divide up the total market, choose the best segments, and design strategies for profitably serving chosen segments. This process involves three steps: market segmentation, target marketing, and market positioning.

Market Segmentation

The market consists of many types of customer, product and needs. The market has to determine which segments offer the best opportunity for achieving

company objective. Consumers can be grouped and served in various ways based on geographic, demographic, psychographic and behavioral factors. The process of dividing a market into distinct groups of buyers who have different needs, characteristics, or behavior and who might require separate products to marketing program, is called market segmentation

Every market has segments, but not all ways of segmenting a market are equally useful. For example, Tylenol would gain little by distinguishing between male and female users of pain relievers if both respond the same way to marketing efforts. A market segment consists of consumers who respond in a similar way to a given set of marketing efforts. In the car market, for example, consumers who choose the biggest, most comfortable car regardless of price make up one market segment. Customers who care mainly about price and operating economy make up another segment. It would be difficult to make one car model that was the first choice of consumers in both segments. Companies are wise to focus their efforts on meeting the distinct needs of individual market segments.

Target marketing

After a company has defined market segment, it can enter one or many segments of a given market. Target marketing involves evaluating each market segment's attractiveness and selecting one or more segments to enter. A company should target segments in which it can generate the greatest customer value profitably and sustain it over time. A company with limited resources might decide to serve only one or a few special segments or "market niches" This strategy limits sales but can be very profitable. Or a company might choose to serve several related segments perhaps those with different kinds of customers but with the same basic wants. A large company might also decide to offer a complete range of products to serve all market segments.

Most companies enter a new market by serving a single segment, and if this proves successful, they add segments, Large companies eventually seek full market coverage. They want to be the General Motors of their industry. GM says that it makes a car for every "person, purse, and personality." The leading company normally has different products designed to meet the special needs of each segment.

Market Positioning

After a company has decided which market segments to enter, it must decide what positions it wants to occupy in those segments. A product's position is the place the product occupies relative to competitors in consumers' minds. Marketers want to develop unique market positions for their products. If a product is perceived to be exactly like others on the market, consumers would have no reason to buy it.

Market positioning is arranging for a product to occupy a clear, distinctive, and desirable place relative to competing products in the minds of target consumers. Thus, marketers plan positions that distinguish their products from competing brands and give them the greatest strategic advantage in their target markets. For example, the Ford Taurus id "built to last": Chevy Blazer is "like a rock": Toyota's economical Echo state, "It's not you. It's the car"

In positioning its product, the company first identifies possible competitive advantages upon which to build the position. To gain competitive advantage, the company must offer greater value to target consumers. It can do this either by charging lower price than competitors do or by offering more benefits to justify higher prices. But if the company positions the product as offering greater value, It must then deliver that greater value. Thus, effective positioning begins with actually differentiating the company's marketing offer so that it gives consumers more value.

Once the company has chosen a desired position, it must take strong to deliver and communicate that position to target consumers. The company's entire marketing program should support the chosen position strategy.

Value Proposition

The Medicare market is becoming increasingly competitive and uncertain. To compete successfully for a share of the Medicare market, providers must have a cogent strategy that defines their customers and the value proposition for those customers, design their services to maximize the benefits of outcomes and service process that are important to consumers. Most importantly, providers must shift their focus externally to the consumer's needs rather than their own.[5]

Concept of Value [6-7]

The concept of Value relies on the relationship between the satisfaction of many differing needs and the resources used in doing so. The fewer the resources used

or the greater the satisfaction of needs, the greater the value. Stakeholders, internal and external customers may all hold differing views of what represents value. The aim of Value Management is to reconcile these differences and enable an organization to achieve the greatest progress towards its stated goals with the use of minimum resources (see figure below)

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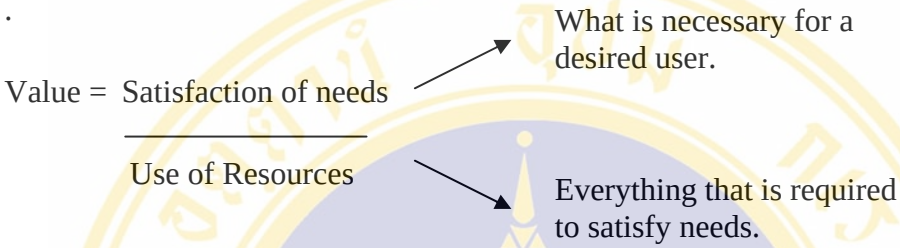


It is important to realize that "Value" may be improved by increasing the satisfaction of need even if the resources used in doing so increase, provided that the satisfaction of need increases more than the increase in use of resources.

Value Management is a style of management particularly dedicated to motivating people, developing skills and promoting synergies and innovation, with the aim of maximizing the overall performance of an organization.

Value Management has evolved out of previous methods based on the concept of value and functional approach. These were pioneered by Lawrence D. Miles in the 1940's and 1950's who developed the technique of Value Analysis (VA) as a method to improve value in existing products. Initially Value Analysis was used principally to identify and eliminate unnecessary costs. However it is equally effective in increasing performance and addressing resources other than cost. As it evolved the application of VA widened beyond products into services, projects and administrative procedures.

The Value Management Approach involves three root principles:

1. A continuous awareness of value for the organization, establishing measures or estimates of value, monitoring and controlling them;

2. A focus on the objectives and targets before seeking solutions;

3. A focus on function, providing the key to maximize innovative and practical outcomes.

The Key Principles

Value Management is distinct from other management approaches in that it simultaneously included attributes which are not normally found together. It brings together within a single management system:

1. **Management style**

   1.1 Emphasis on teamwork and communication.

   1.2 A focus on what things do, rather than what they are (functional approach).

   1.3 An atmosphere that encourages creativity and innovation.

   1.4 A focus on customer's requirements.

   1.5 A requirement to evaluate options qualitatively to enable robust comparisons of options.

2. **Positive human dynamics**

   2.1 Teamwork - encouraging people to work together towards a common solution;

   2.2 Satisfaction - recognizing and giving credit;

   2.3 Communication - bringing people together by improving communication between them;

   2.4 Fostering better common understanding and providing better group decision support;

   2.5 Encouraging change - challenging the status quo and bring about beneficial change;

2.6 Ownership - the assumption of ownership of the outcomes of Value Management activities by those responsible for implementing them;

3. **Consideration of external and internal environment**

3.1 External conditions - taking account of pre-existing conditions external to the organization over which managers may have little influence;

3.2 Internal conditions - within the organization there will be existing conditions which managers may or may not be able to influence;

3.3 Degrees of freedom - the external and internal conditions will dictate the limits of potential outcomes and should be quantified.

4. **Effective use of methods and tools**

4.1 Means of achieving outcomes.

The Benefits of Value Management

The most visible benefits arising out of the application of Value Management include:

1. Better business decisions by providing decision makers a sounds basis for their choice;

2. Improved products and services to external customers by clearly understanding, and giving due priority to their real needs;

3. Enhanced competitiveness by facilitating technical and organizational innovation;

4. A common value culture, thus enhancing every member's understanding of the organization's goals;

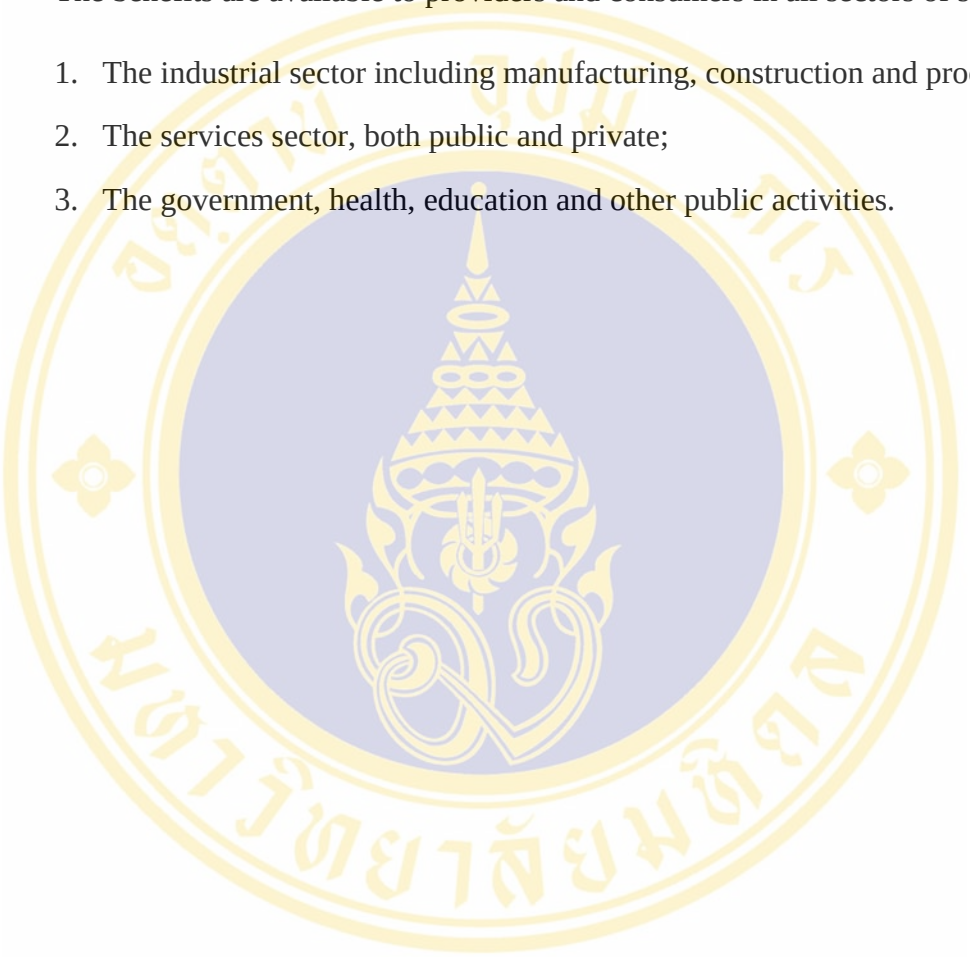
5. Improved internal communication and common knowledge of the main success factors for the organization;

6. Simultaneously enhanced communication and efficiency by developing multidisciplinary and multitask teamwork;

7. Decisions which can be supported by the stakeholders.

The benefits are available to providers and consumers in all sectors of society:

1. The industrial sector including manufacturing, construction and processing;
2. The services sector, both public and private;
3. The government, health, education and other public activities.



Part III. Factors affect the use of health care service

Organizing of outpatient service composes of; [8]

1. Managing place that facilities for providing service and for patient.
2. Preparing equipment which is necessary for providing service.
3. Preparing health personnel or officer who have appropriate characteristics and should be enough for serving.
4. Determining performance and responsibility of each officer.
5. Assigning work which is appropriate to competence of each officer.
6. Managing of controlling and supervising system.
7. Managing of evaluating system in order to provide service which meet the patient's need and expectation.

It has been seen that organization of outpatient department service includes evaluating system in order to get data from patient to improve service provision.

Factors lead to suffering of outpatients at University hospital.

Yothin Sawangdee et al.studied the problems and suffering experienced by patients obtaining service at health care facilities by Principal Component Analysis divided to 8 components: [9]

1. Health personnel
2. Environmental factors
3. Medical equipment
4. Type of services
5. Management system service
6. Socio-economic status of patients
7. Illness of patient
8. Privilege of patients

There are general problems faced by most of hospital in Thailand, which King Chulalongkorn Memorial Hospital might be included. Identifying and trying to solve there problems might lead to increase customer satisfaction.

Factors affect the use of health care service

People would seek for any health care services because of various factors. It was not only the factor that he was sick. These factors could promote or reduce people to attend any medical care service. Aday and Anderson [10] classified these factors in three dimensions, they were:

1. Characteristics of population-at-risk

1.1 Predisposing factors

Predisposing factors could be classified into demographic factors and social structural factors. Demographic factors such as age, sex, health care behavior had an effect on using health care service. Elderly tend to seek for health care service more than younger. Female tends to seek for health care service more than male. Social structural factors such as education, occupation had an effect on using health care service. People who had high education tend to have health awareness more than people who low education.

1.2 Enabling factors

Enabling factors could be classified into economic factors and community sources factors. Economic factors such as income had an effect on using health care service. People who had high income tend to seek for health care service more than people who had low income. Community sources factors such as insurance coverage had an effect on using health care service. People who had insurance tend to seek for health care service more than people who had not.

1.3 Need factors

People had to concern about their sickness and feel needs to seek for health care service. Need factors could be classified into perceived need and evaluated need. Perceived need could be evaluated by health perception of individual and health care officer could be evaluated need.

2. Utilization of health service

Utilization of health service in different type of service or place made different experience of people. Experience affected consumer satisfaction that was a mechanism pushing on using health care service.

3. Characteristic of health delivery system

Health care delivery system had an effect on using health care service. High volume and good distribution of service made people easily seeking for using service.

Consumer satisfaction with medical care

Aday and Anderson [10] described the consumer satisfaction with medical care. They explained that consumer satisfaction could be separated into 5 dimensions, as the following:

1. Satisfaction with convenience

The convenience and characteristics of place people go for health care provide data on whether there is differential "treatment" of individuals, depending on where they chance to go for services. In addition, waiting time in getting service could be as proxy indicator of convenience in any service.

2. Satisfaction with courtesy of providers

Provider was a person who contacted with consumer to serve any service. Characteristics of providers such as personality or conversation would be accepted, responded and valuated by consumer. Consumer was satisfied or dissatisfied when he saw the characteristics of providers.

3. Satisfaction with medical information

Medical information could be classified into information about patient's disease and treatment. Most patients wanted to know what was wrong with them and what treatment that cured them.

4. Satisfaction with quality of care

Consumer expected to receive good service. Quality of service could be defined in accuracy and quick.

5. Satisfacton with expenditure

Expenditure of medical care was the cost of physical examination, Lab test, medical appliance and medicine.

The concept of satisfaction [11]

Satisfaction is a state felt by a person who has experienced a performance (or outcome) that has fulfilled his or her expectation.

Satisfaction is thus a function of relative levels of expectation and perceived performance. If the performance exceeds expectations, the person is highly satisfied.

If the performance matches expectations, the person is satisfied. If the performance falls short of expectations, the person is dissatisfied.

To understand satisfaction, we must understand how people form their expectations. Expectations are formed on the basis of past experience with they same or similar situations, statements made by friends and other associates, and statements made by the supplying organization. The supplying organization influence satisfaction not only through its performance, but also through the expectation; and it creates. If it over claims, it is likely to create subsequent dissatisfaction; and if it under claims, it might attract fewer consumers but create high satisfaction. The safest course is to plan to deliver a certain level of performance and communicate this level to consumers.

Measuring satisfaction [12-14]

Importance-performance analysis is a useful marketing research technique that can be easily and effectively applied in the health care sector to suggest successful marketing strategies.[12] Hemmasi, Strong, and Taylor (1994) [13] propose that "performance-importance analysis" be used to manage service quality. This would involve first measuring consumers' service quality performance perceptions using a scale that taps whatever pertinent dimensions have been identified for the given service context and measuring consumers' perceptions of the importance of each attribute. Then, each service attribute would be plotted on a matrix in terms of its performance score and its importance score to highlight where improvement efforts should be focused. Figure 1 is an example of such a map. The divisions between the four quadrants are determined using the overall mean importance rating and the overall mean performance score of the data obtained in the survey.

The basic value of this plot is that it could be used to help a firm identify aspects of its service that consumers feel are important but need improvement (that is, the quadrant labeled "Concentrate Here"). Similarly, attributes of the service the firm delivers particularly well, but consumers feel are less important, might be identified so that fewer resources could be devoted to performing these activities (that is, the quadrant labeled "Possible Overkill"). The plot might also be used to compare one firm's performance to other firms. With data from two firms plotted on the same map,

one could easily determine how the two firms compare on any of the specific service attributes.

Firm performance

Excellent	Possible overkill	Keep up the good work	
Adequate	Low priority	Concentrate here	
	Slightly importance	**Attribute importance**	Extremely importance

Source: Hemmasi, Strong, and Taylor (1994)

Figure 1: Matrix for a Performance- Importance Analysis.

The Importance /Performance Ratings, another satisfaction measuring device is to ask consumers to rate several services provided by the organization in terms of the importance of each service and how well the organization performs each service.

John A Martilla and John C James studied on Importance Performance Rating for Rehabilitation Center Service.[14] Figures 2 show how 14 services of rehabilitation center were rated by patients. The important of service was rated on a 4-point scale of “extremely important,” “important,” “slightly important,” and “not important”. The performance of service was rated on a 4-point scale of “excellent,” “good,” “fair,” and “poor”. The rating of all 14 services was also shown in figure 1. This part of figure is divided into four sections. Quadrant A shows important services that are not being of fered at the desired performance levels. The rehabilitation center should concentrate on improving these. Quadrant B shows important service the rehabilitation center in performing well: its job is to maintain the high performance. Quadrant C shows minor services that are being delivered in a med fashion, but that need little additional attention since they are not important. Quadrant D shows a minor service that is being performed in an excellent manner, possibly a case of overkill. Thus rating of service according to their perceived importance and performance provides the organization with guidelines as to where it should concentrate its efforts.

Service	description	Mean importance Rating	Mean performance Rating
1	General therapy	3.83	2.63
2	Speech therapy	3.63	2.73
3	Occupational therapy	3.60	3.15
4	‘’	3.56	3.00
5	‘’		
6	‘’		
7	‘’		
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.			
14	‘’	2.05	3.33

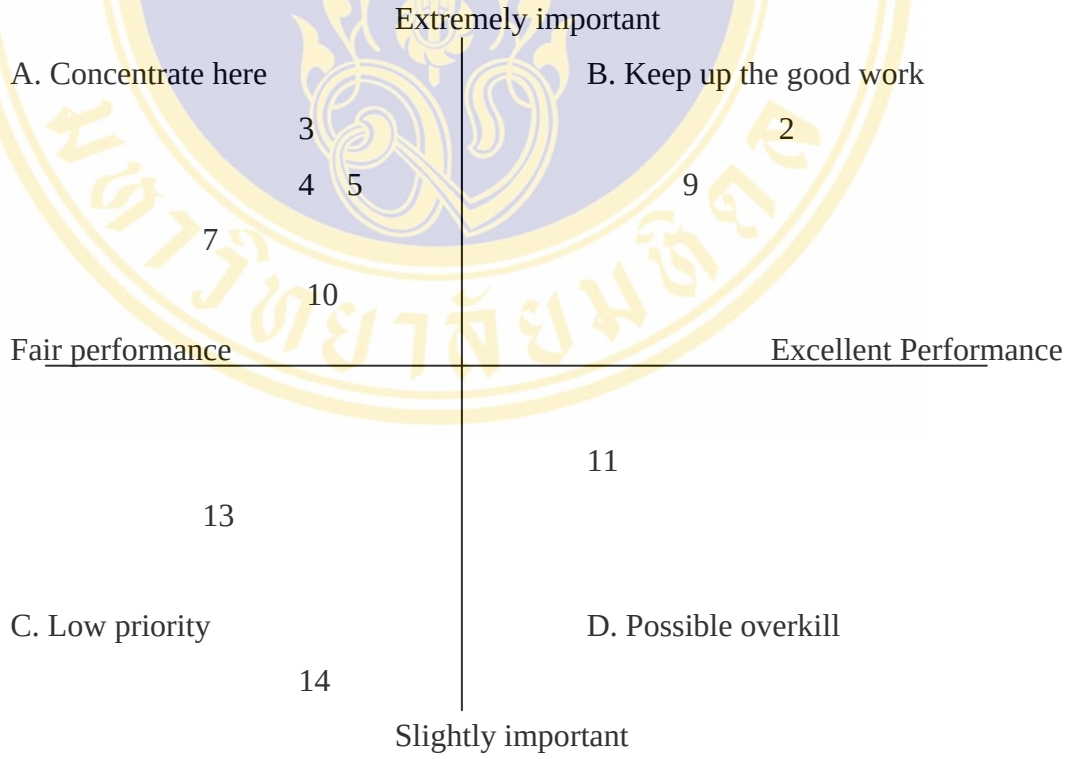


Figure 2: Importance and Performance Rating for Rehabilitation Center Service

Value proposition studied by using importance-performance analysis. [15 - 25]

Value proposition studied by using importance-performance analysis have been described in many literatures such as;

Vijitmakthong A. studied the value proposition of outpatient srvice by outpatient in Civil Servant Medical Benefit Scheme (CSMBS) perspective at King Chulalongkorn Memorial Hospital. The purpose of this study was to assess the CSMBS patient's value proposition On the outpatient service in term of importance and performance and the decision of health service utilization at King Chulalongkorn Memorial Hospital. The interviewing questionnaire was used for collecting data from the 358 civil servants, who received outpatient service during April and May, 2004. The questionnaire included important and performance assessment, general information and factors affecting the patient's decision in selecting hospital. From assessment of the CSMBS patient's value proposition of outpatient service by importance-performance rating technique, it was found that two important services were not at the desired performance level. The hospital should concentrate on improving these. They were "Having guarantee waiting time in each service center" and "Adequate car park". Most service are being performed well. They were the valuable proposition of the outpatient service. Two valuable proposition in service dimension of CSMBS patients was "medical service by physician" and "pharmacy service". The results showed that the model of the CSMBS patients profile of the hospital is an hourglass model. The best managing of this model is to increase patients who advocate from new patients as many as possible by providing existing patients on recommendations and getting referred for the next utilization. This study classified the CSMBS patients by patient's decision to select service hospital, if CSMBS changes its reimbursement to capitation, into three groups. The first group was 70.4 % of CSMBS patient that who select King Chulalongkorn Memorial Hospital to be a service hospital. The second group was 6.1% of CSMBS patients who select other hospital and the last group was 23.5 % of CSMBS patients who could not make decision. Factors affecting their decisions were "modern technology equipment", "confidence in doctor and officer ability" and "government hospital". [15]

Lee MA. measured the quality of nursing service perceived by consumers, and identified the gaps between ideal and actual nursing services in a study of the nursing

service quality and gap perceived by consumers. A questionnaire was developed and distributed to 300 people who had been hospitalized in one of six general hospitals with quality of nursing services in five provincial cities in Korea. For data analysis, the SPSS/WIN(ver 10.0) program was used. The 20 attributes included in the instrument of quality of nursing service were abstracted into 2 factors: tangibility and intangibility. In quality analysis, 15 of 20 attributes were minus scores, meaning that those nursing services were perceived as generally low. Gaps between importance and performance of the nursing service existed in 19 among 20 attributes. In conclusion nursing service quality (performance-expectation) needed to be improved, and gaps (importance-performance) should be reduced. [16]

Lee MA. studied the nursing service perceived by consumers and providers, and the tool that measures nursing service. This study was performed to measure the nursing service perceived value by consumer and providers which importance and performance analysis, and to investigate the relationship among nursing service, general satisfaction and hospital revisiting intent. In this study the questionnaire was distributed to 300 patients and 210 nurses at three general Korean hospitals. The result of this study showed that nursing service perceived value by providers is higher than that by consumers. There are distinctive differences in the expectation, and importance and performance values of the nursing service perceived. In examination of the relationship among nursing service, general satisfaction and hospital revisiting intent, nursing service has a deep relationship with general satisfaction, but doesn't have relationship with hospital revisiting intent. The tool that measures nursing service has a good reliability and construct validity. [17]

Kim JH and Lee IS. [18] studied the differences in quality perceptions, expectations, evaluation, and satisfaction for nursing service between patients and nurses at small-medium sized general Korean hospitals with 200 beds. The purpose of this study was performed to give direction to quality improvement strategies of nursing services by comparing the differences in quality perceptions and satisfaction for nursing services between patients and nurses. The subjects, who were 150 inpatients and 162 nurses of 4 general hospitals in a community, answered a self-report questionnaire with a service quality (SERVQUAL) scale. [19] The result of this

study showed that there were differences between patients' and nurses' expectations and perceptions of nursing service and satisfaction. In the service expectation, the highest factor was "the responsiveness", and in the perceived performance, the highest was the "assurance'. In addition, overall patients" perceptions on nursing services showed higher than nurses'. There were positive correlations among the expectations and perceptions on nursing service, and satisfaction. The correlation between perception and satisfaction was higher than the correlation between expectations and satisfaction. In conclusion to improve the nursing service quality at small-medium hospitals, strengthening the "assurance" factor and improving the nursing service support system is needed. Also, this study on nurses' perceived nursing service at small-medium sized hospitals should be duplicated.

Tregunno D, Ross Baker G, Barnsley J and Murray M. studied the competing values of emergency department performance: balancing multiple stakeholder perspectives. The objective of this study were describing the performance interests of multiple stakeholders associated with the management and delivery of emergency department (ED) care, and to develop a performance framework and set of indicators that reflect these interests. Stakeholders (1,100 physicians, nurses, managers, home care providers, and prehospital care personnel) with responsibility for ED patients in hospitals in the Canadian province of Ontario were studied. Descriptive and inferential statistics were used to explore the interests of each stakeholder group and to compare interests across the five groups. The result of this study showed that sixty-two percent of stakeholders responded to a mail survey regarding the importance of 104 potential ED performance indicators. Emergency department stakeholders were primarily interested in indicators that focus on their role and capacity to provide care. Key differences existed between hospital and nonhospital stakeholders. Physicians mean ratings of the importance on ED performance measures were lower than mean ratings in the other stakeholder groups. In conclusion emergency department performance interests were not homogeneous across stakeholder groups, and evaluating performance from the perspective of any one stakeholder group would result in unbalanced assessments. [20]

Trogen N and Yavas U. seeked to determine the relative importance of factors non-profit hospital administrators relyed on in their decisions to join a non-profit multi hospital organization (MO) and their assessments of an MO in satisfying these motives. A related objective of the study was to determine whether or not the administrators of different types of hospitals (i.e. general vs specialty, member of a national vs non-national MO and church-affiliated vs non-church affiliated) differed in their judgments. The analytical framework of the importance-performance technique was used in analyzing the data gathered from the top administrators of a nation-wide sample of hospitals in the USA. [21]

Yavas U and Shemwell DJ. seeked to investigate the reasons why, in an increasingly competitive health care milieu, patients chose certain hospitals over others. By using the modified importance-performance analysis technique and presents the method and findings of an empirical study which applied importance-performance analysis in a health care setting. The strategies derived from the study findings were discussed. [22]

Werrett JA, Helm RH and Carnwell R. aimed to identify nurses' perceived deficits in the knowledge and skills required to provide effective seamless care, so that appropriate training could be provided. A clear understanding of nursing staff roles, skills and resources was paramount to work at the primary/secondary care interface. Nursing staff require an educational model that would provide a clear understanding of how their roles coalesce with other healthcare professionals. There was little evidence that examines the educational needs of nurses related to changing care boundaries. This study used methodological triangulation to explore these issues within current practice. Focus groups were used to generate items for inclusion in the questionnaire. Questionnaire design was based on an importance-performance analysis. This procedure had been effective in developing health care marketing strategies. A stratified random sample of nursing staff (n=722) from the participating trusts received the questionnaire, eliciting a response rate of 172 (23.8%). The result of this study showed that factor analysis provided a list of seven training categories in order of training need priority: information technology, awareness of roles, communications within seamless care, working across boundaries, professional issues, practice-related issues, delivery of patient/client care issues. There were no differences in nurses'

training needs across NHS trusts. However, differences were highlighted for staff located in primary or secondary settings or working across the interface. [23]

Whynes DK and Reed G. studied importance-performance analysis as a guide for hospitals in improving their provision of services. As a result of the 1990 National Health Services Act, hospitals now competed with one another to win service contracts. A high level of service quality represents an important ingredient of a successful competitive strategy, yet, in general, hospitals had little external information on which to base quality decisions. Specifically, in their efforts to win contracts from fund holding general practitioners, hospitals required information on that which these purchasers deem important with respect to quality, and on how these purchasers assessed the quality of their current service performance. The problem was complicated by the fact that hospital service quality, in itself, was multi-dimensional. In other areas of economic activity, the information problem had been resolved by importance-performance analysis and this paper reports the findings of such an analysis conducted for hospitals in the Trent region. The importance and performance service quality ratings of fund holders were obtained from a questionnaire survey and used in a particular variant of importance-performance analysis, which possesses certain advantages over more conventional approaches. In addition to providing empirical data on the determinants of service quality, as perceived by the purchasers of hospital services, this paper demonstrated how such information can be successfully employed in a quality enhancement strategy. [24]

Scammon DL and Weiss R. studied of customer satisfaction with clinical laboratory service was used as the basis for identifying potential improvements in service and more effectively targeting marketing activities to enhance customer satisfaction. Data on customer satisfaction were used to determine the aspects of service most critical to customers, how well the organization was doing in delivery of service, and how consistent service delivery was. Importance-performance analysis was used to highlight areas for future resource reallocation and strategic emphasis. Suggestions included the establishment of performance guidelines for customer contact personnel, the enhancement of timely delivery of reports via electronic transmission (computer and fax), and the development of standardized graphics for

request and report forms to facilitate identification of appropriate request forms and guide clients to key items of information on reports. [25]

Factors affecting decision of health service utilization from health center. [4]

The influences affect patient make buying decision process consists of four stages:

1. Need recognition: The first stage of buyer decision process, in which the consumer recognizes a problem or need to change or choose new hospital.

2. Information search: The stage of the buyer decision process in which the patient is aroused to search for more information; the patient may simply have heightened attention or may go into active information search. The patient can obtain information from any several sources. There include personal sources (family, friends, neighbors, acquaintance), commercial sources (Advertising, salespeople, dealer, packaging, displays), public sources (mass media, consumer-rating organizations), and experiential sources (handling, examining, using the product).

3. Alternative evaluation: The stage of the buyer decision process in which the patients use information to evaluate alternative such as: quality of health service, proficiency of doctor, waiting time, distance, price, benefit etc.

4. Purchase decision: The patient's decision about which hospital to use services

Model of buyer behavior by Phillip Kotler[4] : The marketer wants to understand how the stimulus are changed into responses inside the consumers' black box, which has two parts. First, the buyer's characteristics influence how he or she perceives and reacts to the stimuli. Second, the buyer's decision process itself affects the buyer's behavior. We look first at buyer characteristics as they affect buying behavior and then discuss the buyer process decision.

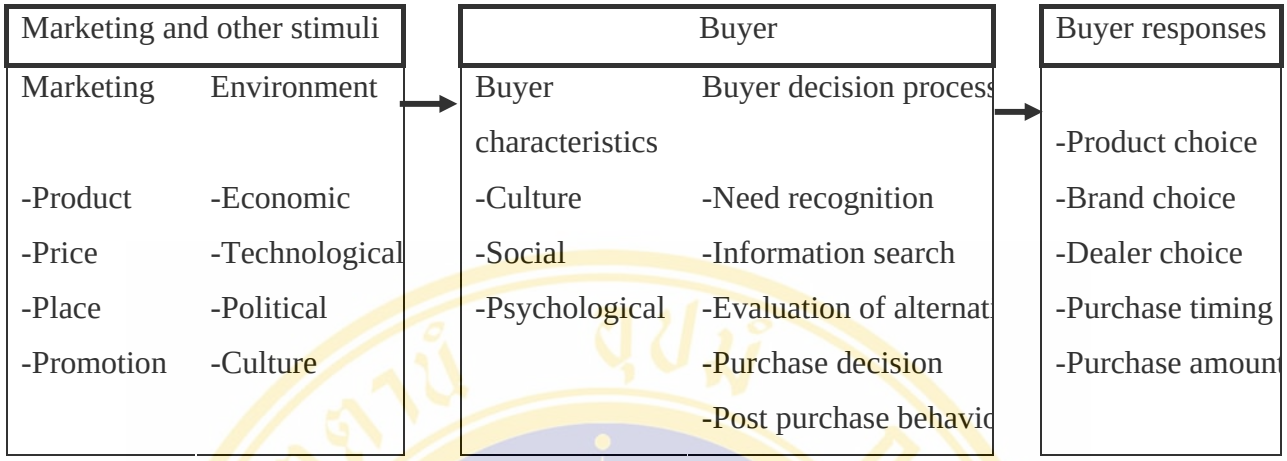


Figure.3 The stimulus-response model

Characteristics affecting consumer behavior.

1. Cultural factors exert a broad and deep influence on consumer behavior. The marketer needs to understand the role played by the buyer' culture, subculture, and social class.

2. Social factors a consumer's behavior also is influenced by social factors, such as the consumer's small group, family and social roles and status.

3. Personal factors a buyer's decisions also are influenced by personal characteristics such as the buyer's age and life cycle stage, occupation, economic situation, lifestyle, and personality and self-concept.

4. Psychological factors a person's buying choices are further influenced by four major psychological factors: motivation; perception; learning; and beliefs and attitudes.

Part IV The customer service profile [26 - 28]

Major business trends such as deregulation, globalization, technological convergence, and the rapid evolution of the internet have transformed the roles that companies play in their dealings with other companies. Business practitioners and scholars talk about alliances, networks, and collaboration among companies, but managers and researchers have largely ignored the agent that is most dramatically transforming the industrial systems as we know it: the consumer. [26]

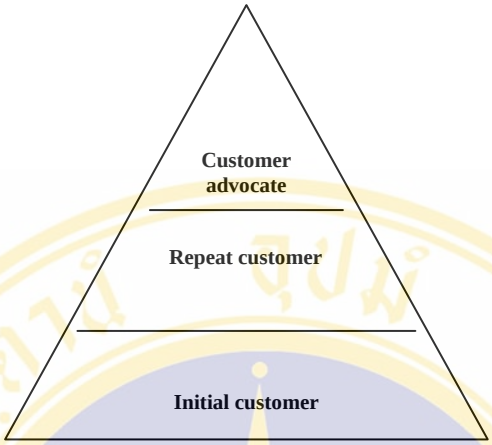
In market in which technology-enabled consumers can now engage themselves in an active dialogue with manufacturers-a dialogue that customers can control companies have to recognize that the customer is becoming a partner in creating value. Unfortunately, customers fine complicated menus very annoying and judge a company's products not by their features but by the degree to which a product or a service gives them the experiences they want.

The benefit of customer service profile [27]

1. It will show you what kind of customer relationships you're trying to create.
2. It will help you identify strength in your current CRM practices.
3. It helpful in communicating to others throughout the organization. Knowing the current profile and the desired profile will naturally help you focus your energy and attention.

There are three service levels to the customer service profile model, initial transactions, repeat customers, customer advocates. The shape of your customer service profile reflects the relationship among these three levels. It is driven by the nature of the product or service you offer, the expectations of your customer base, and the forces of market competition. There are three basic customer service profiles: the Pyramid, the Hourglass, and the Hexagon. It's important to know what kind of customer relationship you have been creating for each type.

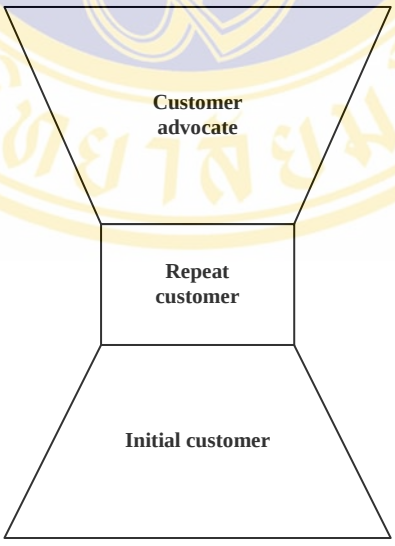
The Pyramid profile



Managing initial transaction is:

1. Make systems simple.
2. Feng shui the experience. A Chinese philosophy about the relationship between humans and the environment.
3. Capture the opportunity.

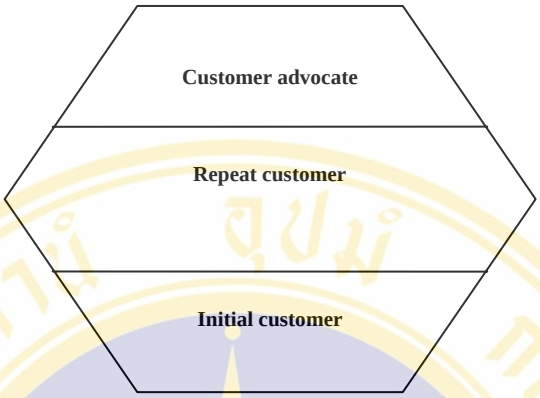
The hourglass profile



Managing of customer advocacy is:

1. Know what's worth talking about.
2. Changes worth talking about.
3. Prompt advocate to share their recommendation.

The hexagon profile



Managing for repeat customer is

1. Track the relationship.
2. Allow for variation.
3. Look for opportunity to expand the relationship.

CHAPTER III
METHODOLOGY

1. Study design

This is a descriptive cross-sectional survey research.

2. Study location

Outpatient departments, Chonburi hospital

3. Study population

1. Groups of outpatient (CSMBS, SSS and self payment).
2. Groups of Chonburi hospital medical staff (doctors, pharmacists and nurses).

The data was collected from both male and female, prompted to answer the questionnaire, not seriously sick and good conscious by convenient sampling technique. Sample size was calculated by this equation (two-tail):

$$n = (Z_\alpha + Z_\beta)^2 (\sigma_1^2 + \sigma_2^2) / (\bar{u}_1 - \bar{u}_2)^2$$

n = sample size

α = 0.05

β = 0.20

σ_1 = Variance of outpatient

σ_2 = Variance of Chonburi hospital medical staff

$\bar{u}_1$ = Mean of outpatient

$\bar{u}_2$ = Mean of Chonburi hospital medical staff

The result from pretest (question 6.2 importance) showed that $\sigma_1 = 0.259$, $\sigma_2 = 0.489$, $\bar{u}_1 = 3.50$ and $\bar{u}_2 = 3.60$. The estimated sample size calculated by this equation in each group was 240 persons.

$$n = \frac{(1.96 + 0.84)^2 \times (0.259^2 + 0.489^2)}{(3.50 - 3.60)^2}$$

$$= 239.82$$

$$\approx 240 \text{ persons}$$

The patient distributed among three health insurance schemes according to the number of outpatients in each health insurance schemes. (table 5)

Table 5: The sample size classified by health insurance schemes.

Health insurance scheme	**No. of outpatient**	
	Percentage	**Sample size**
Self payment	41.25	99
Civil Servant Medical Benefit Scheme	31.81	91
Social Security Scheme	20.93	50
Total	**100.00**	**240**

The sample size of Chonburi hospital medical staff was classified by ratio of healthcare professions into three groups. See table 6.

Table 6: Distribution of sample among Chonburi hospital medical staff classified by healthcare professions.

Healthcare profession	**No. of Chonburi hospital medical staff**	
	Percentage	**Number**
Doctor	19.68	47
Pharmacist	4.44	11
Nurse	75.87	182
Total	**100.00**	**240**

4. Research tools

The questionnaire was used as a research tool. It divided into three parts:

Part 1: the value proposition of health service.

Part 2: factors influencing patients' decision in selecting healthcare providers.

Part 3: general information.

5. Study procedure

1. Developing the questionnaire

The concepts of health service utilization of Aday and Anderson and the concept of satisfaction of Kotler was applied to construct the questionnaire. [10-11] The questions in part 1 was grouped into 7 parts:

1.1 Environment in the hospital

1.2 Service system

1.3 Provider

1.4 Therapeutic procedure

1.5 Pharmacy service

1.6 Nurses service

1.7 Others

The pattern of Importance/Performance Rating technique was used to design the questionnaire form. And structures of questions from the questionnaire of the value proposition of outpatient service by outpatient in Civil Servant Medical Benefit Scheme perspective at King Chulalongkorn Memorial Hospital was applied. [15]

2. Testing the questionnaire

The pretest was done at Chonburi hospital by 40 patients. Content validity was verified by three experts. After the pretest, the questionnaire was corrected and tested for reliability by measure of internal consistency with alpha coefficient (Cronbach alpha) method.

3. Collecting data

The outpatients at Chonburi hospital outpatient department and Chonburi hospital medical staff were answered the interviewed questionnaire. The data was collected during 8.00 am. – 4.00 pm. on the working day.

4. Data analysis

The Statistic Package for Social Sciences (SPSS) was used to analyze the data.

The data will be presented as follows:

1. Descriptive statistic: percentage, mean

   1.1 General information of sample was presented by descriptive statistics: percentage and mean.

   1.2 Decision of health service selection was presented by descriptive statistics: percentage and mean.

   1.3 The factors that influencing patients' decision to choose healthcare providers was presented by descriptive statistics: percentage and mean.

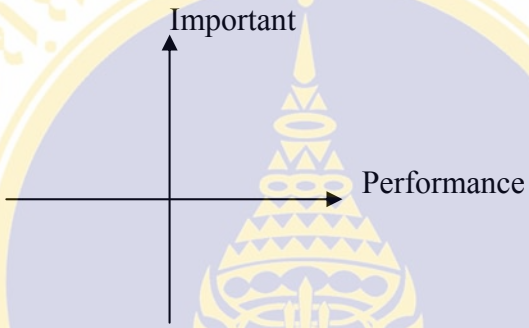
2. Analytical statistic: Komolgorov - Smirnov test, ANOVA, Unpaired t-test

   2.1 Test for normal distribution by Kolmogorov - Smirnov test.

   2.2 ANOVA test was used for the comparison of the value proposition among outpatient medical service perspectives (if data not normal distribution Kruskal - Wallis test would be used).

2.3 Unpaired t-test for the comparison of the value proposition of outpatient medical service perspectives between clients and Chonburi hospital healthcare providers (if data not normal distribution Mann - Whitney U test would be used).

3. Value proposition was presented by mean of outpatient service importance scores and performance scores. Then, the data were ploted into important/performance quadrant charts as follows:



4. The comparison of the value proposition of outpatient medical service perspectives between clients and Chonburi hospital healthcare providers was presented by mean of outpatient service importance and performance score, which ploted into radar chart.

5. Other data were presented by percentage and mean

CHAPTER IV

RESULT

Data were collected from 245 outpatients and 180 Chonburi hospital medical staffs who received service from Chonburi hospital during March to April 2005.

The results are divided into 4 parts as follows;

Part I. General information of respondents.
Part II Value proposition of outpatient service.
Part III Comparison of value proposition of outpatients.
Part IV Selection of health service utilization.

Part I General information of respondents

1.1 Socio-demographic and general information

The data in table 7 shows general characteristics of the respondents which consists of gender, age, education, health insurance schemes, income, travel time, service time, expect service time, satisfaction of hospital service, number of OPD visits per year, and past hospital experience of the family. The samples classify into two groups which are patients and providers.

Most of the patients (61.63%) and providers (89.83%) were female. Age was categorized into 5 groups: less than 35, 35-44, 45-54, and older than 54 years old. Most of them (50.61% patients and 41.28% providers) were less than 35 years old. The respondents' average age is 36.70 years old. The oldest patient was 68 years old, while the youngest was 15 years old. The majority of patients' education (44.08%) was high school-undergraduate degree but the majority of providers' education (75.71%) was Bachelor degree. On the point of income, 49.80% of patients and 8.00% of providers had income less than ten thousand baht per month. Most of them (75.92% patients and 84.88% providers) spent less than 1 hour in traveling to Chonburi hospital. The majority of service times that they spent were 3-4 hours (26.53% patients and 27.54% providers). Knowing that there would be 3-4 hours waiting time, they still expected service time to be within 2 hours (48.98% patients and 57.40% providers). While most of patients (80.41%) and providers (74.85%) satisfied with hospital services. The average frequency of visit times by outpatients was 6.80 times per year and providers' OPD visit times were 7.40 times per year. Most of their families (82.86% patients and 93.02% providers) had experience at Chonburi hospital.

Table 7: Socio-demographic and general information of respondents.

Characteristic		Patients		Providers	
		Number	Percent	Number	Percent
Gender					
	Female	151	61.63	159	89.83
	Male	94	38.37	18	10.17
	Total	245	100	177	100
Age group (years)	< 35	124	50.61	71	41.28
	35-44	52	21.22	60	34.88
	45-54	47	19.18	36	20.93
	≥ 55	22	8.98	5	2.91
	Total	245	100	172	100
Education					
	Lower than high school degree	28	11.43	0	0
	High school-undergraduate degree	108	44.08	4	2.26
	Bachelor's degree	99	40.41	134	75.71
	Higher than Bachelor's degree	10	4.08	39	22.03
	Total	245	100	177	100
Health insurance schemes	Civil Servant Medical Benefit Scheme	91	37.14	171	96.61
	Social Security Scheme	52	21.22	6	3.39
	Self payment	102	41.63	0	0
	Total	245	100	177	100
Income (bath)	≤ 5000	33	13.47	0	0
	5001-10000	89	36.33	14	8
	10001-15000	44	17.96	48	27.43
	15001-20000	24	9.8	35	20
	> 20000	55	22.45	78	44.57
	Total	245	100	175	100
Travel time (hour)	< 1 hr	186	75.92	146	84.88
	1-< 2	52	21.22	22	12.79
	≥ 2	7	2.86	4	2.33
	Total	245	100	172	100
Service time (hour)	< 1 hr	23	9.39	15	8.98
	1-< 2	38	15.51	25	14.97
	2-< 3	61	24.9	37	22.16
	3-< 4	65	26.53	46	27.54
	≥ 4	58	23.67	44	26.35
	Total	245	100	167	100

Table 7: (Continued) Socio-demographic and general information of respondents.

Characteristic		Patients		Providers	
		Number	Percent	Number	Percent
Expect service time	1 hr	56	22.86	36	21.30
	2 hr	120	48.98	97	57.4
	3 hr	52	21.22	28	16.57
	4 hr	17	6.94	8	4.73
	Total	245	100	169	100
Satisfaction with hospital service	Very satisfied	26	10.61	5	2.92
	Satisfied	197	80.41	128	74.85
	Unsatisfied	22	8.98	38	22.22
	Total	245	100	171	100
Number of OPD visits per year	1	22	8.98	12	7.5
	2	32	13.06	25	15.63
	3	39	15.92	16	10
	4	37	15.1	8	5
	5	14	5.71	17	10.63
	6	37	15.1	14	8.75
	≥ 7	64	26.12	68	42.5
	Total	245	100	160	100
Past experienced by the family	Yes	203	82.86	160	93.02
	No	42	17.14	12	6.98
	Total	245	100	172	100

Part II Value proposition

2.1 Reliability

Cronbach's alpha coefficients that assessed internal consistency of the entire scale were measured. Table 8 shows the internal consistency reliability coefficients of seven service dimensions. Facilities and environment had 9 items importance score and 10 items performance score. Service system had 6 items importance score and 7 items performance score. Providers had 5 items importance score and 6 items performance score. Medical service by physician had 5 items importance score and 6 items performance score. Pharmacy services had 7 items importance score and 8 items performance score. Nurse services had 4 items importance score and 5 items performance score. And others had 5 items importance score and 5 items performance score. Among 425 respondents, Nurse services performance score had the highest internal consistency (α = 0.92) but Facilities and environment importance score had the lowest internal consistency (α = 0.77). Over all internal consistency reliability coefficients of importance and performance score were 0.95 and 0.96 respectively. In general, the acceptable lower limit for Cronbach's alpha was 0.70 but De vellis suggested a range of minimally acceptable bound for alpha between 0.65 and 0.70.[28] As the results, all internal consistency reliability coefficients were in the acceptable value.

Table 8: Internal consistency reliability (α Cronbach's coefficient) of each service dimension.

Dimensions	α Cronbach's coefficient	
	Importance	Performance
Facilities and environment	0.77	0.83
Service system	0.78	0.85
Providers	0.82	0.87
Medical service by physician	0.75	0.86
Pharmacy services	0.83	0.83
Nurse services	0.83	0.92
Others	0.76	0.78
Over all	0.95	0.96

2.2 Overall means of patient's perceived importance and performance

Table 9 indicates that the most important thing in service dimension are "Providers" and "Pharmacy service" (important score = 3.76). Moreover, "Nurse services", "Medical service by physician", "Service system", "Others" and "Facilities and environment" receive the rating scores of 3.75, 3.71, 3.70, 3.65 and 3.48 respectively.

The hospital's performances in providing these services were also rated. The highest score of 2.92 went to "Medical service by physician" while "Pharmacy services", "Nurse services", "Others", "Providers", "Service system" and "Facilities and environment" received the score of 2.82, 2.81, 2.80, 2.66, 2.64 and 2.52 respectively.

Table 9: Overall mean of patients' importance and performance (N = 422)

Dimensions	Importance score	Performance score
Providers	3.76 $\pm$ 0.36	2.66 $\pm$ 0.57
Pharmacy services	3.76 $\pm$ 0.35	2.82 $\pm$ 0.50
Nurse services	3.75 $\pm$ 0.40	2.81 $\pm$ 0.58
Medical service by physician	3.71 $\pm$ 0.37	2.92 $\pm$ 0.56
Service system	3.70 $\pm$ 0.39	2.64 $\pm$ 0.53
Others	3.65 $\pm$ 0.40	2.80 $\pm$ 0.48
Facilities and environment	3.48 $\pm$ 0.39	2.52 $\pm$ 0.45

2.3 Details of the patients' importance and hospital's performance in each service dimension.

Table 10 shows the mean of patients' importance and performance score of each service.

2.3.1 Facilities and environment

The most important point was "Clean and good hygiene hospital area" (Importance score = 3.79). Moreover, "Clean and good hygiene toilet", "Clear signpost to service center", "Enough and not crowded seats in doctor's waiting area", "Adequate parking lot", "Clean and good hygiene food center", "Enough and not crowded seats in drug's receiving area", "Adequate green area" and "Children

play ground" had the rating score of 3.78, 3.63, 3.61, 3.61, 3.54, 3.52, 3.11 and 2.73 respectively.

The highest performance score of hospital's service was "Clean and good hygiene hospital area" (Performance score = 2.79). While "Enough and not crowded seats in drug's receiving area", "Clear signpost to service center", "Enough and not crowded seats in doctor's waiting area", "Clean and good hygiene food center", "Clean and good hygiene toilet", "Adequate green area", "Adequate parking lot" and "Children play ground" received the score of 2.77, 2.63, 2.59, 2.59, 2.47, 2.31, 2.24 and 2.17 respectively. And overall of environment performance score was 2.70.

2.3.2 Service system

The most important point was "Queue system" (Importance score = 3.76). In addition, "Uncomplicated service procedure", "Appropriate service time", "Convenience and various services in one area", "The priorities of receiving service" and "Guarantee waiting time in each service center" had the rating score of 3.72, 3.71, 3.69, 3.69and 3.61 respectively.

The highest performance score of hospital's service was "Queue system" (Performance score = 2.89). While "Appropriate service time", "The priorities of receiving service", "Uncomplicated service procedure", "Convenience and various services in one area" and "Guarantee waiting time in each service center" received the score 2.85, 2.67, 2.54, 2.53 and 2.33 respectively. And overall of services system performance score was 2.70.

2.3.3 Providers

The most important point was "Gentle and friendly officers" (Importance score = 3.81). Moreover, "Enthusiastic officers in service", "On time officers", "Adequate officer in each center" and "Adequate staff to give information at busy spot" had the rating score 3.80, 3.79, 3.73 and 3.67 respectively.

The highest performance score of hospital's service was "Gentle and friendly officers" (Performance score = 2.72). While "Enthusiastic officers in service", "On time officers", "Adequate officer in each center" and "Adequate staff to give information at busy spot" received the score 2.70, 2.69, 2.61 and 2.54 respectively. And overall of providers' service performance score was 2.72.

2.3.4 Medical service by physician

The most important service was “Explanation of side effect, limitation, precaution of the treatment and participation in decision making for treatment” (Importance score = 3.81). Moreover, “Asking about allergic and treatment history”, “Appropriate time used by the physician in explanation and treatment”, “Making an appointment for follow up” and “Doctors’ prescribe drug by computer” had the rating score 3.80, 3.73, 3.74 and 3.46 respectively.

The highest performance score of hospital’s service was “Making an appointment for follow up” (Performance score = 3.14). While “Asking about allergic and treatment history”, “Doctors’ prescribe drug by computer”, “Explanation of side effect, limitation, precaution of the treatment and participation in decision making for treatment” and “Appropriate time used by the physician in examination and treatment” received the score of 2.99, 2.83, 2.79 and 2.76 respectively. And overall of physician service performance score was 3.01.

2.3.5 Pharmacy services

The most important service was “Receiving the good quality medicine and relief of symptoms after use” (Importance score = 3.88). More over, “Receiving correct kind and amount of medicine”, “Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence”, “Receiving explanation about use of each medicine by pharmacist”, “Less than 30 minutes drugs’ waiting time”, “Uncomplicated procedure in receiving the medicine” and “Drug information service by telephone” had the rating score 3.87, 3.81, 3.78, 3.74, 3.71 and 3.56 respectively.

The highest performance score of hospital’s service was “Receiving the good quality medicine and relief of symptoms after use” (Performance score = 3.07). While “Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence”, “Receiving correct kind and amount of medicine”, “Receiving explanation about use of each medicine by pharmacist”, “Drug information service by telephone”, “Uncomplicated procedure in receiving the medicine”, and “Less than 30 minutes drugs’ waiting time” received the score of 3.17, 3.00, 2.83, 2.69, 2.63 and 2.35 respectively. And overall of pharmacy service performance score was 2.86.

2.3.6 Nurse services

The most important service “Caring and enthusiastically service” (Importance score = 3.79). More over, “Gentle and friendly nurse”, “Nurses advise before seeing doctor” and “Receiving the equity in nurse service” had the rating score 3.77, 3.71 and 3.71 respectively.

The highest performance score of hospital’s service was “Gentle and friendly nurse” (Performance score = 2.86). While “Caring and enthusiastically service”, “Receiving the equity in nurse service” and “Nurses advise before seeing doctor” received the score of 2.81, 2.79 and 2.74 respectively. And overall of nurses’ service performance score was 2.87.

2.3.7 Others

The most important service was “Receiving the examination with modern technology equipment” (Importance score = 3.79). Moreover, “Receiving the certificate of hospital accreditation from the Quality Improvement and Hospital Accreditation Institute”, “Receiving the equity, convenience and fast services in every health insurance schemes”, “Information about service and hospital news” and “Having board or pamphlet to explain service system in each area” had the rating score 3.73, 3.73, 3.53 and 3.50 respectively.

The highest performance score of hospital’s service was “Receiving the examination with modern technology equipment” (Performance score = 3.01). While “Receiving the certificate of hospital accreditation from the Quality Improvement and Hospital Accreditation Institute”, “Receiving the equity, convenience and fast services in every health insurance schemes”, “Having board or pamphlet to explain service system in each area” and “Information about service and hospital news” received the score 2.81, 2.80, 2.71 and 2.68 respectively.

Table 10: Means of patients' importance and performance with each service dimension.

Services	Importance score	Performance score
1.Facilities and environment		
1.4 Clean and good hygiene hospital area.	3.79 ± 0.46	2.79 ± 0.61
1.6 Clean and good hygiene toilet.	3.78 ± 0.47	2.47 ± 0.73
1.1 Clear signpost to service center.	3.63 ± 0.56	2.63 ± 0.67
1.5 Adequate parking lot.	3.61 ± 0.67	2.24 ± 0.86
1.2 Enough and not crowded seats in doctor's waiting area.	3.61 ± 0.55	2.59 ± 0.71
1.8 Clean and good hygiene food center.	3.54 ± 0.67	2.59 ± 0.68
1.3 Enough and not crowded seats in drug's receiving area.	3.52 ± 0.60	2.77 ± 0.66
1.7 Adequate green area.	3.11 ± 0.76	2.31 ± 0.75
1.9 Children play ground.	2.73 ± 1.00	2.17 ± 0.81
1.10 Overall of environment performance score.	-	2.70 ± 0.57
2. Services system		
2.4 Queue system.	3.76 ± 0.51	2.89 ± 0.71
2.2 Uncomplicated service procedure.	3.72 ± 0.54	2.54 ± 0.78
2.1 Appropriate service time.	3.71 ± 0.52	2.85 ± 0.66
2.3 Convenience and various services in one area.	3.69 ± 0.59	2.53 ± 0.78
2.5 The priorities of receiving service.	3.69 ± 0.55	2.67 ± 0.79
2.6 Guarantee waiting time in each service center.	3.61 ± 0.66	2.33 ± 0.79
2.7 Overall of services system performance score.	-	2.70 ± 0.63
3. Providers		
3.2 Gentle and friendly officers.	3.81 ± 0.43	2.72 ± 0.78
3.3 Enthusiastic officers in service.	3.80 ± 0.45	2.70 ± 0.72
3.4 On time officers.	3.79 ± 0.46	2.69 ± 0.72
3.1 Adequate officer in each center.	3.73 ± 0.48	2.61 ± 0.73
3.5 Adequate staff to give information at busy spot.	3.67 ± 0.54	2.54 ± 0.78
3.6 Overall of providers' service performance score.	-	2.72 ± 0.63

Table 10: (Continued) Means of patients' importance and performance with each service dimension.

Services	Importance score	Performance score
4. Medical service by physician		
4.2 Explanation of side effect, limitation, precaution of the treatment and participation in decision making for treatment.	3.81 ± 0.47	2.79 ± 0.78
4.3 Asking about allergic and treatment history.	3.80 ± 0.43	2.99 ± 0.73
4.4 Making an appointment for follow up.	3.74 ± 0.46	3.14 ± 0.64
4.1 Appropriate time used by the physician in examination and treatment.	3.73 ± 0.49	2.76 ± 0.77
4.5 Doctors' prescribe drug by computer.	3.46 ± 0.71	2.83 ± 0.77
4.6 Overall of physician service performance score.	-	3.01 ± 0.63
5. Pharmacy services		
5.5 Receiving the good quality medicine and relief of symptoms after use.	3.88 ± 0.36	3.07 ± 0.60
5.2 Receiving correct kind and amount of medicine.	3.87 ± 0.39	3.00 ± 0.70
5.3 Receiving explanation about use of each medicine by pharmacist.	3.78 ± 0.50	2.83 ± 0.75
5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence.	3.81 ± 0.42	3.17 ± 0.60
5.4 Less than 30 minutes drugs' waiting time.	3.74 ± 0.58	2.35 ± 0.86
5.1 Uncomplicated procedure in receiving medicine.	3.71 ± 0.55	2.63 ± 0.79
5.7 Drug information service by telephone.	3.56 ± 0.63	2.69 ± 0.79
5.8 Overall of pharmacy service performance score.	-	2.86 ± 0.61
6. Nurse		
6.2 Caring and enthusiastically service.	3.79 ± 0.45	2.81 ± 0.64
6.1 Gentle and friendly nurse.	3.77 ± 0.46	2.86 ± 0.66
6.3 Nurse advice before seeing doctor.	3.71 ± 0.52	2.74 ± 0.68
6.4 Receiving the equity in nurse service.	3.71 ± 0.50	2.79 ± 0.71
6.5 Overall of nurses' service performance score.	-	2.87 ± 0.60

Table 10: (Continued) Means of patients' importance and performance with each service dimension.

Services	Importance score	Performance score
7. Others		
7.2 Receiving the examination with modern technology equipment.	3.79 ± 0.45	3.01 ± 0.56
7.5 Receiving the certificate of hospital accreditation from the Quality Improvement and Hospital Accreditation Institute.	3.73 ± 0.50	2.81 ± 0.71
7.3 Receiving the equity, convenience and fast services in every health insurance schemes.	3.73 ± 0.47	2.80 ± 0.67
7.4 Information about service and hospital news.	3.53 ± 0.64	2.68 ± 0.68
7.1 Having board or pamphlet to explain service system in each area.	3.50 ± 0.65	2.71 ± 0.66

2.4 Value proposition presented by importance performance rating.

Value proposition is the combination of patient's judgment between importance and performance of significant service attributes which can be places in importance performance scale. It can be found by using the X-axis which was assigned to be the performance scale and Y-axis which was assigned to be the important scale. The performance of service was rated on a 4-point scale of "Very good (4)", "Slightly good (3)", "Slightly poor (2)" and "Poor (1)". The important of service was rated on a 4-point scale of "Very important (4)", "Important (3)", "Slightly important (2)" and "Not important (1)". Intersection point was the mid point between scale 4 and 1, that has slightly important and slightly poor performance service, (2.5, 2.5).

The ratings of all forty-one services were shown in figure 4. This part of figure is divided into four sections. Forty-one points of mean of importance and performance in each service were plotted into two quadrants, A and B.

Quadrant A (poor performance and very important) shows six important services that are not at the desired performance levels. The hospital should

concentrate on improving them. They were “1.5 Adequate parking lot.”, “1.6 Clean and good hygiene toilet.”, “1.7 Adequate green area.”, “1.9 Children play ground.”, “2.6 Guarantee waiting time in each service center.” and “5.4 Less than 30 minutes drugs’ waiting time.”.

Quadrant B (very good performance and very important) shows thirty-five services in performing well. It means that these services should be maintained their high performance. These were value propositions of outpatient service of Chonburi hospital in outpatient’s perspective. The list was ranked from the most important to the least. Such as:

5.5 Receiving the good quality medicine and relief of symptoms after use.

5.2 Receiving correct kind and amount of medicine.

5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence.

3.2 Gentle and friendly officers.

4.2 Explanation of side effect, limitation, precaution of the treatment and participation in decision making for treatment.

4.3 Asking about allergic and treatment history.

3.3 Enthusiastic officers in service.

3.4 On time officers.

6.2 Caring and enthusiastically service.

7.2 Receiving the examination with modern technology equipment.

1.4 Clean and good hygiene hospital area

5.3 Receiving explanation about use of each medicine by pharmacist.

6.1 Gentle and friendly nurse.

2.4 Queue system.

4.4 Making an appointment for follow up.

4.1 Appropriate time used by the physician in examination and treatment.

7.5 Receiving the certificate of hospital accreditation from the Quality Improvement and Hospital Accreditation Institute.

3.1 Adequate officer in each center.

7.3 Receiving the equity, convenience and fast services in every health insurance schemes.

2.2 Uncomplicated service procedure.

6.4 Receiving the equity in nurse service.

5.1 Uncomplicated procedure in receiving medicine.

6.3 Nurse advice before seeing doctor.

2.1 Appropriate service time.

2.5 The priorities of receiving service.

2.3 Convenience and various services in one area.

3.5 Adequate staff to give information at busy spot.

1.1 Clear signpost to service center.

1.2 Enough and not crowded seats in doctor's waiting area.

5.7 Drug information service by telephone.

1.8 Clean and good hygiene food center.

7.4 Information about service and hospital news.

1.3 Enough and not crowded seats in drug's receiving area.

7.1 Having board or pamphlet to explain service system in each area.

4.5 Doctors' prescribe drug by computer.

Quadrant C (poor performance and not important) shows the services that need a little additional attention and low priority to concentrate. In this study, there is no service located in this quadrant.

Quadrant D (very good performance and not importance) shows the services that are being performed in an excellent manner. In this study, there is also no service located in this quadrant.

Chonburi hospital is a government health care setting aims to understand patients' expectation and improve health care service satisfaction. Then thirty-six services in quadrant B were repotted by using most importance and high performance scale. Intersection point, the point that has important and slightly good performance service, is set to be at (3, 3) point.

The rating of all thirty-five services was also shown in figure 5. This part of figure is divided into four sections. Thirty-six points' mean of importance and performance were plotted into two quadrants, Ba and Bb.

Quadrant Ba shows thirty more important services that the hospital should concentrate on improving to achieve excellent performance level which are:

3.2 Gentle and friendly officers.

4.2 Explanation of side effect, limitation, precaution of the treatment and participation in decision making for treatment.

4.3 Asking about allergic and treatment history.

3.3 Enthusiastic officers in service.

3.4 On time officers.

6.2 Caring and enthusiastically service.

1.4 Clean and good hygiene hospital area

5.3 Receiving explanation in the use of each medicine by pharmacist.

6.1 Gentle and friendly nurse.

2.4 Queue system

4.1 Appropriate time used by the physician in examination and treatment.

7.5 Receiving the certificate of hospital accreditation from the Quality Improvement and Hospital Accreditation Institute.

3.1 Adequate officer in each center.

7.3 Receiving the equity, convenience and fast services in every health insurance schemes.

2.2 Uncomplicated service procedure.

6.4 Receiving the equity in nurse service.

5.1 Uncomplicated procedure in receiving medicine.

6.3 Nurse advice before seeing doctor.

2.1 Appropriate service time.

2.5 The priorities of receiving service.

2.3 Convenience and various services in one area.

3.5 Adequate staff to give information at busy spot.

1.1 Clear signpost to service center.

1.2 Enough and not crowded seats in doctor’s waiting area.

5.7 Drug information service by telephone.

1.8 Clean and good hygiene food center.

7.4 Information about service and hospital news.

1.3 Enough and not crowded seats in drug’s receiving area.

7.1 Having board or pamphlet to explain service system in each area.

4.5 Doctors' prescribe drug by computer.

Quadrant Bb shows five more important services which had been found excellent performance in patient's perception in this study. They were "4.4 Making an appointment for follow up.", "5.2 Receiving the correct kind and amount of medicine.", "5.5 Receiving the good quality medicine and relief of symptoms after use.", "5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence." and "7.2 Receiving the examination with modern technology equipment.".

Quadrant Bc shows important and slightly good performance services that had low priority to concentrate because it was not the most important. In this study, there is not any service located in this quadrant.

Quadrant Bd shows the excellent performance service but it was not the most important service in patient's perception. In this study, there is not any service located in this quadrant.

Figure 4 Importance and Performance rating for outpatient service of Chonburi hospital.

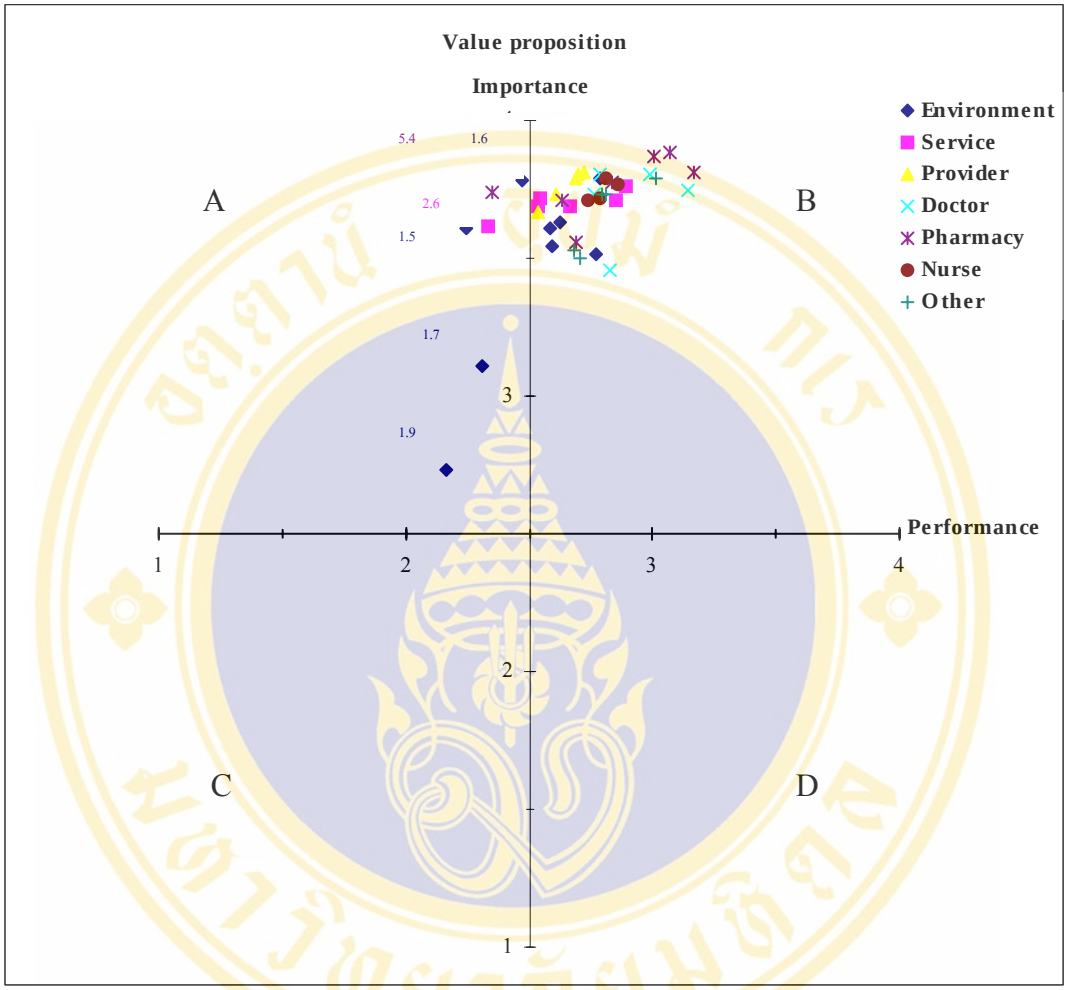
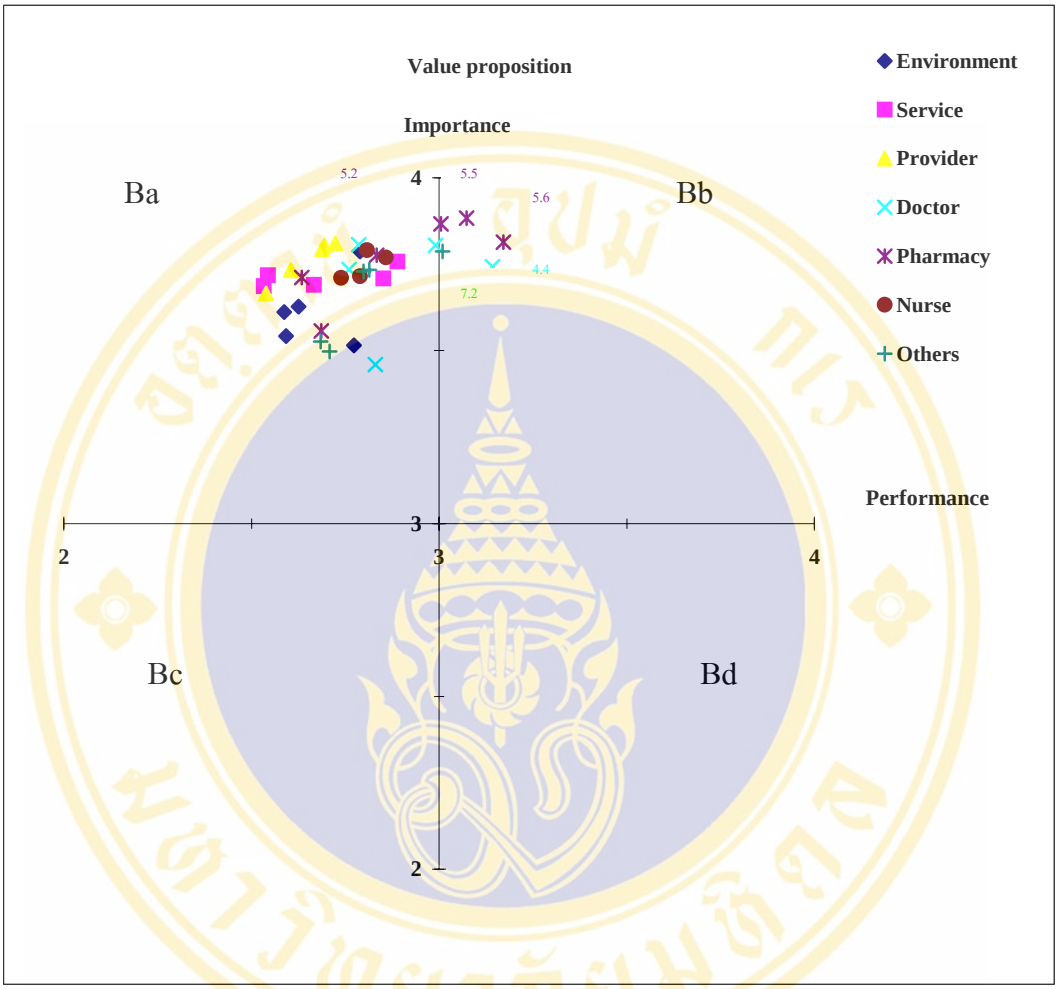


Figure 5 Most Importance and High Performance Rating for outpatient service of Chonburi hospital.



Part III Comparison of value proposition of outpatients.

3.1 Comparison means of value proposition classified by patients' insurance schemes.

3.1.1 Comparison means of the important score.

The results are illustrated in table 11 that there are four dimensions of hospital's service statistically. It has various significant differences ($p< 0.05$) that are classified by patients' insurance schemes such as "Facilities and environment", "Service system", "Medical service by physician" and "Pharmacy services".

CSMBS patients gave the highest importance score to "Pharmacy services" (Importance score = 3.77) which was statistically significant different ($p< 0.05$) from SSS patients and self payment patients who chose "Nurse services" (Importance score = 3.73) and "Providers" (Importance score = 3.78) respectively.

The first three highest importance scores given by CSMBS patients were "Pharmacy services", "Providers" and "Nurse services", while the first three highest importance scores given by SSS patients were "Nurse services", "Pharmacy services" and "Providers". And the first three highest importance scores given by self payment patients were "Providers", "Pharmacy services" and "Medical service by physician" respectively.

The highest importance scores in "Facilities and environment" was given by CSMBS patients (Importance score = 3.51) while SSS patients and self payment patients gave their rating scores are 3.44 and 3.43 respectively.

The highest importance scores in "Service system" was given by CSMBS patients (Importance score = 3.73) while SSS patients and self payment patients gave their rating scores are 3.62 and 3.67 respectively.

The highest importance scores in "Providers" was given by self payment patients (Importance score = 3.78) while CSMBS patients and SSS patients gave their rating scores are 3.76 and 3.71 respectively.

The highest importance scores in "Medical service by physician" was given by self payment patients (Importance score = 3.75) while CSMBS patients and SSS patients gave their rating scores are 3.72 and 3.63 respectively.

The highest importance scores in “Pharmacy services” were given by CSMBS patients and self payment patients (Importance score = 3.77) while SSS patients gave their rating scores is 3.72.

The highest importance scores in “Nurse Services” was given by CSMBS patients (Importance score = 3.75) while self payment patients and SSS patients gave their rating scores are 3.74 and 3.73 respectively.

The highest importance scores in “Others” were given by SSS patients and self payment patients (Importance score = 3.66) while CSMBS patients gave their rating scores is 3.65.

The difference in comparison means of the important score classified by patients’ insurance schemes in each dimensions of hospital’s service was illustrated in Figure 6.

3.1.2 Comparison means of the performance score.

The results are illustrated in table 12. There are all dimensions of hospital’s service statistically which have significant differences ($p < 0.05$) classified by patients’ insurance schemes.

CSMBS patients, SSS patients and self payment patients gave the lowest performance score to “Facilities and environment” dimension similarly. Their rating scores are 2.43, 2.70 and 2.66 respectively.

The first three lowest performance scores given by CSMBS patients were “Facilities and environment”, “Service system” and “Providers”, while the first three lowest performance scores given by SSS patients were “Facilities and environment”, “Providers” and “Service system”. And the first three lowest performance scores given by self payment patients were “Facilities and environment”, “Providers” and “Service system” respectively.

The lowest performance scores in “Facilities and environment” was given by CSMBS patients (Performance score = 2.43) while self payment patients and SSS patients gave their rating scores are 2.66 and 2.70 respectively.

The lowest performance scores in “Service system” was given by CSMBS patients (Performance score = 2.54) while SSS patients and self payment patients gave their rating scores are 2.80 and 2.82 respectively.

The lowest performance scores in “Providers” was given by CSMBS patients (Performance score = 2.53) while self payment patients and SSS patients gave their rating scores are 2.85 and 2.92 respectively.

The lowest performance scores in “Medical service by physician” was given by CSMBS patients (Performance score = 2.80) while self payment patients and SSS patients gave their rating scores are 3.09 and 3.13 respectively.

The lowest performance scores in “Pharmacy services” was given by CSMBS patients (Performance score = 2.73) while self payment patients and SSS patients gave their rating scores are 2.94 and 3.04 respectively.

The lowest performance scores in “Nurse services” was given by CSMBS patients (Performance score = 2.72) while self payment patients and SSS patients gave their rating scores are 2.93 and 3.02 respectively.

The lowest performance scores in “Others” was given by CSMBS patients (Performance score = 2.72) while self payment patients and SSS patients gave their rating scores are 2.94 and 2.96 respectively.

The difference in comparison means of performance score classified by patients’ insurance schemes in each dimensions of hospital’s service was illustrated in Figure 7.

Table 11: Comparison means of the important score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value*
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
Pharmacy services	3.77 ± 0.38	257	3.72 ± 0.33	58	3.77 ± 0.25	102	0.01**
Providers	3.76 ± 0.40	259	3.71 ± 0.32	58	3.78 ± 0.29	102	0.06
Nurse services	3.75 ± 0.42	259	3.73 ± 0.36	58	3.74 ± 0.37	102	0.29
Service system	3.73 ± 0.41	259	3.62 ± 0.35	58	3.67 ± 0.32	102	0.00**
Medical service by physician	3.72 ± 0.40	258	3.63 ± 0.35	58	3.75 ± 0.26	102	0.02**
Others	3.65 ± 0.43	258	3.66 ± 0.32	58	3.66 ± 0.35	102	0.63
Facilities and environment	3.51 ± 0.41	259	3.44 ± 0.35	58	3.43 ± 0.34	102	0.03**

* Tested by Kruskal - Wallis test. ** Statistically significant different.

Figure 6: The difference in comparison means of the important score classified by patients' insurance schemes

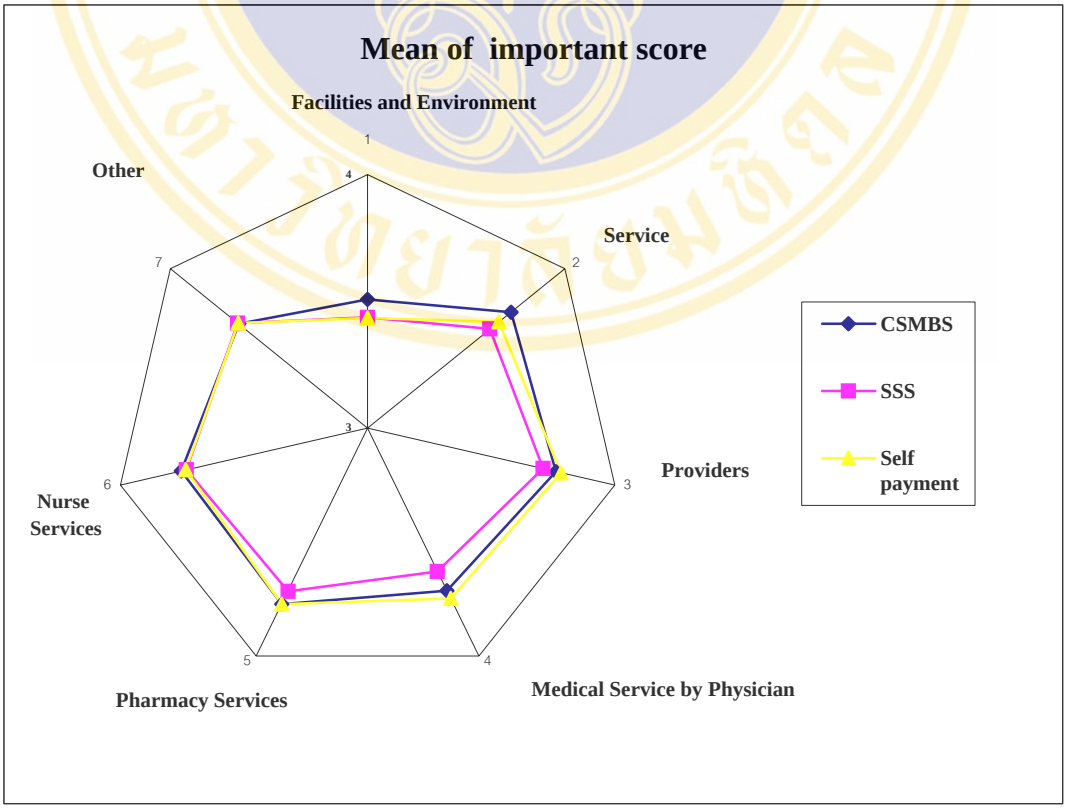
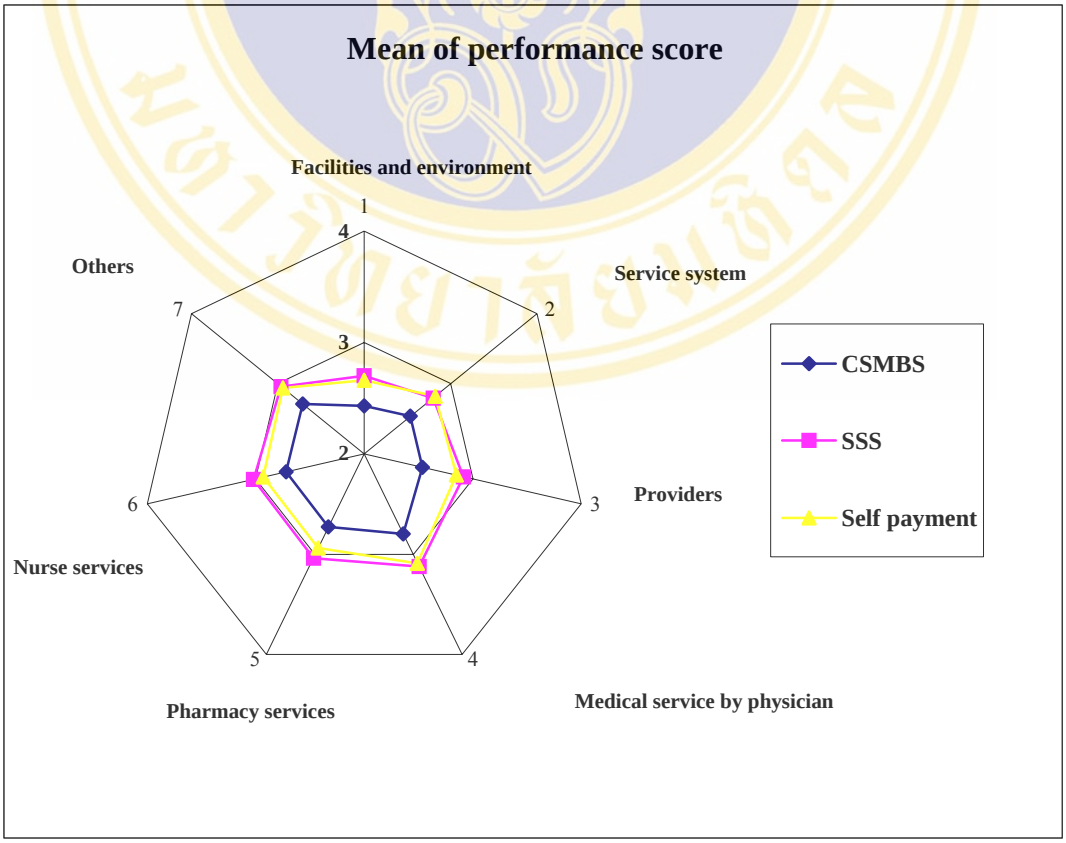


Table 12: Comparison means of the performance score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value*
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
Medical service by physician	2.80 ± 0.55	259	3.13 ± 0.54	57	3.09 ± 0.50	102	0.00**
Pharmacy services	2.73 ± 0.51	260	3.04 ± 0.48	57	2.94 ± 0.40	102	0.00**
Nurse services	2.72 ± 0.60	262	3.02 ± 0.47	57	2.93 ± 0.53	102	0.00**
Others	2.72 ± 0.49	259	2.96 ± 0.43	57	2.94 ± 0.42	102	0.00**
Service system	2.54 ± 0.54	262	2.80 ± 0.52	58	2.82 ± 0.47	102	0.00**
Providers	2.53 ± 0.59	261	2.92 ± 0.49	57	2.85 ± 0.46	102	0.00**
Facilities and environment	2.43 ± 0.45	262	2.70 ± 0.47	58	2.66 ± 0.39	102	0.00**

* Tested by Kruskal - Wallis test. ** Statistically significant different.

Figure7: The difference in comparison means of the performance score classified by patients' insurance schemes.



3.2 Comparison of the value proposition classified by healthcare status.

3.2.1 Comparison means of the important score.

The results are illustrated in table 13 that include five dimensions of hospital's service statistically. It has significant differences ($p < 0.05$) classified by healthcare status such as "Facilities and environment", "Service system", "Providers", "Pharmacy services" and "Nurse services".

Patients gave the highest importance score to "Providers" and "Pharmacy services" (Importance score = 3.74) which were statistically significant different ($p < 0.05$) from providers who chose "Pharmacy services" (Importance score = 3.80).

The first three highest importance scores given by patients were "Providers", "Pharmacy services" and "Medical service by physician", while the first three highest importance scores given by providers were "Pharmacy services", "Nurse services" and "Providers" respectively.

Providers gave higher important score than patients in six dimensions of hospital's service which were "Facilities and environment", "Service system", "Providers", "Pharmacy services", "Nurse services" and "Others". Their rating scores are 3.55, 3.72, 3.78, 3.80, 3.78 and 3.66 respectively.

Similar to providers, patients gave the important score to "Medical service by physician" dimension of hospital's service. Their rating score is 3.71.

In conclusion, the difference in comparison mean of the importance score classified by healthcare status in each dimensions of hospital's service is illustrated in Figure 8.

3.2.2 Comparison means of the performance score.

The results were illustrated in table 14. There are all dimensions of hospital's service statistically which have significant differences ($p < 0.05$) classified by healthcare status.

Patients gave the lowest performance score to "Facilities and environment" (Performance score = 2.66) which was statistically significant different ($p < 0.05$) from providers who chose "Facilities and environment" (Performance score = 2.33) similarly.

The first three lowest performance scores given by patients were “Facilities and environment”, “Service system” and “Providers”, while the first three lowest performance scores given by providers were “Facilities and environment”, “Providers” and “Service system” respectively.

Providers gave lower performance score than patients in all dimensions of hospital’s service which were “Facilities and environment”, “Service system”, “Providers”, “Medical service by physician”, “Pharmacy services”, “Nurse services” and “Others”. Their rating scores are 2.33, 2.43, 2.40, 2.63., 2.62, 2.59 and 2.62 respectively.

The difference in comparison mean of the performance score classified by healthcare status in each dimensions of hospital’s service is illustrated in Figure 9.

Table 13: Comparison means of the important score classified by healthcare status.

Services	Patients		Providers		P-value*
	Mean ± SD	N	Mean ± SD	N	
Providers	3.74 ± 0.32	245	3.78 ± 0.42	177	0.00**
Pharmacy services	3.74 ± 0.30	245	3.80 ± 0.41	175	0.00**
Nurse services	3.72 ± 0.36	245	3.78 ± 0.44	176	0.00**
Medical service by physician	3.71 ± 0.32	245	3.71 ± 0.43	176	0.06
Service system	3.68 ± 0.32	245	3.72 ± 0.46	177	0.00**
Others	3.65 ± 0.35	245	3.66 ± 0.46	175	0.08
Facilities and environment	3.43 ± 0.33	245	3.55 ± 0.45	177	0.00**

* Tested by Mann - Whitney U test. ** Statistically significant different.

Figure 8: The difference in comparison means of the important score classified by healthcare status.

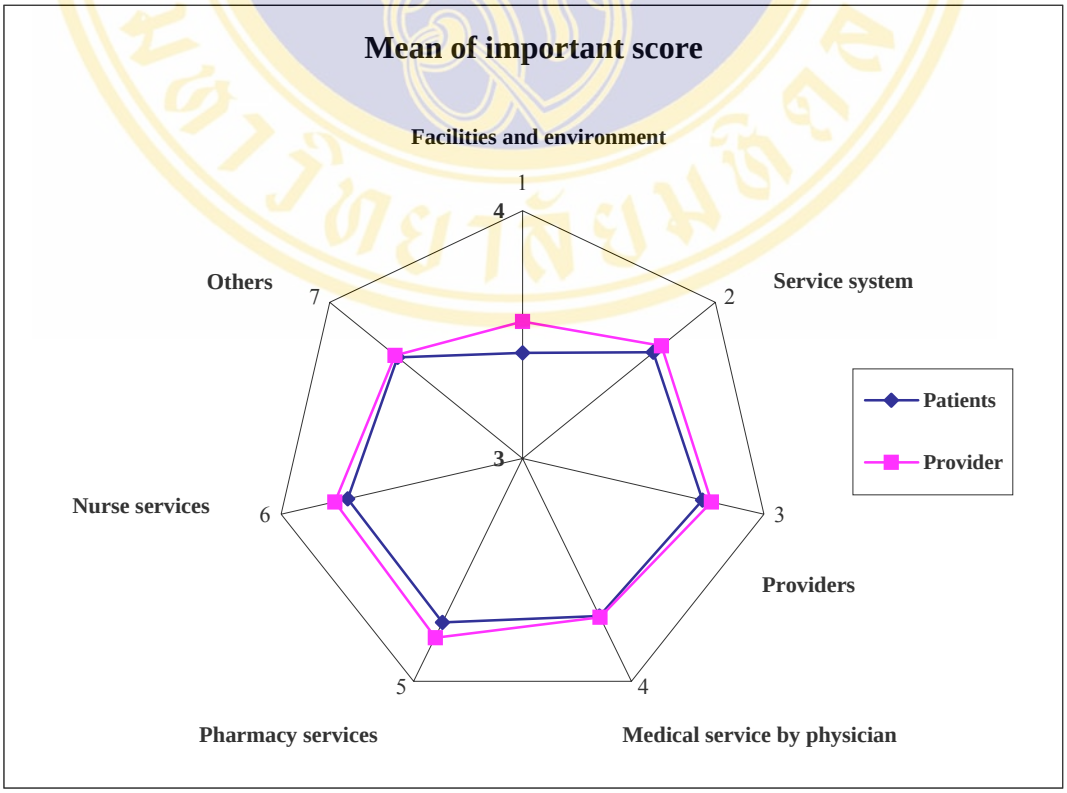
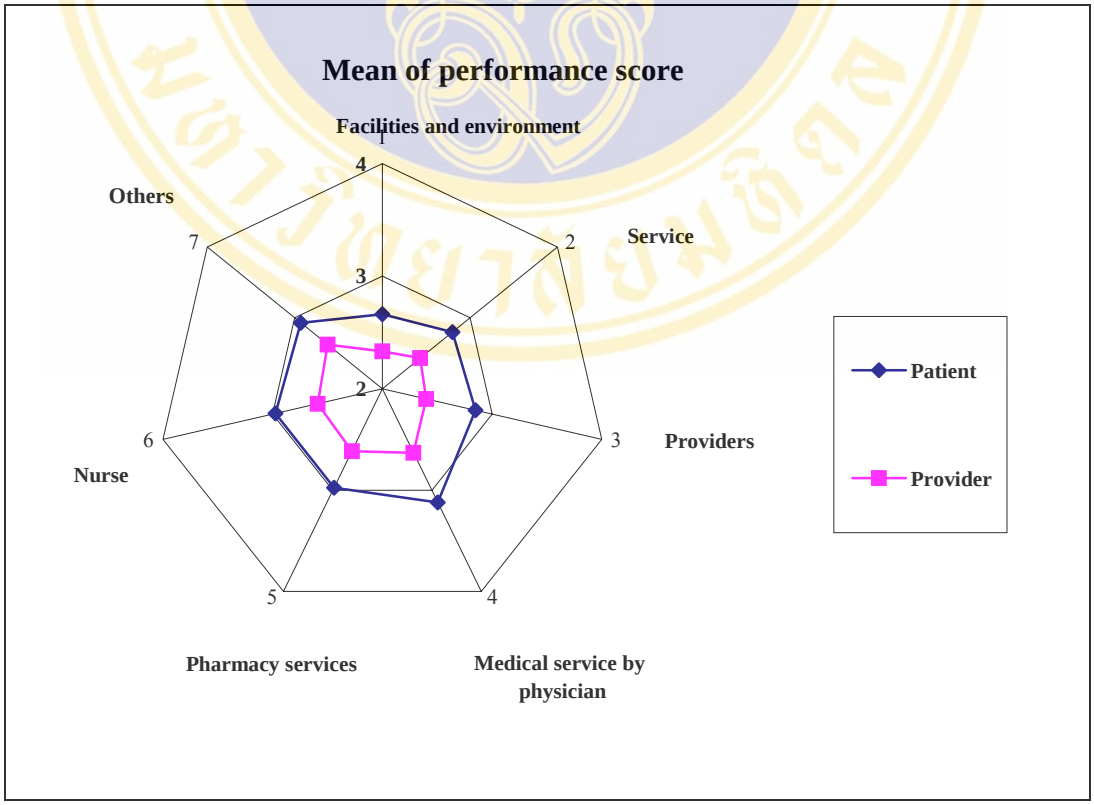


Table 14: Comparison means of the performance score classified by healthcare status.

Services	Patients		Providers		P-value*
	Mean ± SD	N	Mean ± SD	N	
Medical service by physician	3.12 ± 0.49	245	2.63 ± 0.51	176	0.00**
Pharmacy services	2.98 ± 0.42	245	2.62 ± 0.51	177	0.00**
Nurse services	2.97 ± 0.50	245	2.59 ± 0.60	178	0.00**
Others	2.93 ± 0.41	245	2.62 ± 0.51	175	0.00**
Providers	2.85 ± 0.48	245	2.40 ± 0.58	178	0.00**
Service system	2.80 ± 0.49	245	2.43 ± 0.52	180	0.00**
Facilities and environment	2.66 ± 0.39	245	2.33 ± 0.47	179	0.00**

* Tested by Mann - Whitney U test. ** Statistically significant different.

Figure 9: The difference in comparison means of the performance score classified by healthcare status.



Part IV Selection of health service utilization

In table 15, it indicates that 76.13% of patients and 80.70% of providers selected Chonburi hospital to be the service hospital. Only 23.87% of patients and 19.30% of providers would not select Chonburi hospital. Patients (88.16%) and providers (86.39%) will recommend and advice Chonburi hospital to other people. Most of them (97.55% of patients and 97.08% of providers) accepted value proposition to be a factor that can influence patients' decision to choose healthcare providers.

In the future, if the CSMBS changes its reimbursement system to be the same as the social security scheme, the civil servant will probably select their service hospital. Table 16 shows that 80.08% of CSMBS patients would select Chonburi hospital to be the service hospital.

Sixty-five of respondents out of ninety-one respondents who did not select Chonburi hospital preferred Aekchon Hospital (60.00%), Phayathai - Srisacha Hospital (6.15%), Siriraj Hospital as same as Samittivej Hospital (4.62%), Somdej - Sriracha Hospital (3.08%), and Private Hospital (10.77%). The data is shown in table 17.

Table 15: The relationship between decisions making and healthcare status.

Decisions making		Patients		Providers	
		Number	Percent	Number	Percent
Select Chonburi hospital	Yes	185	76.13	138	80.70
	No	58	23.87	33	19.30
	Total	243	100.00	171	100.00
Recommendation and advice Chonburi hospital	Yes	216	88.16	146	86.39
	No	29	11.84	23	13.61
	Total	245	100.00	169	100.00
Value proposition is factor that influence patients' decision to choose healthcare providers	Yes	239	97.55	166	97.08
	No	6	2.45	5	2.92
	Total	245	100.00	171	100.00

Table 16: Selection of Chonburi hospital to be service hospital classified by health insurance schemes.

Select Chonburi hospital	CSMBS		SSS		Self payment	
	Number	Percent	Number	Percent	Number	Percent
Yes	205	80.08	43	75.44	75	74.26
No	51	19.92	14	24.56	26	25.74
Total	256	100.00	57	100.00	101	100.00

Table 17: Lists of preferred hospitals that were mentioned by patients who did not select Chonburi hospital.

Other hospitals	Number (N=65)	Percent
Aekchon Hospital	39	60.00
Phayathai- Srisacha Hospital	4	6.15
Siriraj Hospital	3	4.62
Samittivej Hospital	3	4.62
Somdej- Sriracha Hospital	2	3.08
Prachineburi Hospital	1	1.54
Srinakarin Hospital	1	1.54
Sirikit Hospital	1	1.54
Rayong Hospital	1	1.54
Mongkut Rayong Hospital	1	1.54
Ramathibodi Hospital	1	1.54
Samittivej- Srisacha Hospital	1	1.54
Private Hospital	7	10.77

4.1 The factors affecting the patient's decision in selecting hospital.

Each patient chose three factors from 11-listed answers (Table 18). The top three factors were "confidence in doctor and officer ability" (65.86%), "modern technology equipment" (56.17%) and "government hospital" (38.98%). The data is shown in table 18. The top three factors of patients who selected Chonburi hospital to be service

hospital were not statistically significant different from patients who selected other hospital.

Table 18: The factors affected the patient's decision in selecting service hospital classified by patient's decision.

Factors	Selected Chonburi Hospital (N=322)		Selected other Hospital (N=91)		Total (N=413)		P-value*
	Number	Percent	Number	Percent	Number	Percent	
Confidence in doctor and officer ability	215	66.77	57	62.64	272	65.86	0.46
Modern technology equipment	184	57.14	48	52.75	232	56.17	0.46
Government hospital	132	40.99	29	31.87	161	38.98	0.12
Ease in communication	113	35.09	28	30.77	141	34.14	0.44
Reasonable price	104	32.30	37	40.66	141	34.14	0.14
Near home or office	106	32.92	28	30.77	134	32.45	0.70
Personal relationship	69	21.43	10	10.99	79	19.13	0.03**
No chance	28	8.70	15	16.48	43	10.41	0.03**
Best service	19	5.90	12	13.19	31	7.51	0.02**
Others	13	4.04	8	8.79	21	5.08	0.10
By recommendation & advice	11	3.42	6	6.59	17	4.12	0.23

* Tested by Chi-square test. ** Statistically significant different.

4.2 The differences between general information and patient's decision to select hospital.

The differences among independent variables such as healthcare status, gender, age group, education, health insurance schemes, income, travel time, service time, expect service time, satisfaction of hospital service, number of OPD visits per year, past hospital experience by the family, recommendation and advice Chonburi hospital and value proposition and dependent variable (patient's decisions to select Chonburi

hospital) were applied to analyze the data by using Chi-square. Table 19 shows the significant differences of variables and patient's selection.

From this study, it was found that thee were no statistically significant difference among healthcare status, gender, health insurance schemes, income, travel time, expect service time, number of OPD visits per year, past hospital experience of the family, and value proposition are the factors that influence patients' decision to choose healthcare providers between groups of patients who chose or not chose Chonburi hospital as their service hospital in the future. But statistically significant difference was found in the following factors age, education, satisfaction of hospital services and recommendation and advice for Chonburi hospital.

1. Age: Patients who chose Chonburi hospital were between 35-44 years old which were older than those who chose other hospitals whose ages were less than 35 years old.
2. Education: Education level of patients who chose Chonburi hospital were lower than high school degree which was different from patients who chose other hospitals.
3. Satisfaction of hospital services: Patients who chose Chonburi hospital were very satisfied with hospital services which was different from patients who chose other hospitals whose satisfaction of hospital services were unsatisfied.
4. Recommendation and advice for hospital: 93.19% of patients who chose Chonburi hospital tend to recommend hospital service to others. While 32.58% of patients who chose other hospitals would not recommend Chonburi hospital service to others.

Table 19: Difference between general information and patient's selection.

Factors		Selected Chonburi Hospital		Selected other Hospital		P-value*
		Number	Percent	Number	Percent	
Healthcare status	Provider	185	57.28	58	63.74	0.27
	Patient	138	42.72	33	36.26	
	Total	323	100.00	91	100.00	
Gender						
	Female	90	27.86	20	21.98	0.26
	Male	233	72.14	71	78.02	
	Total	323	100.00	91	100.00	
Age group						
	< 35	137	43.08	53	58.24	0.04**
	35-44	90	28.30	19	20.88	
	45-54	66	20.75	17	18.68	
	≥ 55	25	7.86	2	2.20	
	Total	318	100.00	91	100.00	
Education						
	Lower than high school degree	27	8.36	1	1.10	0.03**
	High school-undergraduate degree	80	24.77	31	34.07	
	Bachelor's degree	175	54.18	51	56.04	
	Higher than Bachelor's degree	41	12.69	8	8.79	
	Total	323	100.00	91	100.00	
Health insurance schemes	Civil Servant Medical Benefit Scheme	205	63.47	51	56.04	0.43
	Social Security Scheme	43	13.31	14	15.38	
	Self payment	75	23.22	26	28.57	
	Total	323	100.00	91	100.00	
Income						
	≤ 5000	26	8.07	7	7.78	0.23
	5001-10000	78	24.22	23	25.56	
	10001-15000	63	19.57	26	28.89	
	15001-20000	44	13.66	13	14.44	
	≥ 20000	111	34.47	21	23.33	
	Total	322	100.00	90	100.00	
Travel time						
	< 1 hr	254	78.88	74	81.32	0.87
	1-<2	59	18.32	15	16.48	
	≥ 2	9	2.80	2	2.20	
	Total	322	100.00	91	100.00	

* Tested by Chi-square test. ** Statistically significant different.

Table 19: (Continued) Difference between general information and patient's selection.

Factors		Selected Chonburi Hospital		Selected other Hospital		P-value*
		Number	Percent	Number	Percent	
Service time	<1 hr	33	10.38	4	4.40	0.08
	1-<2	53	16.67	10	10.99	
	2-<3	78	24.53	19	20.88	
	3-<4	83	26.10	28	30.77	
	> 4	71	22.33	30	32.97	
	Total	318	100.00	91	100.00	
Expect service time	1 hr	68	21.25	23	25.27	0.39
	2 hr	172	53.75	44	48.35	
	3 hr	59	18.44	21	23.08	
	4 hr	21	6.56	3	3.30	
	Total	320	100.00	91	100.00	
Satisfaction of hospital services	Very satisfied	28	8.70	3	3.30	0.00**
	Satisfied	262	81.37	61	67.03	
	Unsatisfied	32	9.94	27	29.67	
	Total	322	100.00	91	100.00	
Number of OPD visits per year	1	24	7.62	10	11.36	0.40
	2	46	14.60	10	11.36	
	3	42	13.33	13	14.77	
	4	35	11.11	9	10.23	
	5	20	6.35	11	12.50	
	6	40	12.70	11	12.50	
	≥ 7	108	34.29	24	27.27	
	Total	315	100.00	88	100.00	
Past hospital experience by the family	Yes	281	87.00	79	88.76	0.96
	No	42	13.00	12	13.48	
	Total	323	100.00	91	102.25	
Recommendation and advice Chonburi hospital	Yes	301	93.19	60	67.42	0.00**
	No	22	6.81	29	32.58	
	Total	323	100.00	89	100.00	

* Tested by Chi-square test. ** Statistically significant different.

Table 19: (Continued) Difference between general information and patient's selection.

Factors		Selected Chonburi Hospital		Selected other Hospital		P-value*
		Number	Percent	Number	Percent	
Value proposition is factor that influence patients' decision to choose healthcare providers	Yes	314	97.21	88	97.78	0.56
	No	9	2.79	2	2.22	
	Total	323	100.00	90	100.00	

* Tested by Chi-square test. ** Statistically significant different.

4.3 Mentioned hospital for good facilities and environment.

The mentioned hospitals for good facilities and environment in 276 respondents' opinions were listed from the most mentioned to the least. It was reported that the most mentioned hospital was Chonburi hospital (58.33%). The followers were Aekchon hospital (19.57%), Somdej-Sriracha hospital (5.80%), Bamroongraj hospital (5.43%), Samittivej-Sriracha hospital (4.35%), and others (33.70%). The result is shown in table 20.

4.4 Mentioned hospital for good service system.

The mentioned hospitals for good service system in 251 respondents' opinions were listed from the most mentioned to the least. It was reported that the most mentioned hospital was Chonburi hospital (33.86%). The followers were Aekchon hospital (22.31%), Bamroongraj hospital (5.58%), Smittivej-Sriracha hospital (4.78%), Smittivej hospital (4.38%), and others (29.08%). The information is shown in table 20.

4.5 Mentioned hospital for good providers.

The mentioned hospitals for good providers system in 226 respondents' opinions were listed from the most mentioned to the least. It was reported that the most mentioned hospital was Chonburi hospital (40.27%). The followers were Aekchon hospital (23.01%), Bamroongraj hospital (4.87%), Smittivej hospital (4.42%) as same as Smittivej-Sriracha hospital (4.42%), and others (23.01%). The data are shown in table 20.

4.6 Mentioned hospital for good medical service by physician.

The mentioned hospitals for good medical service by physician in 250 respondents' opinions were listed from the most mentioned to the least. It was reported that the most mentioned hospital was Chonburi hospital (58.80%). The followers were Aekchon hospital (11.60%), Sriraj hospital (5.20%), Bamroongraj hospital (4.40%), King Chulalongkorn Memorial hospital (3.60%), and Others (16.40%). The data are shown in table 20.

4.7 Mentioned hospital for pharmacy services.

The mentioned hospitals for good nurse services system in 242 respondents' opinions were listed from the most mentioned to the least. It was reported that the most mentioned hospital was Chonburi hospital (54.13%). The followers were Aekchon hospital (19.83%), King Chulalongkorn Memorial hospital (2.89%), Bamroongraj hospital (2.48%), Sriraj hospital (2.07%), and Others (18.60%). The data are shown in table 20.

4.8 Mentioned hospital for good nurse services.

The mentioned hospitals for good pharmacy services system in 231 respondents' opinions were listed from the most mentioned to the least. It was reported that the most mentioned hospital was Chonburi hospital (45.02%). The followers were Aekchon hospital (22.51%), Bamroongraj hospital (5.63%), Bangkok-Pattaya hospital (3.03%), Smittivej hospital (2.60%), and Others (21.21%). The data are shown in table 20.

Table 20: The mentioned hospital for each service dimensions.

Facilities and Environment (N=276)			Service System (N=251)			Providers (N=226)		
Hospital	Number	Percent	Hospital	Number	Percent	Hospital	Number	Percent
Chonburi	86	31.16	Chonburi	85	33.86	Chonburi	91	40.27
Aekchon	54	19.57	Aekchon	56	22.31	Aekchon	52	23.01
Somdej-Sriracha	16	5.80	Bamroongraj	14	5.58	Bamroongraj	11	4.87
Bamroongraj	15	5.43	Smittivej-Sriracha	12	4.78	Smittivej	10	4.42
Samittivej-Sriracha	12	4.35	Smittivej	11	4.38	Smittivej-Sriracha	10	4.42
Others	93	33.70	Others	73	29.08	Others	52	23.01

Table 20: (Continued) The mentioned hospital for each service dimensions.

Medical Service by Physician (N=250)			Pharmacy Services (N=242)			Nurse Services (N=231)		
Hospital	Number	Percent	Hospital	Number	Percent	Hospital	Number	Percent
Chonburi	147	58.80	Chonburi	131	54.13	Chonburi	104	45.02
Aekchon	29	11.60	Aekchon	48	19.83	Aekchon	52	22.51
Siriraj	13	5.20	Chulalongkorn	7	2.89	Bamroongraj	13	5.63
Bamroongraj	11	4.40	Bamroongraj	6	2.48	Bangkok-Pattaya	7	3.03
Chulalongkorn	9	3.60	Siriraj	5	2.07	Smittivej	6	2.60
Others	41	16.40	Others	45	18.60	Others	49	21.21

The model of patients' profile of Chonburi hospital was a hexagonal model (Figure 10). 14.38% of the patients were new patients (initial transaction). 78.39% of the patients became a regular customer (repeating customer). And, 73.05% of repeating customers would recommend (advocate) the hospital to other patients. With identifying the repeating customer by patients' insurance schemes, it found that 80.07% of CSMBS patients, 75.43% of SSS patients, and 74.29% of self payment patients had become the repeating customers. It does not have a statistically significant difference (p-value>0.05). Furthermore, it was found that 92.68% of CSMBS repeating customers, 75.43% of SSS repeating customers, and 74.29% of self payment repeating customers would recommend this hospital to others. It does not either have a statistically significant difference (p-value>0.05).

A way to manage customer advocacy is to know what values are necessary for the customers. So, the hospital needs to listen to them to find out what they want. The hospital needs to discover what features, what benefits, and what aspects of the experiences that the patients recount when they recommend the hospital to the others. It will probably be different from the hospital's aspect in terms of the most important or the most impressive. Finally, the hospital must include this value into each service.

The hexagonal is the most stable when it has a strong base of new patients. Recommendation by experienced patients is the best advertising to increase and attract new patients.

Figure 10: The shape of patients' profile of Chonburi hospital.

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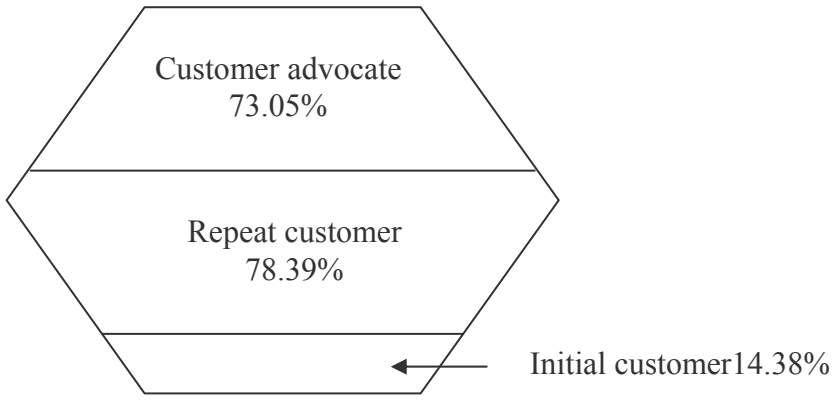

4.9 Recommendation from the respondents about services that should be improved.

Based on the respondents' opinion, it was found that services which should be improved could be classified in seven dimensions. Table 21 shows five services that had priority to concentrate on improvement. They were ranked from the most mentioned to the least. It was reported that the top five services should be improved are "Gentle and friendly officers", "Diagnosis' waiting time", "Quality and convenience of services system", "Guarantee waiting time in each service center" and "Drugs' receiving time". These are the guideline for the hospital to improve the services that meet patients' needs.

Table 21: Lists of services should be improved recommendation from the respondents.

Services should be improved	Number (N = 398)	Percent
1.Facilities and environment		
1.1 Adequate parking lot.	15	3.77
1.2 Narrow OPD services' place.	14	3.52
1.3 Enough and not crowded seats in doctor's waiting area.	7	1.76
1.4 Clean and good hygiene toilet.	6	1.51
1.5 Clean and good hygiene hospital area.	5	1.26
1.6 Adequate green area.	5	1.26
1.7 Enough and not crowded seats in drug's receiving area.	2	0.50
1.8 Clear signpost to service center.	2	0.50
1.9 Clean and good hygiene food center.	1	0.25
1.10 Air condition.	1	0.25
2. Services system		
2.1 Quality and convenience of services system.	36	9.05
2.2 Guarantee waiting time in each service center.	30	7.54
2.3 Uncomplicated service procedure.	19	4.77
2.4 Uncomplicated service when find medicals history at card room.	11	2.76
2.5 Time of serviced and not breaks serviced at lunchtime.	2	0.50
2.6 The priorities of receiving service.	1	0.25
2.7 Computers' system.	1	0.25
3. Providers		
3.1 Gentle and friendly officers.	68	17.09
3.2 Adequate officer in each center.	10	2.51
3.3 Adequate staff to give information at busy spot.	7	1.76
3.4 Enthusiastic officers in service.	3	0.75
3.5 Gentle guard.	1	0.25

Table 21: (Continued) Lists of services should be improved recommendation from the respondents.

Services should be improved	Number (N = 398)	Percent
4.Medical service by physician		
4.1 Diagnosis' waiting time.	46	11.56
4.2 Explanation of diagnosis, side effect, limitation, precaution of the treatment and participation in decision making for treatment.	19	4.77
4.3 Appropriate number of physician in examination and treatment.	8	2.01
5. Pharmacy services		
5.1 Drugs' receiving time.	27	6.78
5.2 Uncomplicated procedure in receiving medicine.	12	3.02
5.3 Satellite dispensing rooms.	1	0.25
6. Nurse		
6.1 Gentle advice and friendly nurse. Caring and enthusiastically service.	15	3.77
7. Others		
7.1 Information about service and hospital news.	13	3.27
7.2 Receiving the equity, convenience and fast services in every health insurance schemes.	8	2.01
7.3 Having board or pamphlet to explain service system in each area.	1	0.25
7.4 Receiving the examination with modern technology equipment.	1	0.25
7.5 Not surcharge when expense which credit card.	1	0.25

CHAPTER V
DISCUSSION

Discussion was presented in four parts:

Part I General information of respondents.

Part II Value proposition of outpatient service.

Part III Comparison of value proposition of outpatient.

Part IV Selection of health service utilization.

Part I General information of respondents.

1.1 General information of the patients.

The result of this study showed that most patients who received service from the outpatient department at Chonburi hospital were female. The ratio between female to male is 1.60:1. Chonburi hospital statistics show that the proportion of the female outpatients is higher than that of the male outpatients in every clinic. So, the result of this study can be generalized to explain Chonburi hospital's patient population.

Regarding to the distance to the hospital, 75.92% of the patients spent less than one hour. One of the reasons is most patients live around the hospital. The majority of the medical service time that they had spent in the hospital is 3-4 hours. However, their expected service time is 2 hours.

According to the study, no significant difference was found in selecting Chonburi hospital for their medical service between the patients who spent less than one hour and those who spent more than one hour traveling to the hospital (p-value = 0.67). Also, it does not have a significant difference either in choosing Chonburi hospital for their medical service between 86.97% of the patients who spent less than two hours and 74.16% of the patients who spent more than two hours for the medical service process (p-value = 0.22).

1.2 General information of the providers.

The result of this study showed that most of Chonburi hospital medical staffs were female. The ratio between female to male is 8.83:1 because the majority of the samples are nurses. 41.28% of providers' age are less than 35 years old. It showed that most providers were young with bachelor degree or higher.

For the total time that the providers spend in traveling to the hospital, 84.88% of them also spent less than one hour similar to the patients. For the medical service time that the providers spend when received medical service at the hospital, they mostly spent 3-4 hours. However, their satisfied and expected service time is 2 hours.

Similar to patients, it was found that providers made their decision to choose Chonburi hospital for their medical therapies. No significant difference was found in choosing this hospital between the providers who spent less than one hour and those who spent more than one hour in traveling to Chonburi hospital (p-value = 1.00). In

contrast, there was a significant difference in choosing Chonburi hospital for their medical service between 92.31% of the providers who spent less than two hours and 76.38% of those who spent more than two hours for the medical service time (p-value = 0.03).

Part II Value proposition of outpatient service.

Value is a factor inducing the utilization of the service at a hospital. From the study, the value proposition of the groups who selected Chonburi hospital to be their service hospital was higher than that of the groups who selected other hospitals.

The value will be improved by the increase of the patients' satisfaction, the necessary in using each service in the hospital, and the potential of each service that will help improve the hospital's quality and fame.

Most services are being performed well and usefully. Probably, it is because Chonburi hospital is the provincial medical school and has been submitted the certificate of Hospital Accreditation (HA), so it provides a high quality of the services to the patients and make them satisfied. Chonburi hospital is a governmental health care hospital that aims to understand patients' expectation and to improve patients' satisfaction. In my opinion, the hospital should be improving all services to perform at its best performance. Due to a limited budget, hospital has to carefully allocate the budget according to the importance of each service to meet customer's expectation and satisfaction. Administrating management is the most important issue that will be able to help improve the satisfaction in each service.

The most valuable proposition in service dimension of respondents is "Pharmacy services". "Receiving a good quality medicine and relief of symptom after use" has the highest valuable proposition. When the patients come to see physicians, they would like to get proper medicine. They expect to get an appropriate and the right medicine in order to cure their illness. If they sometimes get the wrong medicine for their sickness, it will probably cause them to death or potent illness. So, the officers of pharmacy division have to provide quality medicine for them in order to maintain the performance at the highest level.

"Receiving explanation in the use of each medicine by pharmacist" has the value proposition lower than "Appropriate containers of medicine, clear and simple instruction on the label to ensure confidence." This might be the cause that most of them usually have OPD visits for their chronic disease and received theirs medicines routinely.

Similar to King Chulalongkorn Memorial hospital, the pharmacy must improve value of service by reducing waiting time since it is the lowest performance score. [15] This might be explained that there is a bottleneck in the flow of service provision at pharmacy unit. Only one pharmacy unit provides the service for numbers of patients from several clinics. Thus, the waiting time at this unit might be too long so performance score in respondents' perspective is relatively low. In addition, from the observation during data collection, we found that there were a lot of patients waiting at pharmacy unit during lunch-break. However, there were a few patients during 8.00–10.00 am. That is because the physicians normally start their work approximately during 9.00 - 9.30 am. If the physicians started their work earlier, it will reduce patient waiting time at pharmacy unit.

"Drug information service by telephone" has the lowest valuable proposition in pharmacy services. The respondents may think that this service is not importance for them. So, it can be one of the reasons why today they should not invest in this service very much. That is because people think it is not very important.

"Medical service by physician" was the second value proposition in respondents' perspective. "Asking about allergic and treatment history" has the highest valuable proposition. It means that caring from physician is perceived by patients.

Most of the patients want the physician to explain side effects, limitation, precaution of the treatment, and participation in decision making for treatment. Nevertheless, they thought that the physician did not give enough information about disease, what they should do when they get sick and what they should do to stay healthy. Thus, the physician should inform the patients about how to take care of their health, the reason of using the medicine, the way to remedy the sickness, and the cause of sickness because these points had the highest important scores. Moreover the physician should use spend time with the patients appropriately because this service

has the lowest performance scores. The improvement of these services may increase value proposition.

“Doctors’ prescribe drug by computer” has the lowest value proposition in medical service by the physician. It means that respondents think that this service is not importance for them. Although nowadays, this service does not cover the cost for investment, but this service will be reducing drug s’ receiving time at pharmacy unit. It could reduce the waiting time at pharmacy unit.

“Gentle and friendly nurses” with “caring and enthusiastic service” are the highest value proposition of “Nurse Services”. It means they think that personal relationships of nurses are the most important service for them. From the score report, nurses’ advice to patients before their meeting with the doctor must be improved because this service had the lowest performance score. Therefore, the improvement of this service will help increase the value in the nurse section.

“Gentle and friendly healthcare providers” is the highest value proposition of the “Providers”. However “Adequate staff to give information at busy spot” has the lowest performance scores. That is because there are not enough health personals providing services to a lot of patients. So, the hospital should provide more personals for serving the patients. It may help increase value of “Providers”.

“Queue system” is the highest value of the service system. “Guarantee waiting time in each service center” has the lowest performance score which hospital should improve this service. “Guarantee waiting time in each service center” helps the providers to easily manage time because they have to give the patients medicines within the guarantee waiting time. However, most of them run over time than the waiting time in each service. Thus, the waiting time should be reset to be more practical.

“Clean and good hygiene hospital area.” is the highest value of the facilities and environment of Chonburi hospital, but the hospital should concentrate more on parking lot problem because of the lowest performance. This problem is difficult to solve based on the limited area and the distance from parking lot to OPD building.

“Children play ground” is the lowest value service of all services. It means respondents think that this service is not very important to the respondents. So, it can be one of the reasons why today they do not invest in this service very much.

For the others, “Receiving the examination with modern technology equipment” and “Receiving the certificate of hospital accreditation from the Quality Improvement and Hospital Accreditation Institute” are the values of the hospital services. It supports that quality is the most important in respondents’ perspective. Also, there is the importance score in quality examination and quality insurance.

According to the Maslow’s Hierarchy of Needs, there are five stages of people’ needs, which are physiological needs, safety needs, social needs, esteem needs, and self-actualization. When people get sick, they will be in the psychological needs which they want drugs to cure their illness. Apart from that, their needs also include the safety and security needs, for example, they want to receive the right medicine at the right time and dose. And, they want the physicians to advise them or give them the useful information.[29]

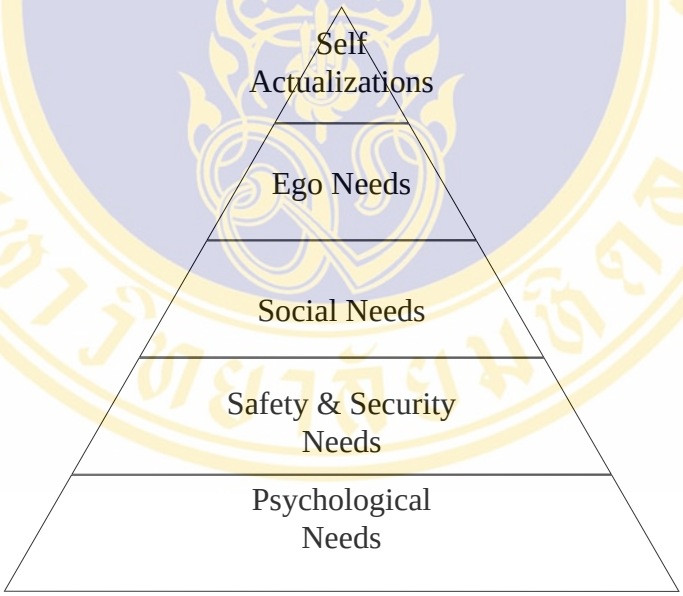

Figure 11: Maslow’s Hierarchy of Needs

Part III Comparison of value proposition of outpatient medical service.

3.1 Comparison of value proposition of each group classified by the insurance schemes: CSMBS patients, SSS patients, and Self payment patients.

CSMBS patients group valued these three service dimensions, “Providers”, “Medical service by physician”, and “Others” as the lowest value comparing to other groups. Because CSMBS patients gave the performance scores as the lowest comparing to other patients’ insurance schemes did therefore, the hospital should improve these services to increase the value proposition of CSMBS patients.

From this study, most CSMBS patients are female (78.25%) who mostly care about good services. With the average age of 39.88 years old, only 34.63% of CSMBS patients are under 35 years old. This data shows that most of them are middle age people with the Bachelor's degree education level. As for the financial aspect, most CSMBS patients are in the high range position comparing to average national income. 85.75% of CSMBS patients earn more than 10,000 baht per month. Thus, these people are affordable for many medium-to-high end products and services. At this point, they prefer a high quality of the service. This is one of the reasons why they valued some performance scores as the lowest. And, today many hospitals and organizations try to improve their service quality in order to maintain their current customers and attract new customers. Therefore, the hospital should certainly provide a better service in each unit within the hospital.

About the distance to the hospital, according to the data from the study, 82.88% of CSMBS patients spent less than one hour to reach the hospital because most of them are local people. They lived near the hospital. However, it normally takes them more than 4 hours for the whole process of receiving the medical services; despite, they prefer having their medical services completed within 2 hours. As a result, the hospital should improve the time administration in providing its patients the medical services.

SSS patients valued the “Service system” dimension as the lowest value comparing to other groups did; whereas, they valued “Facilities and environment” as the highest value. Hence, the hospital should improve in the “Service system” dimension. As a result, it may increase value proposition of SSS patients.

Most SSS patients are female (72.41%). With the average age of 28.60 years, 81.03% of SSS patients are under 35 years old. The data show that most of them are still young with lower than Bachelor's degree. Their occupations are industrial workers. As for the financial aspect, 75.86% of SSS patients earn lower than 10,000 baht per month. It means that most of them are in the mid range position comparing to average national income.

Regarding the distance to the hospital, 84.48% of SSS patients spent less than one hour to reach the hospital. They have also used the services from Chonburi hospital more than one time including one of their family members. Most of them are local people. One of the reasons why they choose to receive the medical service from Chonburi hospital is because it is near their houses or offices. However, for the whole process of the medical services, it normally takes them about 3-4 hours despite they prefer 2 hours. This is also one of the things that the hospital should improve the quality to meet the patients' expectation.

Self payment patients valued "Facilities and environment" dimension as the lowest value comparing to other patient groups did; while, they valued the three dimensions of the hospital's service, "Service system", "Providers" and "Medical service by physician" as the highest value comparing to other groups did. Therefore, the hospital should immediately improve in this dimension, "Facilities and environment". Then, it may help increase value proposition of self payment patients.

Most of self payment patients are female (61.76%) with the average age of 33.27 years old. Moreover 57.84% of self payment patients are also under 35 years old. The data also show that most of them are in the middle age group of people with lower than Bachelor's degree. As for the financial aspect, most of self payment patients are in the mid range position comparing to average national income. 53.92% of self payment patients earn lower than 10,000 baht per month. Most of them have also used the services from Chonburi hospital more than one time including one of their family members.

Regarding to the distance to the hospital, 68.63% of self payment patients spent less than one hour to reach the hospital. It shows that self payment patients are local people. Besides, it normally takes them about 2-3 hours for the whole process of the

medical services despite they prefer to have their medical services completed within 2 hours.

To discuss the result of this study, factors that are related to patients' importance score are education and income.

Education: Compared to patients with Bachelor's degree education level (mean of importance score = 3.70 $\pm$ 0.34), patients with lower than Bachelor's degree education level gave the importance score (mean of importance score = 3.66 $\pm$ 0.24) lower, it has a statistically significant different (p-value<0.05).

Income: Patients who have income less than 10,000 baht per month gave the importance score (mean of importance score = 2.66 $\pm$ 0.24) lower than those who have income more than 10,000 baht per month did (mean of importance score = 3.70 $\pm$ 0.34). It has a statistically significant different (p-value<0.05).

Other than that, factors that are related to patients' performance score are education, income, and patient's decision to select Chonburi hospital.

Education: Patients with lower than Bachelor's degree education level gave the performance score (mean of performance score = 2.95 $\pm$ 0.33) higher than those who are with Bachelor's degree education level did (mean of performance score = 2.63 $\pm$ 0.43). It has a statistically significant different (p-value<0.05).

Income: Patients who have income less than 10,000 baht per month gave the performance score (mean of performance score = 2.89 $\pm$ 0.37) higher than those who have income more than 10,000 baht per month (mean of performance score = 2.67 $\pm$ 0.43). It has a statistically significant different (p-value<0.05).

Patient's decision to select Chonburi hospital: Patients who decide to select Chonburi hospital gave the performance score (mean of performance score = 2.78 $\pm$ 0.41) higher than those who decide to select other hospital (mean of performance score = 2.61 $\pm$ 0.45). Therefore, it has a statistically significant different (p-value<0.05).

To discuss based on the theories of learning, the patients with the Bachelor's degree are educated and have a lot of learning. For example, today there is a high competition in business by providing better and better services to customers. When they have received a good service from one business provider, it probably causes them to need equal or better quality services from Chonburi hospital. Also, they are

educated to choose a high quality service after paying for medical fee. That is the reason why they valued the performance score for each service lower than another group did.[30]

3.2. Comparison mean of value proposition classified by healthcare status: Providers and patients.

The providers valued all dimensions of hospital's service, "Facilities and environment", "Service system", "Providers", "Medical service by physician", "Pharmacy services", "Nurse services" and "Others" lower than the patients did. To conclude, the providers valued all services to have the performance scores lower than the patients did. It means that Chonburi hospital medical staffs agreed with the improvement in these kinds of services.

The result of this classification is the same as that of patients' insurance schemes classification. Factors that are related to patients' importance score are education and income. And factors that are related to patients' performance score are education, income, and patient's decision to select Chonburi hospital. The resulted of this study showed that most patients were younger with high school-undergraduate education level. 49.80% of patients had income lower than 10,000 baths per month and 76.13% of them would select Chonburi hospital to be the service hospital. While most providers were younger with the Bachelor's degree education level. 44.57% of provider had income more than 20,000 baths per month and 80.70% of them would select Chonburi hospital to be the service hospital.

To discuss, from the study, the services that had the highest importance score should be firstly considered to be improved their quality. With the concept of the order of consideration, if the patients think that which services are necessary for them and should be improved their quality, the hospital should set the budgets and allocate the resources in order to improve those services straight away.[31]

Part IV Selection of health service utilization.

Based on the patient's decision, it was found that patients were classified into two groups.

The first group is people who select "Chonburi hospital" to be their service hospital (78.00%). Most of them are young and satisfied with the hospital services. Moreover, they will recommend others to use Chonburi hospital's services. For the patients' insurance schemes classification, it was found that CSMBS patients were the highest proportion of all patients in selecting "Chonburi hospital". Apart from that, five factors that affect their decision to select Chonburi hospital to be their service hospital are "Confidence in doctor and officer ability", "Modern technology equipment", "Government hospital", "Ease in communication" and "Reasonable price". From the study, one of the reasons why a minority of the patients in the first group selects Chonburi hospital is because they had their high royalty to Chonburi hospital. As they are old patients, they get used to receiving the service from this hospital for a long time and they would not like to change the hospital.

The second group is people who select "other hospitals" to be their service hospital (22.00%). Most of them are young. They are under 35 years old with a high school-undergraduate degree. For the patients' insurance schemes classification, it was found that self payment patients were the highest proportion of all patients in selecting "other hospital" to be their service hospital. Other than that, five factors that affect their decisions to select "other hospital" to be service hospital are "Confidence in doctor and officer ability", "Modern technology equipment", "Government hospital", "Reasonable price" and "Ease in communication".

Today, people, especially teenagers and young adults, are interested in modern technology more and more. Most of them currently use high technology in their daily life because it facilitates them and makes them more convenient. This can be a reason explaining why the second group of people selects "other hospitals" to be their service hospital based on one of the five factors ("Modern technology equipment"). Today, many companies have been closed or replaced by innovative companies. Many of the frequently cited indicators of the decline are such as lack of innovation, falling marketing share, low productivity, and poor quality. As a result, Chonburi hospital

should manage a strategy in innovation and change such as implementing new designs and equipment. And, manage linkages to share patients' data or information with others in the vital case. Or, be ready if one department or unit needs a patient's information quickly.[32]

The interviewed patients can be divided into two groups: repeated customer 78.39% and non-repeated customer 21.61%. Among these non-repeated patients, they are 19.07% of CSMBS patients, 24.57% of SSS patients and 25.71% of self payment patients. After multiplying the number of patients in each group with the income that they generated to hospital, it can be estimated that the hospital will lose 108,511,352 bath if they changed the service to other hospitals.

In the last part, the objective is to identify the hospital's competitors. (i.e. one of the process of competitor analysis) The hospital's competitors were defined as similar or higher quality of services offerings to the same groups of the patients.

In all service dimensions, Chonburi hospital had the highest percentage in all mentioned hospitals. Assumptions are because they have a high royalty for the hospital. The majority of them are aged people, have a high frequency in visiting OPD, and have low experienced to other hospitals.

Aekchon hospital is the runner-up hospital that had high percentage in all service dimensions. Morover, it is a private hospital and has more resources to completely improve its services in order to meet patients' satisfaction. Since, it is located in Chonburi. It can compete with Chonburi hospital in case of SSS and self payment patients.

Bumroungraj hospital is the third mentioned hospital in all service dimensions. It is a luxury private hospital and has more resources to completely improve its services that can make patients satisfied and convenience. Although, its location is in Bangkok it can be one of the Chonburi hospital's competitors in case of self payment patients.

King Chulalongkorn Memorial hospital and Siriraj hospital, the large government medical school hospitals. Although, their location are in Bangkok, they are also Chonburi hospital's competitors in case of CSMBS and self payment patients because it is famous on modern technology equipments.

Somdej-Sriracha hospital is a large government hospital. It is famous in facility and environment service dimension. And, its location is in Chonburi. In case of CSMBS, SSS, and self payment patients, it might be Chonburi hospital's competitor.

Samittivej-Sriracha hospital and Bangkok-Pattaya hospital are private hospitals. They have many resources to completely improve their services in order to meet their patients' satisfaction and convenience. And, they are located in Chonburi. In case of SSS and self payment patients, they might be ones of the competitors.

Smittivej hospital is a luxury private hospital and has a lot of resources to improve its services to meet its patients' satisfaction and convenience. But, its location is in Bangkok where is pretty far away from Chonburi province. However, in case of self payment patients, it might be one of the Chonburi hospital's competitors.

Compared between these competitors, Aekchon hospital is the main competitor of Chonburi hospital that has enough resources and a good location in the vicinity. Thus, Chonburi hospital should research more about the competitor's services in order to improve its own services for better and higher quality. Also, it should differentiate itself from the competitor. By using marketing strategy to compete with the competitor, the hospital should evaluate its strategies based on the marketing mix concept, learn through feedback at customers' express, and analyze its strengths and weaknesses to provide the strong points of Chonburi hospital's services as its competitive advantages.[33]

One of the ways to improve the hospital's performance is the control of resource allocation and usage. As people know that resources has become important since it can create the power. If the hospital has power to manage their resources, it will lead to the best productivity. For example, first, the hospital should hire the right providers who are experienced and skilled in the right position and the right job as well as fire the bad ones if they are not the right person in the right position. Secondly, the hospital should efficiently allocate the budgets as budgets are incremental if each department uses them for the most useful activities. Lastly, raise sufficient rewards for all of the outstanding performers so that they will provide their best services to the patients. These will help improve the hospital's performance and make the patients more impressed and satisfied.[31]

CHAPTER VI
CONCLUSIONS AND RECOMMENDATIONS

Conclusions

If civil servant medical benefit scheme (CSMBS) changes its reimbursement to capitation, the civil servant participants should select service hospital as there service hospital. It will directly affect budget management system of the government hospital such as Chonburi hospital. Analysis of patient needs and behavior, value judgments, patients' decision and competitors will help increase the number of patients and provide better service.

CSMBS patients gave the highest importance score to "Pharmacy services" (Importance score = 3.77) which was statistically significant different ($p < 0.05$) from SSS patients and self payment patients who chose "Nurse services" (Importance score = 3.73) and "Providers" (Importance score = 3.78) respectively. All of them gave the lowest performance score to "Facilities and environment" dimension similarly.

Patients gave the highest importance score to "Providers" and "Pharmacy services" (Importance score = 3.74) which were statistically significant different ($p < 0.05$) from providers who chose "Pharmacy services" (Importance score = 3.80). And all of them gave the lowest performance score in "Facilities and environment" dimension similarly.

Based on the patient's decision, those who selected "Chonburi hospital" as their service hospital (78.00%) were young and satisfied with the hospital services, while those who selected "other hospitals" as their service hospital (22.00%) were under 35 years old with a high school-undergraduate degree. Five factors that affected their decision were "Confidence in doctor and officer ability", "Modern technology equipment", "Government hospital", "Ease in communication" and "Reasonable price".

Based on the result, it shows that the model of the patients' profile of Chonburi hospital is a hexagonal model. There are 14.38% initial transaction, 78.39% of patients become repeating customer and 73.05% of repeating customers will advocate services of hospital. The best way to manage of this model is to increase new patients. Recommendation by experiencing patients (words-of-mouth) is the best advertising to increase new patients.

The respondents placed value propositions for outpatient service to:

- "Pharmacy services" is the most valuable proposition in service dimension. They are highest satisfied in receiving the good quality medicine and relief of symptom after use. While "Drug information service by telephone." had the lowest valuable proposition, drugs' receiving time was the lowest performance of pharmacy service.

- "Medical service by physician" was the second value proposition in respondents' perspective. "Asking about allergic and treatment history" had the highest value proposition. "Doctors' prescribe drug by computer" had the lowest value proposition. While appropriate time used by the physician in examination and treatment was the lowest performance of medical service.

- The highest value proposition of "Nurse services" were "Gentle and friendly nurse." and "Caring and enthusiastically service". Nurses advice before seeing doctor must be improved because of this service had the lowest performance scores.

- Providing service by gentle and friendly healthcare officers is one of the values of the outpatient service, while "Adequate staff to give information at busy spot" was lowest performance.

- "Queue system" was the highest value of services system. While "Guarantee waiting time in each service center" had lowest performance. Most of patients thought that they used more waiting time in each service so they wanted the hospital to decrease waiting time and make it real.

- "Clean and good hygiene hospital area" is the value of facilities and environment of Chonburi hospital. However the hospital should concentrate on parking lot problem and "Children play ground." Since it is the lowest value proposition.

- Receiving the examination with modern technology equipment and receiving the certificate of hospital accreditation from the Quality Improvement and Hospital Accreditation Institute are quality aspect value of service in respondents' perspective.

The hospital should add the value into services because value is the important factor that inducing the utilization. Value may be improved by increasing satisfaction or performance of service. The hospital should concentrate on a method to improve quality of the service to be an excellent performance.

In addition, analyzing competitor is also an important issue to focus on. Although this study found that Chonburi hospital had the highest percentage of mentioned hospital in all dimension, Aekchon hospital was the second mentioned hospital in all service dimensions. So, Aekchon hospital was identified as the main competitor. Chonburi hospital should look how this hospital provides its service in order to create competitive advantages.

In conclusion, the hospital should focus on the strength point in the service dimension of the competitive hospital to improve their quality of service.

Recommendations of The Study

Base on the results of this study, the recommendation can be made as follow:

1. If the hospital wants to maintain and increase the number of patients, the hospital should improve hospital service's value, retain patient's trust to the hospital and develop the favorable attitude to hospital system. These are the ways to promote patient advocate.

2. Hospital marketing research should be performed as a regular or periodical research for the hospital, because the patient's need and behavior could changed all the times. Update customer profile is also an important process of customer management.

3. Competitor analysis is the interesting issue for further study. It will help the hospital in planning strategy to compete with others hospital.

4. This survey should be conduct among Universal Coverage patients because it is the largest group that influenced Chonburi Hospital expenditure. The hospital consists of many types of patients, services, and needs. The market should be determined which segments offer the best opportunity for achieving hospital objectives. Patients can be grouped and served in various ways.

Recommendations of the policy maker.

1. Base on the result of this study, five services that had high importance scores but low performance scores which urgently need improvement are
    - 5.4 Less than 30 minutes drugs' waiting time.
    - 1.5 Adequate parking lot.
    - 2.6 Guarantee waiting time in each service center.
    - 1.7 Adequate green area.
    - 1.9 Children play ground.
2. While the strong points found from this study are five services those received high importance scores and high performance scores, they are
    - 4.4 Making an appointment for follow up.
    - 5.2 Receiving the correct kind and amount of medicine.
    - 5.5 Receiving the good quality medicine and relief of symptoms after use.
    - 5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence.
    - 7.2 Receiving the examination with modern technology equipment.

    These strong points can be used as a promotion tools to gain competitive advantages.
3. Find strategy to build up more new patients.
4. Use words-of-mouth promote Chonburi Hospital's renown to be known widely.

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APPENDIX

การประเมินคุณค่างานในการบริการทางการแพทย์ผู้ป่วยนอกโรงพยาบาลชลบุรี

การให้คะแนนความสำคัญของหัวข้อบริการ

4 คะแนน สำคัญมาก
3 คะแนน สำคัญ
2 คะแนน สำคัญน้อย
1 คะแนน ไม่สำคัญ

การให้คะแนนประสิทธิภาพผลงานการให้บริการ

4 คะแนน ดีมาก
3 คะแนน ค่อนข้างดี
2 คะแนน ค่อนข้างแย่
1 คะแนน แย่มาก

โปรดให้คะแนนความสำคัญ (ด้านซ้าย) และประสิทธิภาพผลงาน (ด้านขวา) ของทุกหัวข้อที่ใช้ประเมินต่อไปนี้

คะแนนความสำคัญ				1. สภาพแวดล้อมในโรงพยาบาล	ประสิทธิภาพผลงาน			
1	2	3	4		1	2	3	4
				1.1 มีเครื่องหมายป้ายบอกทางไปจุดรับบริการต่าง ๆ ชัดเจน ไม่สับสน				
				1.2 มีที่นั่งรอพบแพทย์เพียงพอ				
				1.3 มีที่นั่งรอรับยาเพียงพอ				
				1.4 พื้นที่ในโรงพยาบาลสะอาด ถูกสุขลักษณะ				
				1.5 มีที่จอดรถเพียงพอ				
				1.6 ห้องน้ำที่ให้บริการมีความสะอาด				
				1.7 สถานที่พักผ่อนสำหรับครอบครัวผู้ป่วยเพียงพอ				
				1.8 โรงอาหารสะอาด ถูกสุขลักษณะ ให้บริการได้ อย่างพอเพียง				
				1.9 มีห้องสันทนาการสำหรับเด็กๆ				
				1.10 ผลงานด้านสภาพแวดล้อมในโรงพยาบาลโดยรวม				

โรงพยาบาลที่ท่านได้รับทราบว่ามีสิ่งแวดล้อมดีที่สุด คือ

☐ โรงพยาบาลชลบุรี ☐ โรงพยาบาลรัฐแห่งอื่น..... ☐ โรงพยาบาลเอกชน.....

คะแนนความสำคัญ				2. ระบบการให้บริการ	ประสิทธิภาพผลงาน			
1	2	3	4		1	2	3	4
				2.1 ระยะเวลาที่เปิดให้บริการเหมาะสม 08.00 – 16.00 น.				
				2.2 ขั้นตอนในการรับบริการไม่ยุ่งยากซับซ้อน				
				2.3 จุดให้บริการต่างๆ อยู่ในบริเวณเดียวกัน สามารถทำให้เสร็จในจุดเดียว				
				2.4 มีระบบคิว				
				2.5 เวลาการรับบริการตรงตามบัตรคิว				
				2.6 มีการประกันระยะเวลาในการรอรับบริการแต่ละจุด				
				2.7 ผลงานด้านระบบการให้บริการโดยรวม				

โรงพยาบาลที่ท่านได้รับทราบว่ามีระบบการให้บริการที่ดีที่สุด คือ

☐ โรงพยาบาลชลบุรี ☐ โรงพยาบาลรัฐแห่งอื่น..... ☐ โรงพยาบาลเอกชน.....

คะแนนความสำคัญ				3. ผู้ให้บริการ	ประสิทธิภาพผลงาน			
1	2	3	4		1	2	3	4
				3.1 มีเจ้าหน้าที่ให้บริการเพียงพอในจุดต่าง ๆ				
				3.2 เจ้าหน้าที่มีความสุภาพและเป็นมิตร				
				3.3 เจ้าหน้าที่มีความกระตือรือร้นในการให้บริการ มีความเข้าใจในระบบงาน ให้ข้อมูลและคำแนะนำที่ถูกต้อง				
				3.4 เจ้าหน้าที่ ให้บริการตรงเวลา				
				3.5 มีเจ้าหน้าที่สังเกตการณ์ให้คำแนะนำ ตอบคำถามผู้ป่วย ณ จุดบริการที่สำคัญต่างๆ				
				3.6 ผลงานของผู้ให้บริการโดยรวม				

โรงพยาบาลที่ท่านได้รับทราบว่ามีผู้ให้บริการที่ดีที่สุด คือ

☐ โรงพยาบาลชลบุรี ☐ โรงพยาบาลรัฐแห่งอื่น..... ☐ โรงพยาบาลเอกชน.....

คะแนนความสำคัญ				4. การรับบริการตรวจโดยแพทย์	ประสิทธิภาพผลงาน			
1	2	3	4		1	2	3	4
				4.1 เวลาที่ใช้ในการตรวจและซักถามอาการ เหมาะสม				
				4.2 แพทย์อธิบายโรค ผลข้างเคียง ข้อจำกัด และข้อควรระวังในการรักษาและให้ผู้ป่วยมีส่วนร่วมในการเลือกวิธีการรักษา				
				4.3 แพทย์ได้สอบถามเรื่องประวัติการแพ้ยา และประวัติการรักษา				
				4.4 แพทย์มีการนัดหมายครั้งต่อไป เพื่อติดตามผลการรักษา				
				4.5 แพทย์สั่งยาด้วยระบบคอมพิวเตอร์				
				4.6 ผลงานการรับบริการตรวจจากแพทย์โดยรวม				

โรงพยาบาลที่ท่านได้รับทราบว่ามีการบริการตรวจโดยแพทย์ดีที่สุด คือ

☐ โรงพยาบาลชลบุรี ☐ โรงพยาบาลรัฐแห่งอื่น..... ☐ โรงพยาบาลเอกชน.....

คะแนนความสำคัญ				5. การรับบริการของฝ่ายเภสัชกรรม	ประสิทธิภาพผลงาน			
1	2	3	4		1	2	3	4
				5.1 ขั้นตอนการติดต่อซื้อยาถึงการรับยาไม่ยุ่งยาก				
				5.2 ได้รับยาถูกต้อง ครบถ้วน				
				5.3 ได้รับคำแนะนำในการใช้ยาโดยเภสัชกร				
				5.4 ระยะเวลาในการรอคอยรับยาไม่นานกว่า 30 นาที				
				5.5 ยาที่ได้รับมีคุณภาพดี				
				5.6 ภาชนะบรรจุ, ฉลากยา และวิธีใช้ยา มีความเหมาะสม ทำให้เกิดความความมั่นใจ สามารถปฏิบัติตามได้				
				5.7 มีบริการโทรศัพท์ติดต่อสอบถามข้อมูลยา				

				5.8 ผลงานการรับบริการจากฝ่ายเภสัชกรรมโดยรวม				
โรงพยาบาลที่ท่านได้รับทราบว่ามีบริการเภสัชกรรมที่ดีที่สุด คือ ☐ โรงพยาบาลชลบุรี ☐ โรงพยาบาลรัฐแห่งอื่น..... ☐ โรงพยาบาลเอกชน.....							
คะแนนความสำคัญ				**6. การบริการของพยาบาล**	**ประสิทธิภาพผลงาน**		
1	**2**	**3**	**4**		**1**	**2**	**3**	**4**
				6.1 สุภาพ นุ่มนวล ยิ้มแย้มแจ่มใส มีอัธยาสัยดี				
				6.2 สนใจ เอาใจใส่ และเต็มใจให้ความช่วยเหลือ				
				6.3 ให้ข้อมูลและอธิบายขั้นตอนการพบแพทย์				
				6.4 ปฏิบัติต่อท่านอย่างเสมอภาคและให้เกียรติ				
				6.5 ผลงานการบริการของพยาบาลโดยรวม				
โรงพยาบาลที่ท่านได้รับทราบว่ามีการบริการ โดยพยาบาลดีที่สุด คือ ☐ โรงพยาบาลชลบุรี ☐ โรงพยาบาลรัฐแห่งอื่น..... ☐ โรงพยาบาลเอกชน.....							
คะแนนความสำคัญ				**7. อื่นๆ**	**ประสิทธิภาพผลงาน**		
1	**2**	**3**	**4**		**1**	**2**	**3**	**4**
				7.1 มีบอร์ด, แผ่นพับอธิบายขั้นตอนการดำเนินงาน และวิธีการใช้บริการการรักษาพยาบาล ในแต่ละจุด				
				7.2 ได้รับการตรวจวินิจฉัยโรคด้วยเครื่องมือที่ทันสมัย				
				7.3 ได้รับการบริการที่สะดวกรวดเร็วเท่าเทียมผู้ป่วยที่ใช้สิทธิบัตรอื่นๆ				
				7.4 มีบริการข่าวสารเกี่ยวกับการบริการของโรงพยาบาล				
				7.5 การผ่านการรับรองคุณภาพโรงพยาบาลตามมาตรฐานของสถาบันพัฒนาและรับรองคุณภาพโรงพยาบาล (HA)				
สิ่งที่ท่านอยากให้ปรับปรุงบริการมากที่สุด คือ …….....								

ข้อมูลทั่วไปของท่าน

1. เจ้าหน้าที่โรงพยาบาลชลบุรี ☐ ใช่ (โปรดระบุตำแหน่ง ……/ แผนก ……) ☐ ไม่ใช่
2. เพศ ☐ ชาย ☐ หญิง
3. อายุ..... ปี
4. การศึกษา ☐ ต่ำกว่าประถมศึกษา/ ประถมศึกษา ☐ มัธยมศึกษา/ ปวช./ ปวส./ อนุปริญญา
   ☐ ปริญญาตรีหรือเทียบเท่า ☐ สูงกว่าปริญญาตรี
5. สิทธิ ☐ รับราชการ/ รัฐวิสาหกิจ ☐ ประกันสังคม ☐ ชำระเงินเอง
6. รายได้ทั้งหมดต่อเดือน
   ☐ ≤ 5,000 บาท ☐ 5,001 – 10,000 บาท ☐ 10,001 – 15,000 บาท
   ☐ 15,001 – 20,000 บาท ☐ > 20,000 บาท
7. ระยะเวลาเฉลี่ยที่ท่านใช้ในการเดินทางมาโรงพยาบาล
   ☐ น้อยกว่า 1 ชั่วโมง ☐ 1 – น้อยกว่า 2 ชั่วโมง ☐ 2 – น้อยกว่า 3 ชั่วโมง
   ☐ 3 – น้อยกว่า 4 ชั่วโมง ☐ มากกว่า 4 ชั่วโมง
8. ระยะเวลาที่มาใช้บริการจากโรงพยาบาล (ตั้งแต่การยื่นบัตรผู้ป่วยจนถึงระยะเวลาสิ้นสุดขั้นตอนการรับยา)
   ☐ น้อยกว่า 1 ชั่วโมง ☐ 1 – น้อยกว่า 2 ชั่วโมง ☐ 2 – น้อยกว่า 3 ชั่วโมง
   ☐ 3 – น้อยกว่า 4 ชั่วโมง ☐ มากกว่า 4 ชั่วโมง
9. ระยะเวลาที่มาใช้บริการจากโรงพยาบาลที่ท่านยอมรับได้ตั้งแต่การยื่นบัตรผู้ป่วยจนถึงสิ้นสุดขั้นตอนการรับยา
   ☐ 1 ชั่วโมง ☐ 2 ชั่วโมง ☐ 3 ชั่วโมง
   ☐ 4 ชั่วโมง ☐ 5 ชั่วโมง
10. ท่านพอใจกับการมารับบริการที่โรงพยาบาล
    ☐ พอใจมาก ☐ พอใจ ☐ ไม่พอใจ
11. ความถี่ในการมาใช้บริการที่โรงพยาบาล (ต่อปี)…… ครั้ง ☐ มาครั้งแรก
12. คนในครอบครัว ญาติ คนรู้จักอื่นๆ เคยมารักษาที่โรงพยาบาลชลบุรี
    ☐ เคย ☐ ไม่เคย
13. ท่านจะแนะนำให้บุคคลอื่นมาใช้บริการที่โรงพยาบาลชลบุรีหรือไม่
    ☐ แนะนำ ☐ ไม่แนะนำ
14. หากท่านจำเป็นต้องระบุเลือกโรงพยาบาลตามสิทธิการรักษาพยาบาลล่วงหน้า ท่านจะเลือกโรงพยาบาลชลบุรีหรือไม่
    ☐ เลือก
    ☐ ไม่เลือก (ระบุโรงพยาบาลที่จะเลือก)……..

15. ผลของการประเมินคุณค่างานในการบริการทางการแพทย์ผู้ป่วยนอก มีผลต่อการตัดสินใจเลือกโรงพยาบาลเป็นสถานพยาบาลตามสิทธิการรักษาหรือไม่

☐ มี ☐ ไม่มี

16. โปรดระบุปัจจัยสำคัญ 3 ข้อที่ท่านตัดสินใจเลือกโรงพยาบาลเป็นสถานพยาบาลตามสิทธิการรักษา

….. 1. เลือกเพราะไม่มีทางเลือกอื่น

….. 2. มีผู้แนะนำ คือ……..

….. 3. มีเครื่องมือแพทย์ที่ทันสมัย

….. 4. เชื่อมั่นในความสามารถของแพทย์และบุคลากรของโรงพยาบาล

….. 5. เป็นโรงพยาบาลรัฐ

….. 6. ราคาค่าบริการที่สมเหตุสมผล

….. 7. รู้จักกับบุคลากรในโรงพยาบาลเป็นพิเศษ เช่นแพทย์ พยาบาล ฯลฯ

….. 8. ได้ทราบข้อมูลว่าให้บริการดี (ระบุด้าน)……

….. 9. การเดินทางคมนาคมสะดวก

….. 10. ใกล้บ้านหรือใกล้ที่ทำงาน

….. 11. อื่นๆ คือ ……

Comparison of importance score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
1.1 Having clearly signpost to service center.	3.66 ± 0.57	258	3.59 ± 0.50	58	3.57 ± 0.57	102	0.16
1.2 Enough and not crowded seats in doctor's waiting area.	3.64 ± 0.55	259	3.66 ± 0.51	58	3.49 ± 0.56	102	0.02
1.3 Enough and not crowded seats in drug's receiving area.	3.57 ± 0.58	258	3.45 ± 0.65	58	3.42 ± 0.60	102	0.06
1.4 Clean and good hygiene hospital area.	3.78 ± 0.48	259	3.79 ± 0.41	58	3.78 ± 0.46	102	0.98
1.5 Adequate parking lot.	3.68 ± 0.58	259	3.47 ± 0.75	58	3.52 ± 0.79	102	0.03
1.6 Clean and good hygiene toilet.	3.78 ± 0.48	258	3.79 ± 0.41	58	3.78 ± 0.46	102	0.99
1.7 Adequate green area.	3.06 ± 0.77	259	3.16 ± 0.79	58	3.21 ± 0.72	102	0.22
1.8 Clean and good hygiene food center.	3.57 ± 0.64	258	3.45 ± 0.75	58	3.51 ± 0.69	102	0.52
1.9 Children play ground.	2.82 ± 0.99	259	2.58 ± 1.02	57	2.62 ± 1.04	102	0.12
2.1 Appropriate service time.	3.71 ± 0.53	259	3.74 ± 0.44	58	3.70 ± 0.52	102	0.92
2.2 Uncomplicated service procedure.	3.78 ± 0.49	258	3.55 ± 0.68	58	3.67 ± 0.57	102	0.01
2.3 Having convenience appointment system and various services in one area.	3.74 ± 0.57	258	3.55 ± 0.60	58	3.65 ± 0.62	102	0.02
2.4 Queue system.	3.79 ± 0.50	258	3.71 ± 0.50	58	3.72 ± 0.53	102	0.16
2.5 The priorities of receiving service.	3.70 ± 0.54	256	3.69 ± 0.50	58	3.66 ± 0.61	102	0.79
2.6 Having guarantee waiting time in each service center.	3.64 ± 0.63	256	3.48 ± 0.75	58	3.62 ± 0.66	102	0.25
3.1 Adequate officer in each center.	3.75 ± 0.48	259	3.66 ± 0.51	58	3.74 ± 0.49	102	0.34
3.2 Gentle and friendly officers.	3.81 ± 0.45	259	3.78 ± 0.46	58	3.84 ± 0.37	102	0.70
3.3 Served by enthusiastically officers.	3.79 ± 0.48	258	3.81 ± 0.40	58	3.81 ± 0.42	102	0.98
3.4 On time officers.	3.79 ± 0.48	259	3.71 ± 0.50	58	3.85 ± 0.36	101	0.14

* Tested by Kruskal - Wallis test.

(Continued) Comparison of importance score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
3.5 Familiarly officers in service system and ability to give advice.	3.67 ± 0.53	258	3.60 ± 0.53	58	3.68 ± 0.58	102	0.45
4.1 Appropriate time used by the physician in examination and treatment.	3.74 ± 0.49	258	3.57 ± 0.50	58	3.80 ± 0.47	102	0.00
4.2 Explanation side effect, limitation, precaution of the treatment and given a chance to participate in treatment.	3.83 ± 0.44	256	3.64 ± 0.69	58	3.84 ± 0.37	102	0.05
4.3 Asking about allergic and treatment history.	3.80 ± 0.46	256	3.72 ± 0.45	58	3.85 ± 0.36	102	0.13
4.4 Making an appointment for follow up.	3.74 ± 0.48	257	3.76 ± 0.47	58	3.75 ± 0.43	102	0.93
4.5 Doctors' prescribe drug by computer.	3.46 ± 0.72	257	3.45 ± 0.71	58	3.48 ± 0.67	102	0.96
5.1 Uncomplicated procedure in receiving the medicine.	3.75 ± 0.51	256	3.53 ± 0.71	58	3.73 ± 0.53	102	0.05
5.2 Receiving the correct kind and amount of medicine.	3.88 ± 0.40	257	3.79 ± 0.41	58	3.87 ± 0.34	102	0.06
5.3 Receiving explanation in the use of each medicine by pharmacist.	3.69 ± 0.52	256	3.72 ± 0.56	58	3.80 ± 0.42	102	0.64
5.4 Less than 30 minutes drugs' waiting time.	3.74 ± 0.60	257	3.69 ± 0.63	58	3.77 ± 0.49	102	0.77
5.5 Receiving the good quality medicine and relief of symptoms after use.	3.87 ± 0.39	257	3.88 ± 0.33	58	3.92 ± 0.27	102	0.57
5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence.	3.80 ± 0.44	256	3.84 ± 0.37	58	3.82 ± 0.41	102	0.88
5.7 Drug information service by telephone.	3.59 ± 0.61	257	3.55 ± 0.54	58	3.49 ± 0.71	102	0.43
6.1 Gentle and friendly nurse.	3.75 ± 0.47	259	3.81 ± 0.51	58	3.79 ± 0.41	102	0.44
6.2 Interesting and enthusiastically service	3.79 ± 0.47	259	3.79 ± 0.41	58	3.78 ± 0.44	102	0.92
6.3 Nurse advice before seeing doctor.	3.63 ± 0.49	259	3.66 ± 0.51	58	3.69 ± 0.60	102	0.46

*Tested by Kruskal - Wallis test.

(Continued) Comparison of importance score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
6.4 Receiving the equity in nurse service.	3.74 ± 0.48	259	3.67 ± 0.60	58	3.68 ± 0.49	102	0.44
7.1 Having board or pamphlet to explain service system in each area.	3.54 ± 0.62	258	3.47 ± 0.68	58	3.41 ± 0.72	102	0.35
7.2 Receiving the examination with modern technology equipment.	3.74 ± 0.50	257	3.81 ± 0.40	58	3.90 ± 0.30	102	0.01
7.3 Receiving the equity, convenience and fast services in every health insurance schemes.	3.72 ± 0.48	258	3.76 ± 0.47	58	3.74 ± 0.44	102	0.82
7.4 Having information of service and hospital news.	3.55 ± 0.63	257	3.48 ± 0.63	58	3.49 ± 0.69	102	0.59
7.5 Receiving the certificate of hospital accreditation from Quality Improvement and Hospital Accreditation Institute.	3.72 ± 0.51	255	3.78 ± 0.42	58	3.75 ± 0.54	102	0.66

*Tested by Kruskal - Wallis test.

(Continued) Comparison of performance score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
1.1 Having clearly signpost to service center.	2.48 ± 0.69	260	2.90 ± 0.52	58	2.85 ± 0.57	102	0.00
1.2 Enough and not crowded seats in doctor's waiting area.	2.52 ± 0.76	262	2.66 ± 0.69	58	2.72 ± 0.57	102	0.02
1.3 Enough and not crowded seats in drug's receiving area.	2.71 ± 0.64	261	2.74 ± 0.78	58	2.94 ± 0.58	102	0.00
1.4 Clean and good hygiene hospital area.	2.75 ± 0.58	261	2.90 ± 0.67	58	2.84 ± 0.64	102	0.07
1.5 Adequate parking lot.	2.12 ± 0.84	260	2.59 ± 0.86	58	2.34 ± 0.83	102	0.00
1.6 Clean and good hygiene toilet.	2.39 ± 0.71	259	2.62 ± 0.81	58	2.59 ± 0.72	101	0.01
1.7 Adequate green area.	2.15 ± 0.71	262	2.60 ± 0.80	57	2.57 ± 0.73	101	0.00
1.8 Clean and good hygiene food center.	2.46 ± 0.66	260	2.74 ± 0.67	57	2.87 ± 0.66	101	0.00
1.9 Children play ground.	2.16 ± 0.79	257	2.40 ± 0.80	57	2.04 ± 0.85	101	0.02
1.10 Overall of environment performance score.	2.60 ±0.56	241	2.93 ± 0.59	57	2.81 ± 0.54	102	0.00
2.1 Appropriate service time.	2.85 ± 0.67	261	2.76 ± 0.63	58	2.88 ± 0.65	102	0.46
2.2 Uncomplicated service procedure.	2.37 ± 0.75	260	2.79 ± 0.77	58	2.83 ± 0.73	102	0.00
2.3 Having convenience appointment system and various services in one area.	2.38 ± 0.77	261	2.83 ± 0.73	58	2.76 ± 0.75	102	0.00
2.4 Queue system.	2.77 ± 0.70	262	3.07 ± 0.75	58	3.07 ± 0.68	102	0.00
2.5 The priorities of receiving service.	2.54 ± 0.77	260	2.84 ± 0.81	58	2.87 ± 0.75	102	0.00
2.6 Having guarantee waiting time in each service center.	2.24 ± 0.79	261	2.49 ± 0.78	57	2.48 ± 0.79	102	0.01
2.7 Overall of services system performance score.	2.61 ± 0.63	246	2.81 ± 0.55	57	2.86 ± 0.65	102	0.00
3.1 Adequate officer in each center.	2.42 ± 0.71	261	2.86 ± 0.67	57	2.94 ± 0.66	102	0.00

* Tested by Kruskal - Wallis test.

(Continued) Comparison of performance score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
3.2 Gentle and friendly officers.	2.59 ± 0.78	261	2.98 ± 0.64	57	2.93 ± 0.76	102	0.00
3.3 Served by enthusiastically officers.	2.56 ± 0.75	261	3.05 ± 0.67	57	2.87 ± 0.57	102	0.00
3.4 On time officers.	2.58 ± 0.72	260	2.86 ± 0.77	57	2.88 ± 0.65	101	0.00
3.5 Familiarly officers in service system and ability to give advice.	2.44 ± 0.77	261	2.81 ± 0.77	57	2.64 ± 0.78	102	0.00
3.6 Overall of providers' service performance score.	2.63 ± 0.69	245	2.93 ± 0.59	57	2.83 ± 0.45	102	0.00
4.1 Appropriate time used by the physician in examination and treatment.	2.64 ± 0.79	259	3.00 ± 0.65	57	2.93 ± 0.73	102	0.00
4.2 Explanation side effect, limitation, precaution of the treatment and given a chance to participate in treatment.	2.63 ± 0.74	259	3.07 ± 0.80	57	3.03 ± 0.78	102	0.00
4.3 Asking about allergic and treatment history.	2.85 ± 0.71	259	3.25 ± 0.66	57	3.21 ± 0.72	102	0.00
4.4 Making an appointment for follow up.	3.07 ± 0.63	259	3.21 ± 0.67	57	3.27 ± 0.63	102	0.01
4.5 Doctors' prescribe drug by computer.	2.74 ± 0.77	256	3.05 ± 0.74	57	2.96 ± 0.74	102	0.00
4.6 Overall of physician service performance score.	2.91 ± 0.62	240	3.18 ± 0.63	57	3.16 ± 0.58	100	0.00
5.1 Uncomplicated procedure in receiving the medicine.	2.53 ± 0.80	259	2.89 ± 0.70	57	2.75 ± 0.78	102	0.00
5.2 Receiving the correct kind and amount of medicine.	2.82 ± 0.74	259	3.32 ± 0.63	57	3.29 ± 0.48	102	0.00
5.3 Receiving explanation in the use of each medicine by pharmacist.	2.69 ± 0.76	258	3.09 ± 0.74	57	3.04 ± 0.69	102	0.00
5.4 Less than 30 minutes drugs' waiting time.	2.25 ± 0.86	259	2.65 ± 0.83	57	2.44 ± 0.83	102	0.00
5.5 Receiving the good quality medicine and relief of symptoms after use.	3.00 ± 0.61	259	3.25 ± 0.58	57	3.15 ± 0.55	102	0.01

* Tested by Kruskal - Wallis test.

(Continued) Comparison of performance score classified by patients' insurance schemes.

Services	CSMBS		SSS		Self payment		P-value
	Mean ± SD	N	Mean ± SD	N	Mean ± SD	N	
5.5 Receiving the good quality medicine and relief of symptoms after use.	3.00 ± 0.61	259	3.25 ± 0.58	57	3.15 ± 0.55	102	0.01
5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence.	3.09 ± 0.59	259	3.33 ± 0.64	57	3.28 ± 0.55	102	0.00
5.7 Drug information service by telephone.	2.69 ± 0.76	259	2.82 ± 0.87	57	2.61 ± 0.85	102	0.19
5.8 Overall of pharmacy service performance score.	2.78 ± 0.59	246	2.98 ± 0.61	57	2.97 ± 0.62	102	0.00
6.1 Gentle and friendly nurse.	2.80 ± 0.67	262	3.02 ± 0.58	57	2.93 ± 0.65	102	0.02
6.2 Interesting and enthusiastically service	2.74 ± 0.66	262	3.04 ± 0.57	57	2.86 ± 0.61	102	0.00
6.3 Nurse advice before seeing doctor.	2.61 ± 0.68	261	2.95 ± 0.58	57	2.96 ± 0.64	102	0.00
6.4 Receiving the equity in nurse service.	2.68 ± 0.72	262	3.05 ± 0.61	57	2.91 ± 0.69	102	0.00
6.5 Overall of nurses' service performance score.	2.78 ± 0.62	251	3.07 ± 0.53	57	2.98 ± 0.56	102	0.00
7.1 Having board or pamphlet to explain service system in each area.	2.58 ± 0.65	257	2.88 ± 0.63	57	2.94 ± 0.63	102	0.00
7.2 Receiving the examination with modern technology equipment.	3.08 ± 0.57	259	3.05 ± 0.51	57	3.07 ± 0.57	102	0.26
7.3 Receiving the equity, convenience and fast services in every health insurance schemes.	2.98 ± 0.69	256	2.95 ± 0.64	57	2.86 ± 0.63	102	0.05
7.4 Having information of service and hospital news.	2.94 ± 0.66	258	2.89 ± 0.75	57	2.80 ± 0.66	102	0.00
7.5 Receiving the certificate of hospital accreditation from Quality Improvement and Hospital Accreditation Institute.	3.04 ± 0.76	254	3.02 ± 0.58	57	3.02 ± 0.53	102	0.00

* Tested by Kruskal - Wallis test.

Comparison of importance score classified by healthcare status.

Services	Patients		Providers		P-value*
	Mean ± SD	N	Mean ± SD	N	
1.1 Having clearly signpost to service center.	3.58 ± 0.55	245	3.69 ± 0.57	176	0.01
1.2 Enough and not crowded seats in doctor's waiting area.	3.58 ± 0.53	245	3.65 ± 0.59	177	0.07
1.3 Enough and not crowded seats in drug's receiving area.	3.43 ± 0.61	245	3.63 ± 0.56	176	0.00
1.4 Clean and good hygiene hospital area.	3.77 ± 0.48	245	3.81 ± 0.44	177	0.27
1.5 Adequate parking lot.	3.59 ± 0.72	245	3.64 ± 0.60	177	0.77
1.6 Clean and good hygiene toilet.	3.77 ± 0.44	245	3.81 ± 0.50	176	0.12
1.7 Adequate green area.	3.13 ± 0.75	245	3.07 ± 0.78	177	0.36
1.8 Clean and good hygiene food center.	3.47 ± 0.70	245	3.64 ± 0.60	176	0.01
1.9 Children play ground.	2.52 ± 1.05	244	3.03 ± 0.86	177	0.00
2.1 Appropriate service time.	3.72 ± 0.48	245	3.69 ± 0.57	177	0.90
2.2 Uncomplicated service procedure.	3.69 ± 0.56	245	3.76 ± 0.52	176	0.16
2.3 Having convenience appointment system and various services in one area.	3.65 ± 0.59	245	3.73 ± 0.59	176	0.06
2.4 Queue system.	3.73 ± 0.51	245	3.80 ± 0.49	176	0.08
2.5 The priorities of receiving service.	3.70 ± 0.55	245	3.68 ± 0.56	174	0.73
2.6 Having guarantee waiting time in each service center.	3.58 ± 0.68	245	3.66 ± 0.63	174	0.20
3.1 Adequate officer in each center.	3.73 ± 0.47	245	3.74 ± 0.50	177	0.60
3.2 Gentle and friendly officers.	3.79 ± 0.42	245	3.84 ± 0.45	177	0.11
3.3 Served by enthusiastically officers.	3.78 ± 0.43	245	3.84 ± 0.48	176	0.04
3.4 On time officers.	3.77 ± 0.47	244	3.82 ± 0.44	177	0.25
3.5 Familiarly officers in service system and ability to give advice.	3.64 ± 0.54	245	3.69 ± 0.54	176	0.25
4.1 Appropriate time used by the physician in examination and treatment.	3.75 ± 0.46	245	3.72 ± 0.52	176	0.72
4.2 Explanation side effect, limitation, precaution of the treatment and given a chance to participate in treatment.	3.80 ± 0.47	245	3.82 ± 0.47	174	0.48
4.3 Asking about allergic and treatment history.	3.79 ± 0.44	245	3.82 ± 0.43	174	0.34
4.4 Making an appointment for follow up.	3.74 ± 0.46	245	3.74 ± 0.48	175	0.88
4.5 Doctors' prescribe drug by computer.	3.46 ± 0.72	245	3.46 ± 0.71	175	0.97

* Tested by Mann - Whitney U test.

(Continued) Comparison of importance score classified by healthcare status.

Services	Patients		Providers		P-value*
	Mean ± SD	N	Mean ± SD	N	
5.1 Uncomplicated procedure in receiving the medicine.	3.65 ± 0.59	245	3.79 ± 0.48	174	0.00
5.2 Receiving the correct kind and amount of medicine.	3.85 ± 0.36	245	3.89 ± 0.42	175	0.02
5.3 Receiving explanation in the use of each medicine by pharmacist.	3.74 ± 0.52	245	3.82 ± 0.47	174	0.05
5.4 Less than 30 minutes drugs' waiting time.	3.71 ± 0.61	245	3.77 ± 0.52	175	0.43
5.5 Receiving the good quality medicine and relief of symptoms after use.	3.91 ± 0.29	245	3.85 ± 0.43	175	0.16
5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence.	3.80 ± 0.42	245	3.84 ± 0.43	174	0.17
5.7 Drug information service by telephone.	3.48 ± 0.66	245	3.66 ± 0.57	175	0.00
6.1 Gentle and friendly nurse.	3.76 ± 0.45	245	3.78 ± 0.48	176	0.51
6.2 Interesting and enthusiastically service	3.77 ± 0.44	245	3.82 ± 0.46	176	0.08
6.3 Nurse advice before seeing doctor.	3.69 ± 0.53	245	3.73 ± 0.52	176	0.35
6.4 Receiving the equity in nurse service.	3.67 ± 0.51	245	3.77 ± 0.48	176	0.02
7.1 Having board or pamphlet to explain service system in each area.	3.45 ± 0.69	245	3.56 ± 0.60	175	0.13
7.2 Receiving the examination with modern technology equipment.	3.87 ± 0.34	245	3.68 ± 0.55	174	0.00
7.3 Receiving the equity, convenience and fast services in every health insurance schemes.	3.72 ± 0.46	245	3.74 ± 0.49	175	0.56
7.4 Having information of service and hospital news.	3.46 ± 0.69	245	3.62 ± 0.56	173	0.02
7.5 Receiving the certificate of hospital accreditation from Quality Improvement and Hospital Accreditation Institute.	3.74 ± 0.48	245	3.72 ± 0.53	171	0.84

* Tested by Mann - Whitney U test.

Comparison of performance score classified by healthcare status.

Services	Patients		Providers		P-value*
	Mean ± SD	N	Mean ± SD	N	
1.1 Having clearly signpost to service center.	2.86 ± 0.59	245	2.31 ± 0.64	177	0.00
1.2 Enough and not crowded seats in doctor's waiting area.	2.68 ± 0.71	245	2.46 ± 0.70	179	0.00
1.3 Enough and not crowded seats in drug's receiving area.	2.91 ± 0.61	245	2.58 ± 0.68	178	0.00
1.4 Clean and good hygiene hospital area.	2.89 ± 0.60	245	2.66 ± 0.60	178	0.00
1.5 Adequate parking lot.	2.36 ± 0.83	245	2.08 ± 0.87	177	0.00
1.6 Clean and good hygiene toilet.	2.60 ± 0.71	243	2.31 ± 0.73	177	0.00
1.7 Adequate green area.	2.55 ± 0.71	244	1.99 ± 0.69	178	0.00
1.8 Clean and good hygiene food center.	2.79 ± 0.65	242	2.32 ± 0.63	178	0.00
1.9 Children play ground.	2.17 ± 0.82	243	2.16 ± 0.80	173	0.74
1.10 Overall of environment performance score.	2.84 ± 0.54	245	2.47 ± 0.56	157	0.00
2.1 Appropriate service time.	2.88 ± 0.65	245	2.81 ± 0.68	179	0.15
2.2 Uncomplicated service procedure.	2.77 ± 0.74	245	2.24 ± 0.72	178	0.00
2.3 Having convenience appointment system and various services in one area.	2.79 ± 0.72	245	2.18 ± 0.72	179	0.00
2.4 Queue system.	3.00 ± 0.75	245	2.74 ± 0.64	180	0.00
2.5 The priorities of receiving service.	2.82 ± 0.80	245	2.46 ± 0.73	178	0.00
2.6 Having guarantee waiting time in each service center.	2.49 ± 0.78	244	2.12 ± 0.77	179	0.00
2.7 Overall of services system performance score.	2.86 ± 0.57	245	2.47 ± 0.65	162	0.00
3.1 Adequate officer in each center.	2.83 ± 0.67	245	2.30 ± 0.69	178	0.00
3.2 Gentle and friendly officers.	2.94 ± 0.72	245	2.42 ± 0.76	178	0.00
3.3 Served by enthusiastically officers.	2.92 ± 0.62	245	2.39 ± 0.74	178	0.00
3.4 On time officers.	2.84 ± 0.68	244	2.48 ± 0.72	177	0.00
3.5 Familiarly officers in service system and ability to give advice.	2.69 ± 0.77	245	2.34 ± 0.76	178	0.00
3.6 Overall of providers' service performance score.	2.88 ± 0.55	245	2.49 ± 0.67	162	0.00
4.1 Appropriate time used by the physician in examination and treatment.	2.99 ± 0.71	245	2.44 ± 0.74	176	0.00
4.2 Explanation side effect, limitation, precaution of the treatment and given a chance to participate in treatment.	3.01 ± 0.77	245	2.47 ± 0.70	176	0.00
4.3 Asking about allergic and treatment history.	3.20 ± 0.69	245	2.70 ± 0.68	176	0.00

* Tested by Mann - Whitney U test.

(Continued) Comparison of performance score classified by healthcare status.

Services	Patients		Providers		P-value*
	Mean ± SD	N	Mean ± SD	N	
4.4 Making an appointment for follow up.	3.31 ± 0.62	245	2.91 ± 0.60	176	0.00
4.5 Doctors' prescribe drug by computer.	3.03 ± 0.72	245	2.54 ± 0.75	173	0.00
4.6 Overall of physician service performance score.	3.19 ± 0.58	243	2.72 ± 0.59	156	0.00
5.1 Uncomplicated procedure in receiving the medicine.	2.80 ± 0.74	245	2.40 ± 0.80	176	0.00
5.2 Receiving the correct kind and amount of medicine.	3.26 ± 0.59	245	2.65 ± 0.69	176	0.00
5.3 Receiving explanation in the use of each medicine by pharmacist.	3.04 ± 0.67	245	2.54 ± 0.77	175	0.00
5.4 Less than 30 minutes drugs' waiting time.	2.50 ± 0.83	245	2.15 ± 0.85	176	0.00
5.5 Receiving the good quality medicine and relief of symptoms after use.	3.23 ± 0.55	245	2.85 ± 0.59	176	0.00
5.6 Appropriate containers of medicine, clearly and simple instruction on the label to ensure confidence.	3.32 ± 0.55	245	2.97 ± 0.60	176	0.00
5.7 Drug information service by telephone.	2.67 ± 0.82	245	2.70 ± 0.76	176	0.92
5.8 Overall of pharmacy service performance score.	2.98 ± 0.58	245	2.69 ± 0.61	163	0.00
6.1 Gentle and friendly nurse.	3.03 ± 0.61	245	2.62 ± 0.65	178	0.00
6.2 Interesting and enthusiastically service	2.96 ± 0.59	245	2.60 ± 0.66	178	0.00
6.3 Nurse advice before seeing doctor.	2.94 ± 0.60	245	2.46 ± 0.69	177	0.00
6.4 Receiving the equity in nurse service.	2.93 ± 0.69	245	2.60 ± 0.70	178	0.00
6.5 Overall of nurses' service performance score.	3.02 ± 0.53	245	2.66 ± 0.64	167	0.00
7.1 Having board or pamphlet to explain service system in each area.	2.86 ± 0.61	245	2.50 ± 0.69	173	0.00
7.2 Receiving the examination with modern technology equipment.	3.08 ± 0.53	245	2.91 ± 0.60	175	0.00
7.3 Receiving the equity, convenience and fast services in every health insurance schemes.	2.92 ± 0.63	245	2.63 ± 0.69	172	0.00
7.4 Having information of service and hospital news.	2.78 ± 0.68	245	2.55 ± 0.67	173	0.00
7.5 Receiving the certificate of hospital accreditation from Quality Improvement and Hospital Accreditation Institute.	3.02 ± 0.56	245	2.51 ± 0.79	169	0.00

* Tested by Mann - Whitney U test.

Difference between general information and patients' insurance schemes.

Characteristic		CSMBS		SSS		Self payment		P-value*
		Number	Percent	Number	Percent	Number	Percent	
Gender								0.01
	Female	205	78.25	42	72.41	63	61.76	
	Male	57	21.76	16	27.59	39	38.24	
	Total	262	100	58	100	102	100	
Age group (years)								0.00
	< 35	89	34.63	47	81.03	59	57.84	
	35-44	78	30.35	7	12.07	27	26.47	
	45-54	67	26.07	3	5.17	13	12.75	
	>=55	23	8.95	1	1.72	3	2.94	
	Total	257	100.00	58	100.00	102	100.00	
Education								0.00
	Lower than high school degree	5	1.908	8	13.79	15	14.71	
	High school-undergraduate degree	22	8.40	38	65.52	52	50.98	
	Bachelor's degree	186	70.99	12	20.70	35	34.31	
	Higher than Bachelor's degree	49	18.70					
	Total	262	100	58	100	102	100	
Income (bath)								0.00
	<=5000	3	1.15	9	15.52	21	20.59	
	5001-10000	34	13.08	35	60.34	34	33.33	
	10001-15000	65	25	10	17.24	17	16.67	
	15001-20000	47	18.08	3	5.17	9	8.82	
	>20000	111	42.70	1	1.72	21	20.59	
	Total	260	100	58	100	102	100	

* Tested by Chi-square test.

Difference between general information and patients' insurance schemes.

Characteristic	CSMBS		SSS		Self payment		P-value*
	Number	Percent	Number	Percent	Number	Percent	
Travel time (hour)							
<1 hr	213	82.88	49	84.48	70	68.63	
1-<2	37	14.40	9	15.52	28	27.45	
>=2	7	2.72	0	0.00	4	3.92	
Total	257	100.00	58	100.00	102	100.00	
Service time (hour)							0.01
<1 hr	19	7.539683	12	20.68966	7	6.862745	
1-<2	37	14.68254	10	17.24138	16	15.68627	
2-<3	56	22.22222	10	17.24138	32	31.37255	
3-<4	67	26.5873	18	31.03448	26	25.4902	
>=4	73	28.96825	8	13.7931	21	20.58824	
Total	252	100	58	100	102	100	
Expect service time							
1 hr	48	18.90	20	34.48	24	23.53	
2 hr	144	56.69	25	43.10	48	47.06	
3 hr	47	18.50	10	17.24	23	22.55	
4 hr	15	5.91	3	5.17	7	6.86	
Total	254	100.00	58	100.00	102	100.00	
Satisfaction with hospital service							0.01
Very satisfied	14	5.47	6	10.34	11	10.78	
Satisfied	194	75.78	46	79.31	85	83.33	
Unsatisfied	48	18.75	6	10.34	6	5.88	
Total	256	100.00	58	100.00	102	100.00	

* Tested by Chi-square test.

Difference between general information and patients' insurance schemes.

Characteristic	CSMBS		SSS		Self payment		P-value*
	Number	Percent	Number	Percent	Number	Percent	
Number of OPD visits per year							0.00
1	17	6.91	5	8.77	12	11.76	
2	30	12.20	7	12.28	20	19.61	
3	21	8.54	18	31.58	16	15.69	
4	26	10.57	5	8.77	14	13.73	
5	25	10.16	5	8.77	1	0.98	
6	35	14.23	3	5.26	13	12.75	
>=7	92	37.40	14	24.56	26	25.49	
Total	246	100.00	57	100.00	102	100.00	
Past experienced by the family							0.00
Yes	236	91.83	43	74.14	84	82.35	
No	21	8.17	15	25.86	18	17.65	
Total	257	100.00	58	100.00	102	100.00	
Select Chonburi hospital							0.43
Yes	205	80.08	43	75.44	75	74.26	
No	51	19.92	14	24.56	26	25.74	
Total	256	100.00	57	100.00	101	100.00	
Recommendation and advice Chonburi hospital							0.13
Yes	225	88.58	46	79.31	91	89.22	
No	29	11.42	12	20.69	11	10.78	
Total	254	100.00	58	100.00	102	100.00	

* Tested by Chi-square test.

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