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Analysis of The Level of Satisfaction of Outpatients tt Smart Medica Clinic with an Importance Performance Analysis Approach

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A R T I C L E I N F O

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ABSTRACT

This study aims to find out how far the satisfaction level of outpatients at Smart Medica Clinic in the dimensions of *Tangibility, Reliability, Responsiveness, Assurance* and *Empathy*. This research is a descriptive study. The study was conducted at Smart Medica Clinic, Sekayu, Musi Banyuasin, South Sumatra, Indonesia, on 162 outpatients as a target population. The data collection technique is carried out by distributing questionnaires using accidental sampling. The data obtained were then analyzed using the Importance Performance Analysis (IPA) method with the help of the SPSS for Windows application program *ver*. 27. The results of this study show that outpatients of Smart Medica Clinic are not satisfied with outpatient services in the dimensions of *Tangibility*, *Reliability, Responsiveness, Assurance* and *Empathy.*

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1. Introduction

First Level Health Facilities are health facilities that carry out public health efforts or individual health efforts which are non-specialist in nature for the purposes of observation, diagnosis, treatment and other health services (Permenkes RI No. 24, 2015). In a business that emphasizes services as its superior product, the consumer satisfaction is a vital thing, the satisfaction of consumers of health facilities (in this case: the patients) can be achieved if the quality of health services provided is able to meet expectations (Duck, Robinson & Stewart, 2017). According to the results of an exploratory survey of thirty patients who had been treated outpatiently at the Smart Medica Clinic in January 2022 using the Smart Medica Clinic satisfaction survey questionnaire, the results of the total score percentage of the maximum total score were still below the target (≥80%) that's 73.5%. With the gap between expectations and reality from the results of the exploratory research that has been carried out, this is a problem that must be of concern to the management of the Smart Medica Clinic.

According to Ocampo *et al*., (2018) A model that evaluates the quality of public services must be proposed systematically and able to capture the complexity of the evaluation process caused by the number of criteria to be taken into account. Measuring the right patient satisfaction, if done correctly in following and adapting to cultural and environmental changes that tend to be dynamic, can be a determining factor for achieving a better understanding of the quality of health services and have a positive impact on health services universally (Iqbal & Li, 2019).

SERVQUAL model is a diagnostic technique that reveals the strengths and weaknesses of an organization's service quality (Parasuraman *et al*., 1988). The modified SERVQUAL model has five dimensions: *Tangibility, Reliability, Responsiveness, Assurance* and *Empathy*. Whereas Importance-Performance Analysis (IPA) is a quantitative technique for making diagnostic observations sourced from customer experience by assessing the performance and relative importance of an attribute they

have used, in the nature of the process, the results of measurements by applying SERVQUAL can be shown in a cartesian diagram (Supranto, J. 1997).

Given that there is still a gap between expectations and reality to the level of patient satisfaction with outpatient services at the Smart Medica Clinic, it is necessary to conduct research on how far the satisfaction level of outpatients of the Smart Medica Clinic is in five dimensions of satisfaction: *Tangibility, Reliability, Responsiveness, Assurance* and *Empathy* by using the SERVQUAL method and the Importance Performance Analysis approach to answer these problems.

2. Literature Review

The quality of service in a health facility is the difference between the perception of customers and their expectations of the services offered by the service provider, the quality of service is described through the patient's perception of the quality of services provided during their visit (Moghaddam *et al*., 2019). Parasuraman *et al*., (1985) define service quality as the gap between customer expectations and perceptions of the services provided. The quality of a service will have a high value when the customer perception meets expectations, but the quality will have a low value when the customer perception cannot meet the expectations (Zeithaml, 1990).

According to Parasuraman *et al*., in Kotler (2013) there are five dimensions that represent the perception or impression of customers on a quality of service in the field of service, namely:

1. *Reliability* is a dimension that measures the reliability of a service to customers. Reliability is defined as the ability of a service provider to be able to provide services in accordance with what is promised, accurately and reliably.
2. *Responsiveness* is a dimension that measures a service provider's ability to provide services quickly to customers. The dimension of responsiveness is the most dominant and vital dimension, in which one example of the aspect of responsiveness in service is speed.
3. *Tangibility* is a dimension that measures a tangible, for example: the appearance of the physical facilities of service providers, equipment, personnel and media.
4. *Assurance* is a dimension that measures a service provider's ability to instill trust and assurance in customers. The dimensions of assurance include personnel knowledge of the product, personnel's politeness in providing services, personnel skills in providing a sense of security to customers when utilizing the services offered.
5. *Empathy* is a dimension that measures the willingness and effort of personnel to care and provide attention to customers. Although it is very personal, this can have an effect beyond customer expectations. So that as a result it can have a positive effect on the customer's assessment of the service of the service provider.

Importance Performance Analysis (IPA) will measure the relationship between the importance and the patient's perception of the performance of the service provider. The effort to measure existing performance is so that service providers are able to develop the right strategy to achieve the optimal level which is a key element in quality assurance. When service providers are trying to identify which parts are priorities for improvement, it is important to be able to focus on corrective actions (Markazi, *et al*., 2019). The purpose of IPA diagnostically is to as a tool that makes it easier for users at the time of identifying attributes and also items based on their respective interests. Furthermore, the items suggesting patient satisfaction will be described and grouped into four parts in a cartesian diagram (Djeri*, et al*., 2018).

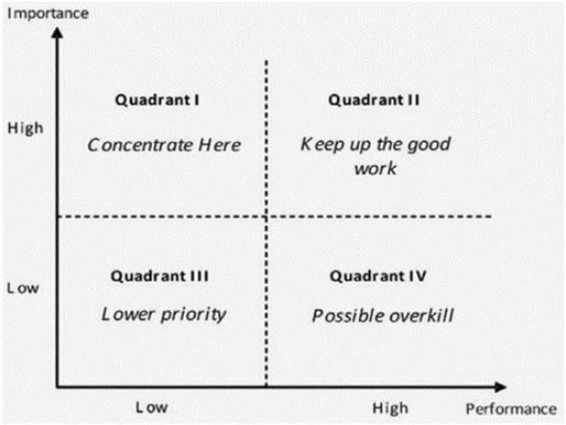

Figure 1. Cartesian Diagram of Importance Performance Analysis (Source: Djeri, *et al*., 2018)

Figure 1 Caption:
Quadrant I: attributes that are considered very important in customer satisfaction, but the service provider has not done so in line with expectations so it is not satisfactory.
Quadrant II: attributes that are considered important to customer satisfaction have been successfully provided with good performance as well so that they are very satisfactory.
Quadrant III: attributes that are less important to the customer, are given with mediocre performance on the part of the service provider.
Quadrant IV: attributes that are considered less important but are given with excessive performance of service providers (Djeri, *et al*., 2018).

3. Methods

The material object in this study is the outpatient of the Smart Medica Clinic as an individual observation unit and the object of forma in this study is the level of satisfaction with the outpatient services of the Smart Medica Clinic in the dimensions of service quality (*Tangibility, Reliability, Responsiveness, Assurance* and *Empathy*). Based on the purpose of the study, this type of research is descriptive research. The target population in this study was all outpatients who came to Smart Medica Clinic in May 2022. This research used the *Krejcie-Morgan* table reference in determining the size of the sample. From the calculation results using the table, the number of samples needed was 162 samples. The sampling technique in this study used *accidental sampling* while the data collection method in this study used a questionnaire. This research is a type of descriptive research with a *Cross Sectional* approach in which the researcher does not intervene in the research subject but only provides a questionnaire for the respondents to fill in themselves. In this study, the researcher used a descriptive statistical analysis method that aims to provide an overview of the variables in the study. Furthermore, researchers use the *Importance Performance Analysis* (IPA) method with the data that has been processed and then displayed into a cartesian diagram which will later produce several focuses on increasing customer satisfaction.

4. Result and Discussion

The technique for measuring the validity of the questionnaire is to calculate the correlation between the data on each statement with a total score using the following correlation formula:

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}} \quad (1)$$

Information:
r_{xy} = Correlation coefficient
N = Size of samples
X = Item of the tested variable
Y = Number of scores of all items of the tested variable

Later the calculation will refer to the *r table* with the criteria for assessing the validity test are:
1. If r count $\geq$ r table (at the α level of 5%) then it can be said that the questionnaire item is *valid*.
2. If r count $<$ r table (at the α level of 5%) then it can be said that the questionnaire item is *invalid*.

Based on this formula, a questionnaire validity test has been carried out on 162 respondents of outpatients of the Smart Medica Clinic and it is known that all questions in the questionnaire have the rxy value of >0.381, so that all questionnaire questions on the question items on the variables *Tangibles, Reliability, Responsiveness, Assurance* and *Empathy* are valid.

Reliability is calculated using the *Cronbach Alpha* coefficient formula. Alpha values range from 0 to 1. The measurement action will be said to be reliable if at least the alpha value is 0.6. The Reliability Test Formula:

$$\alpha = \left[\frac{N}{N-1}\right]\left[1 - \frac{\sum \sigma^2 item}{\sigma^2 total}\right] \quad (2)$$

Information:
α = *Cronbach's alpha*
N = Number of questions
σ^2 item = Variance with question
σ^2 total = Variance of the score

Based on the formula above, a questionnaire reliability test has been carried out on 162 respondents of outpatients of the Smart Medica Clinic with the results of the coefficient of *Cronbach's Alpha* > 0.60 so that all questions in the questionnaire on the variables *Tangibles, Reliability, Responsiveness, Assurance* and *Empathy* are reliable.

The profiles of respondents in this study were described based on age, gender, education and monthly income. The largest number of respondents were in the age range of 15-64 which reached 87% or as many as 141 people, followed by respondents aged >64 years who reached 13% or as many as 21 person. The results of the frequency of male respondents was 44.4% or as many as 72 people, and female respondents was 55.6% or as many as 90 people. Based on the level of education, from the most started from respondents with high school education, namely 40.7% or as many as 66 people, followed by college at 30.2% or as many as 49 people, then junior high school education at 14.8% or as many as 24 people, and the smallest frequency, namely elementary and non-school education, was 13.6% or as many as 22 people and 0.6% or as many as 1 person. Meanwhile, when viewed based on their income level, most of the respondents earned <5 million per month which reached 78. 4% or as many as 127 people and respondents who earn > 5 million per month are 21% or as many as 34 people.

The gap analysis of the SERVQUAL model will analyze the gap between the performance of the quality of existing services (P) and the quality of the desired service (E).
If P > E then it is said that the customer feels *very satisfied*
If P = E then it says the customer is *satisfied*
If P < E then it says the customer is *not satisfied*

Table 1.
Reliability Dimension Gap Analysis

Items in Reliability Dimension	Mean Performance (P)	Mean Expectation (E)	Gap (P-E)	Information
1. (X1) Outpatient service procedures are not convoluted.	4.02	4.40	-0,38	Dissatisfied
2. (X2) The doctor's service schedule is carried out on time.	3.87	4.42	-0,55	Dissatisfied
3. (X3) Outpatient officers provide clear information.	4.13	4.48	-0,35	Dissatisfied

According to the results of *Table 1* above, the gap analysis of each indicator of service quality questions on the dimension of reliability shows dissatisfied results. Attributes The doctor's service schedule is carried out on time has a service performance value below expectations so that respondents are classified as dissatisfied. Atribute The outpatient service procedure is not convoluted to have a service performance value below expectations so that respondents are classified as dissatisfied. And The attributes of outpatients provide clear information that has a service performance value below expectations so that respondents are classified as dissatisfied.

Table 2.
Responsiveness Dimension Gap Analysis

Items in Responsiveness Dimension	Mean Performance (P)	Mean Expectation (E)	Gap (P-E)	Information
1. (X4) The outpatient admission procedure is fast.	4.10	4.40	-0,3	Dissatisfied
2. (X5) Doctors are quick to respond in handling patient complaints.	4.16	4.41	-0,25	Dissatisfied
3. (X6) Nurses are quick to respond in handling patient complaints.	4.15	4.43	-0,28	Dissatisfied
4. (X7) The patient examination process is fast.	4.14	4.41	-0,27	Dissatisfied
5. (X8) The drug collection process is fast.	3.98	4.42	-0,44	Dissatisfied
6. (X9) The attendant is immediately present at the time the patient is in need.	4.10	4.43	-0,33	Dissatisfied

According to the results of *Table 2* above, the gap analysis of each indicator of the service quality question on the dimension of responsiveness shows dissatisfied results. Attributes The process of taking drugs running fast has a service performance value below expectations so that respondents are classified as dissatisfied. The Officer's attributes are immediately present when the patient needs to have a service performance value below expectations so that the respondents are classified as dissatisfied. Attributes The outpatient admission procedure takes place quickly has a service performance value below expectations so that respondents are classified as dissatisfied. Attributes The patient examination process goes fast has a service performance value below expectations so that respondents are classified as dissatisfied. The nurse's attributes are quick to respond to handling patient complaints, which has a service performance value below expectations so that respondents are classified as dissatisfied. And the attributes of doctors are quick to respond in handling patient complaints have a service performance value below expectations so that respondents are classified as dissatisfied.

Table 3.
Tangible Dimension Gap Analysis

Items in Tangible Dimension	Mean Performance (P)	Mean Expectation (E)	Gap (P-E)	Information
1. (X10) The outpatient room is clean.	4.02	4.29	-0,27	Dissatisfied
2. (X11) The outpatient room is neat.	3.99	4.26	-0,27	Dissatisfied
3. (X12) The outpatient room is comfortable.	4.05	4.28	-0,23	Dissatisfied
4. (X13) The proofing tools are fully available.	3.95	4.37	-0,42	Dissatisfied
5. (X14) The inspection tools are available clean.	4.01	4.34	-0,33	Dissatisfied
6. (X15) The exterior arrangement of the room is beautiful.	3.77	4.19	-0,42	Dissatisfied
7. (X16) The interior arrangement of the room is beautiful.	3.75	4.18	-0,43	Dissatisfied
8. (X17) The appearance of the officer is neat.	4.07	4.29	-0,22	Dissatisfied

According to the results of *Table 3* above, the gap analysis of each indicator of the service quality question on the dimension of tangible shows dissatisfied results. Attributes The interior arrangement of a beautiful room has a service performance value below expectations so that respondents are classified as dissatisfied. Attributes The arrangement of the exterior of a beautiful room has a service performance value below expectations so that respondents are classified as dissatisfied. Attributes The complete available inspection tools have a service performance value below expectations so that respondents are classified as dissatisfied. Attributes Neat outpatient rooms have service performance values below expectations so that respondents are classified as dissatisfied. Attributes The net available inspection tools have a service performance value below expectations so that respondents are classified as dissatisfied. Attributes Clean outpatient rooms have service performance values below expectations so that respondents are classified as dissatisfied. Attributes Comfortable outpatient rooms have service performance values below expectations so that respondents are classified as dissatisfied. And atribute The appearance of neat officers has a service performance value below expectations so that respondents are classified as dissatisfied.

Table 4.
Assurance Dimension Gap Analysis

Items in Assurance Dimension	Mean Performance (P)	Mean Expectation (E)	Gap (P-E)	Information
1. (X18) Officers serve politely	4.21	4.40	-0,19	Dissatisfied
2. (X19) Officers serve kindly	4.23	4.45	-0,22	Dissatisfied
3. (X20) Outpatient services are guaranteed safety	4.11	4.38	-0,27	Dissatisfied
4. (X21) The outpatient service process can be trusted	4.14	4.39	-0,25	Dissatisfied
5. (X22) Doctors are reliable in determining disease diagnoses	4.22	4.42	-0,2	Dissatisfied
6. (X23) Doctors skilled in treating patients	4.20	4.44	-0,24	Dissatisfied
7. (X24) Nurses skilled in handling patients	4.15	4.44	-0,29	Dissatisfied

According to the results of *Table 4* above, the gap analysis of each indicator of the service quality question on the dimension of the Assurance shows dissatisfied results. Attributes of outpatient services guaranteed safety has a service performance value below expectations so that respondents are classified as dissatisfied. Attributes The outpatient service process can be trusted to have a service performance value below expectations so that respondents are classified as dissatisfied. Attributes Nurses skilled in handling patients have a service performance value below expectations so that respondents are classified as dissatisfied. Attributes Doctors skilled in treating patients have a service performance value below expectations so that respondents are classified as dissatisfied. The attributes of officers serving politely have a service performance value below expectations so that respondents

are classified as dissatisfied. Attributes Doctors are reliable in determining disease diagnoses have a service performance value below expectations so that respondents are classified as dissatisfied. And atribute Officers serve kindly have a service performance value below expectations so that respondents are classified as dissatisfied.

Table 5.
Empathy Dimension Gap Analysis

Items in Empathy Dimension	Mean Performance (P)	Mean Expectation (E)	Gap (P-E)	Information
1. (X25) The officer pays attention to the patient.	4.10	4.42	-0,32	Unsatisfied
2. (X26) The officer gives attention to the patient's family.	4.07	4.36	-0,29	Unsatisfied
3. (X27) Officers do not discriminate against social status in service.	4.17	4.47	-0,3	Unsatisfied

According to the results of *Table 5* above, the gap analysis of each indicator of the service quality question on the dimension of empathy shows dissatisfied results. Attributes Officers pay attention to the patient's family have a service performance value below expectations so that respondents are classified as dissatisfied. Attributes Officers pay attention to patients have a service performance value below expectations so that respondents are classified as dissatisfied. And atribute Officers do not discriminate against social status in serving having a service performance value below expectations so that respondents are classified as dissatisfied.

Once the importance and performance level of each attribute is known for all respondents, the user satisfaction level can be calculated based on the following formula:

$$CS = \sum (Ii - Ppi) \quad (3)$$

Information:
CS = Customer Satisfaction
I = Importance
Pp = Perceived Performance

Description of the calculation results:
CS < 0 = respondents feel very satisfied
CS = 0 = respondents are satisfied
CS > 0 = respondents are dissatisfied

The data is calculated and then displayed into a cartesian diagram which will later result in some focus on increasing customer satisfaction. A Cartesian diagram is an Importance-Performance matrix that displays four quadrants, each quadrant of which has a different degree of importance bounded by two lines intersecting perpendicular to the point (X,Y) each calculated by the formula:

$$X = \frac{\sum_{i=1}^{n} xi}{k} \quad (4)$$

Description:
X = Average performance of all statements
Y = Average of importance of all statements
K = Total attribute (question)

Table 6.
Mean Performance and Mean Importance

Attribute	Mean Performance (P)	Mean Expectation (E)
X1	4.02	4.40
X2	3.87	4.42
X3	4.13	4.48
X4	4.10	4.40
X5	4.16	4.41
X6	4.15	4.43
X7	4.14	4.41
X8	3.98	4.42
X9	4.10	4.43
X10	4.02	4.29
X11	3.99	4.26
X12	4.05	4.28
X13	3.95	4.37
X14	4.01	4.34
X15	3.77	4.19
X16	3.75	4.18
X17	4.07	4.29
X18	4.21	4.40
X19	4.23	4.45
X20	4.11	4.38
X21	4.14	4.39
X22	4.22	4.42
X23	4.20	4.44
X24	4.15	4.44
X25	4.10	4.42
X26	4.07	4.36
X27	4.17	4.47

With the results of the analysis on the cartesian diagram are as follows:

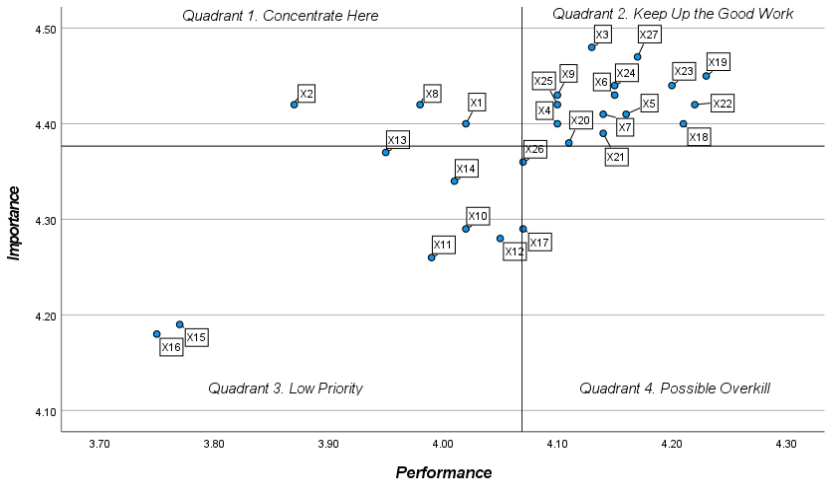

Figure 2. Analysis Results on Cartesian Diagrams

Based on the data presented in the *Figure 2* of the cartesian diagram above, each of the attributes of the five dimensions is divided into four quadrants. The attributes that are in "*Quadrant 1. Concentrate here*" means that items that are considered to affect patient satisfaction include elements that are considered very important by patients, but the management of Smart Medica Clinic has not carried it out according to wishes or expectations so that it is disappointing or unsatisfactory. These items include: The doctor's service schedule is carried out on time, the drug collection process is fast

and the outpatient service procedures are not convoluted. According to Ahmad, Khairatul & Farnaza (2017) a Clinic must have an effective service scheduling system and a short and easy registration procedure so that it is able to meet the needs of patients who come to achieve the best waiting time results. Similarly, efforts to shorten the waiting time when waiting for drugs in the pharmacy department are said to increase customer satisfaction. (Sun, *et al*. 2015).

The attributes contained in "*Quadrant 2: Keep up the good work*" indicate that the element of service performance has been successfully implemented by the Smart Medica Clinic and must be maintained. This is because the attributes in the quadrant are considered very important and their performance is very satisfactory. These items include: Officers serve kindly, Doctors are reliable in determining disease diagnoses, Officers serve politely, Doctors are skilled in handling patients, Officers do not discriminate against social status in serving, Doctors are quick to respond in handling patient complaints, Nurses are skilled in handling patients, Nurses are quick to respond in handling patient complaints, The patient examination process goes fast, The outpatient service process can be trusted, outpatient officers provide clear information, Outpatient services are guaranteed safety, Officers are immediately present when the patient needs, Officers pay attention to patients and the outpatient admission procedure takes place quickly. In this quadrant it appears that the dominant attribute regarding the doctor is a thing that is considered important for the patient, according to research conducted by Gavirova, Dvorsky & Popesko (2021), in which they say that the ability of doctors and trust in doctors themselves in a health facility is one of the things that is most considered important by patients.

The attributes contained in "*Quadrant 3: Low Priority*" indicate that these attributes are considered less important in their influence on patients and their implementation is carried out mediocrely by the Smart Medica Clinic. These attributes are: Beautiful room interior arrangement, beautiful room exterior arrangement, Complete available examination tools, Neat outpatient room, Available examination tools clean, Clean outpatient room and comfortable outpatient room. In this quadrant, it can be seen that many attributes derived from the perceived dimension of embodiment are still lacking in terms of performance. According to Zarei*, et al*., (2020) the tangible aspects of a health service such as the physical environment and tangible things are very important in shaping the patient's perspective on the quality of service, given that can be easily seen and felt by customers.

Meanwhile, the attributes in "*Quadrant 4: Possible overkill*" indicate that the item is considered less important but its implementation is carried out excessively by the Smart Medica Clinic. The items are: The officer pays attention to the patient's family, and The appearance of the officer is neat. From the attributes in this quadrant, it does not mean that the management of the Smart Medica Clinic must reduce performance in providing attention to the patient's family, but rather must increase customer awareness of the importance of it so that the expectations and interests of both things can increase as well. According to Park *et al*., (2018) patient-centered services and their families are seen as a high-quality approach in terms of providing health services. Such is the case with a necessity in looking neat for officers, because a neat appearance has an important role in reflecting the professionalism of an officer in providing health services (LaSala & Nelson, 2005).

5. Conclusion

This study was conducted to be able to find out how far the satisfaction level of outpatients of Smart Medica Clinic in the dimensions of *Tangibility, Reliability, Responsiveness, Assurance* and *Empathy*. Based on the results of data analysis from this study, it was concluded that the outpatient of Smart Medica Clinic was not satisfied in the dimensions of *Tangibility, Reliability, Responsiveness, Assurance* and *Empathy.* The managerial implications of this study can be seen based on the results of analysis using importance performance analysis above which states that there are several attributes that must get priority attention in performance improvement. With the description of these attributes are: The schedule of doctor services that are expected to be carried out on time, the process of taking drugs that are expected to run quickly and the expected outpatient service procedures are not convoluted.

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