PROCUREMENT MANAGEMENT INFORMATION SYSTEM OF DRUGS AT PHARMACIES KLINIK BHAKTI SANDAAN

Wigan Wahyu Mandiri[1], [2] Tati Harihayati M., S.T., M.T.

Informatics Engineering – Indonesia Computer University
Dipatiukur Street 112-114 Bandung
E-mail : wiganmandiri@gmail.com[1], tharihayati@yahoo.com [2]

ABSTRACT

Bhakti Sandaan Clinic is a common service facilities and specialized in the field of health. Sandaan clinic has several health care facilities and one of them is pharmacy. Pharmacies act as providers of drugs or pharmaceuticals led by business Pharmacist Pharmacy. Drugs that must be provided pharmacy there are more than 1200 types of more than 10 suppliers of drugs, Procurement part in determining the amount per type of medication is not quite right so often drugs available are not sufficient to meet the needs of the pharmacy. The emergence of a lot of opportunities to make the wrong decision due to dipertimbangkanya any criteria should include the prospective suppliers of drugs in pharmacies Clinic Sandaan Bhakti. Error in choosing suppliers will pose some problems for pharmacies, one of which is the result of delays in the sales process is too lengthy process of drug delivery from the supplier.

Based on the problems that arise, then the required analysis of the procurement management, starting from planning, carrying out, supervise up to evaluate every process involved in procurement of drugs in pharmacies. Consumption methods used to predict the amount per type of medication so that the number of drugs in pharmacies needs can be met. AHP method is used to determine the best drug supplier, this method is able to solve problems that multiple criteria where there is more than one thing or the criteria that you want to compare from each supplier.

Based on the description of the results of research and analysis has been done, of the results of applying the method to peneteapan consumption amount per type of drug and the application of AHP for supplier selection, Drug Procurement Management Information Systems already can assist in planning the procurement section identification requirement is to determine the number per type of medication needs Bhakti Sandaan Clinical Pharmacy. Drug Procurement Management Information Systems already can assist Pharmacy Pharmacist business and Procurement Section in planning the selection of suppliers to determine the best supplier based on the criteria proposed Bhakti Sandaan Clinical Pharmacy.

Keywords: Management Information System, procurement, konsumsi, analytic hierarchy process (AHP)

1. INTRODUCTION

1.1 Background

Bhakti clinic Sandaan or commonly known by the local community with the name of the clinic Sandaan, a common service facilities and specialized in the field of health. Sandaan clinic has several health care facilities and one of them is pharmacy. Pharmacies act as providers of drugs or pharmaceuticals led by Pharmacy Pharmacist business. Pharmacy Pharmacist business of running a business Pharmacy assisted by four working parts, one of which is the Procurement section. Task Procurement Section which provides a number of drugs needed by a pharmacy from a number of suppliers Drugs are available. Because engaged in trade, the procurement activities is an important factor in achieving business goals Bhakti Sandaan Clinic Pharmacy is to provide and sell drugs kedapa patient or consumer.

Based on interviews with Ms. Erna Colorful Utari, S.Apt as Clinical Pharmacy Pharmacist business Sandaan Bhakti can be seen that the activity or process of procurement in Clinical Pharmacy Bhakti Sandaan include the identification process needs medication, the process of selecting suppliers, the purchasing process, process of receiving the drug, and payment processes , One of the critical success factors in achieving the targets or goals for procurement of medicines Clinical Pharmacy Bhakti Sandaan determined in the process of identifying needs. The process of identification of needs consists of two stages of processing, namely the determination of the type and the determination of the amount per type of drug. Phase determination of the amount per type of drug carried by the Procurement section. Parts procurement determine the number per type of drug based on the amount of use of the drug last month, the amount per type of drug prescribed exactly the same as the number of the user, while based on data on the use of drugs in May 2015 until April 2016 can be seen each month the amount of drug use always experience changes, sometimes experience a surge of drug use and

sometimes the use of drugs has decreased, to cope with the increase of drug use, Clinical pharmacy Bhakti Sandaan make purchases of medicine to the pharmacy partner, the price of drugs purchased from pharmacies Partner more expensive than the price of drugs purchased from suppliers. As a mother Erna Colorful Clinical Pharmacy Pharmacist business Bhakti Sandaan explained that the purchase of medicines to pharmacies Partner should be avoided as much as possible because later in the pharmacy drug sales price remains the same, both are bought from pharmacies or from Supplier Partner. Pharmacies will lose the opportunity to benefit more when too often bought drugs to pharmacies Partner.

Mrs. Erna Colorful, S.Apt as Bhakti Clinical Pharmacy Pharmacist business Sandaan also said that the current Pharmacy has more than 15 suppliers of drugs. The number of suppliers and types of drugs that are owned pharmacies make Pharmacist Pharmacy difficulty in establishing business decisions Which suppliers who are able to consistently meet the needs of the pharmacy. The process of selecting suppliers in Clinical Pharmacy Bhakti Sandaan was done by assessing or evaluating suppliers, how to assess or supplier votes still are subjective, based on the criteria assessed only supplier price. Supplier assessment based solely on price criteria alone caused no dipertimbangkanya drug delivery time. The duration of drug delivery from suppliers will hinder the process of selling pharmacies due to drugs that have low or empty and not able to provide much needed back quickly. Supplier selection process also affects the other procurement activities such as purchasing activities, receiving the drug, and payments, where the differences in the type and amount of drugs was sent to drug suppliers can change the outcome of the needs of pharmacies and drug receipts total payment of procurement costs than initially planned. Errors in planning the procurement costs would give rise to suspicion of fraud in the procurement of drugs at the pharmacy Clinic Sandaan Bhakti.

Based on the problems outlined above, the support of Management Information Systems (MIS) becomes an important role in drug procurement management activities in Clinical Pharmacy Bhakti Sandaan.

1.2 Formulation of the problem

Based on the description of the background before the main issues will be formulated in the manufacture of this thesis is how to build an information management system for procurement of medicines Clinical Pharmacy Bhakti Sandaan.

1.3 Purpose and objectives

The purpose of making this final task is to develop a management information system for procurement of medicines Clinical Pharmacy Bhakti Sandaan. The purpose of the development of this system are as follows:

1. Procurement Section assist in determining the amount per type of drug that must be purchased to suppliers.
2. Helping Pharmacy Pharmacist business and Procurement Section in selecting suppliers according to specified criteria.

1.4 Definition of Management Information Systems

The system can be defined as a collection of things or elements that work together to form a union and work together to achieve a goal. Here is some understanding of the management information system [1]:

1. Management Information Systems is a human / machine integrated separately menyajiakn information to support the operations function, management, and decision-making in an organization.
2. Management Information Systems is a whole network of information aimed at leaders for the purpose of implementation of the management functions for the leader, especially in determining the right decision.
3. Management Information Systems is a whole tangle and units of network traffic all kinds of information, it means the network between sections and sub-sections. And is the information is data and information.

The conclusion that the concept of management information system has some characteristics [2]:

1. In an organization, there is one special part as SIM manager.
2. SIM is jalian traffic data and information from any part in the organization that is centered on the SIM.

SIM is the fabric of the relationship between parts of the organization through one part of the SIM.

1.5 PDCA Cycle

Mechanical PDCA *(Plan, Do, Check, Action)* is a method for continuous process improvement. This technique is a cycle that was popularized by W. Edwards Deming (October 14, 1900 - December 20, 1993) is a professor, author, lecturer and consultant. He is considered the father of modern quality control so that this cycle is often referred to as the Deming Cycle. PDCA Cycle or Cycle 'plan, do, check, follow up' is a four-step problem-solving process that is commonly used in quality control. According Syahu Sugiano, PDCA cycle can be likened to a ball that should be encouraged rose toward the goals set are located in atas.Berikut is an overview of the PDCA cycle shown in the figure 1.1.

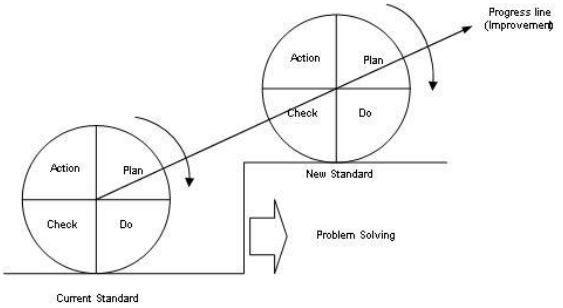


Figure 1.1 PDCA Cycle

1.*Plan* (Perencanaaan)

Planning is the selection and connecting facts, making and using assumptions relating to the future by describing and formulating specific activities that are believed necessary to achieve a specific outcome. In the phase plan in the PDCA cycle planning is performed against a target of selling goods.

2. *Do* (Kerjakan)

Do (Do) means that the planning process is predetermined and monitor the implementation process. The sizes of this process has also been established in the PLAN stage. Referring to the application and implementation of the planned activities.

3. *Check* (Cek)

At this stage we measure how effective the experiments have been performed on the stage of the PDCA cycle before, ie Do. In addition, this stage is also interesting learning as much as possible so that later could produce better results. In the PDCA cycle stage Do and Check with the scale and areas of improvement to be done, we can repeat these steps prior to the next stage if necessary. If the results are satisfactory then we can move to the next stage of the PDCA cycle that Act.

4. *Act* (Tindaklanjuti)

Following up the results to make the necessary repairs, is also reviewing all of the steps and modify the process to fix it before the next implementation. If this stage has been completed and we've reached the next stage better, we can repeat this process over again to achieve higher stages.

1.6 Understanding Consumption Method

Method of consumption is one of the standard methods used for planning the required amount of drug. This method provides a good prediction accuracy for planning needs medication. However, do not always give a satisfactory result, because this method can only predict how much medicine needs to be planned, can not be known when to order drugs again. In addition, the consumption method also could not provide information about drug plans based on the priority value of the investment [3].

Consumption method is based on analysis of previous drug consumption data. Planning needs medication according to consumption patterns have steps - steps as follows: collection and processing of data, an approximate calculation of drug needs and adjust the amount of medication needs with the allocation of funds. Number of drug requirements according to the method of consumption can be calculated by the following formula [8]:

This year the plan needs drug use last year = number of empty stock + + needs lead time + safety stock - the remaining stock of last year .... (2.1)

2.1 formula tailored to the needs to calculate the requirement plan for 3 months so the formula becomes like the following [8]:

*Needs Plan for 3 months = 3 * (the amount of usage per month + rata2 empty stock last month leadtime + Needs + safety stock - remaining stock last month) ... ... (2.2)*

Based Formula 2.2, the plan needs the drug for 1 month onshore written into the formula as follows:

Demand Plan 1 month = amount of usage per month + rata2 empty stock last month leadtime + Needs + safety stock - remaining stock last month ..... ……..... (2.3)

1.7 Analytical Hierarkhi Process (AHP)

Basically, the decision-making process is to choose an alternative. The main equipment AHP is a functional hierarchy of human perception with its main input. The existence of a hierarchy allows dipecahnya complex or unstructured problems into sub-problems, then menyusunya into a form of hierarchy.

Basically, procedures or steps in the method of AHP include [9]:

1. Defining the problem and determine the desired solution, and then draw up a hierarchy of problems encountered. Preparation of hierarchy is by setting goals that are the target system as a whole at the top level.
2. Specify a priority element

a. The first step in determining the priority is to make paired comparisons of elements, comparing element in pairs according to the criteria given.

b. Matrix of pairwise comparisons were filled in using numbers to represent the relative importance of one element against another element.

3. synthesis

Considerations on pairwise comparisons in the synthesis to obtain the overall priorities. Things are done in this step are:

a. Summing up the values of each column in the matrix.

b. Dividing each column with a total value of the column in question to obtain a normalization matrix.

c. Summing up the values of each line and dividing by the number of elements to obtain an average value.

4. Measuring Consistency

In making the decision, it is important to know how well the consistency that exists because we do not want decisions based on consideration with a low consistency. Things are done in this step are:

a. Multiply each value in the first column with the relative priority of the first element, the value in the second column with the relative priority of the second element, and so on.
b. Sum of each row
c. The results from the sum of the line divided by the relative priority elements are concerned.
d. Total the results of the above with the number of existing elements, the result called λ max.

5. Calculate Consistency Index (CI) using the formula:

CI = (λ max-n) / n .... (2.4)

Where n = number of elements

6. Calculate the ratio Consistency / *Consistency Ratio* (CR) by the formula:

CR = CI / IR .... (2.5)

Where CR = Consistency Ratio

CI = Consistency Index

IR = Random Consistency Index

Check the consistency of the hierarchy. If the value is more than 10%, then the judgment must be corrected data assessment. However, if the consistency ratio (CI / IR) is less than or equal to 0.1, the final result can be declared true. Here is a list of random consistency index (IR) can be seen in Table 2.1.

Table 2.1 List Random Index consistency

Matrix size	value IR
1,2	0,00
3	0,58
4	0,90
5	1,12
6	1,24
7	1,32
8	1,41
9	1,45
10	1,49
11	1,51
12	1,48
13	1,56
14	1,57
15	1,59

2. CONTENTS OF RESEARCH

2.1 Analysis Planning Needs Identification

Planning stages are conducted in the Clinical Pharmacy Needs Identification in Bhakti Sandaan is to identify the needs of the drug, based on business rules Bhakti Sandaan Clinical Pharmacy, phases of activities undertaken in identifying the needs of the drug is the determination of the type of drug needs and the determination of the amount of medication needs.

A. Stipulation of Drug Supplies

The first step in planning the procurement is to establish the type of medication needs, supporting data used in the determination of the type of drug needs are drug inventory reports, reports of drug use preceding month. Stages in determining the type of drug needs in Clinical Pharmacy Bhakti Sandaan the first is to investigate reports of drug supplies. This report drug supplies in the warehouse can be seen in Table 2.1.

Table 2.1 Reports May 1, 2016 Drug Supply

type Drugs	Total Inventories	safety Stock	Ket	Information
Amoxicillin 500mg	150	180	<	Not Safe
Antasida 200mg	220	260	<	Not Safe
Antiza	22	260	<	Not Safe
Centirizin 10mg	75	188	<	Not Safe
Emturnas	10	128	<	Not Safe
Gemfitbrozil	447	284	>	Safe
Grafachlor	120	108	<	Safe
Ketoconazol 200mg	475	380	>	Safe
Melacort	10	564	<	Not Safe
Metformin 500mg	150	336	<	Not Safe
Neurodex	250	240	>	Safe
OBH	10	28	<	Not Safe
Renadinac 50mg	10	528	<	Not Safe

the identification of drug needs created by the inventory report in table 2.1 can be seen in Table 2.2.

Table 2.2 Types of Drug Supplies

No	Type Drugs
1	Amoxicillin 500mg
2	Antasida 200mg
3	Antiza
4	Centirizin 10mg
5	Emturnas
6	Melacort
7	Metformin 500mg
8	OBH
9	Renadinac 50mg

B. Determining Total Drug Supplies

Stages determine the required amount of medication is an activity where the number or quantity of each type of drug requirements been anticipated number pemesananya (pembelianya). Consumption method chosen to assist the Procurement Section estimate (predict) the required

amount of drug so that the drug is provided able to (overcome surge in drug use) meet the required amount of drug in each period. Following the calculation of the amount of drug need to use methods of consumption can be seen in Table 2.3. and 2.4.

Table 2.3 Calculation of Total Requirements medicine for Month of May 2016 (1)

Medicine name	Usage Rata2 / Month	Out of stock	The Need For *Lead Time*
Amoxicillin 500mg	375	0	50.00
Antasida 200mg	364	0	48.53
Antiza	55	0	7.33
Centirizin 10mg	83	0	11.07
Emturnas	48	200	6.40
Melacort	459	300	61.20
Metformin 500mg	106	0	14.13
OBH	9	0	1.20
Renadinac 50mg	438	0	58.40

Table 2.4 Calculation of Total Requirements medicine for Month of May 2016 (2)

Medicine name	*safety Stock*	Stock	Plan
Amoxicillin 500mg	180	150	1
Antasida 200mg	260	220	1
Antiza	260	22	1
Centirizin 10mg	188	75	1
Emturnas	128	10	1
Melacort	564	10	1
Metformin 500mg	336	150	1
OBH	28	10	1
Renadinac 50mg	528	10	1

Based on the data in table 2.3 and 2.4. it can be calculated the amount of medication needs for the month of May 2016 using formulas 1.1 and the results of the calculation of the required amount of drug can be seen in Table 2.5.

Table 2.5 Results Calculation of Total Requirements medicine for Month of May 2016

Medicine name	Number of Drug Supplies
Amoxicillin 500mg	455
Antasida 200mg	453
Antiza	300
Centirizin 10mg	207
Emturnas	372
Melacort	1374
Metformin 500mg	306
OBH	28
Renadinac 50mg	1014

2.2 Implementation Analysis Needs Identification

The implementation stage is the stage where the Procurement Section began to make PR *(Purchase Requisition).* PR contains the data needs of the drugs that have been analyzed at the planning stage Needs Identification, and then handed over to the PR Pharmacy Pharmacist business as chairman in charge of Pharmacy to decide whether the PR will be approved or must be regenerated.

2.3 Monitoring Analysis Needs Identification

Phase Monitoring is the stage where Pharmacist business Pharmacy monitoring (supervising) nets activities reuirement determination, this stage monitor whether the plan needs the drug has been in accordance with what is expected of Pharmacy Clinic Bhakti Sandaan, which is able to supply the drug to the type and amount according to the needs, especially the number of drug requirements if the amount of drugs purchased to meet the needs of Pharmacy during the period targeted. Based on interviews with Clinical Pharmacy Pharmacist business Bhakti Sandaan at (Appendix C) planning targets to be achieved are as follows:

1. Drug supply can not be empty before the targeted period.
2. Excess Inventory drugs should be less than or equal to the amount of its use or expressed by the following formula:

Here's an example of monitoring drug procurement in May 2016 can be seen in Figure 2.1.

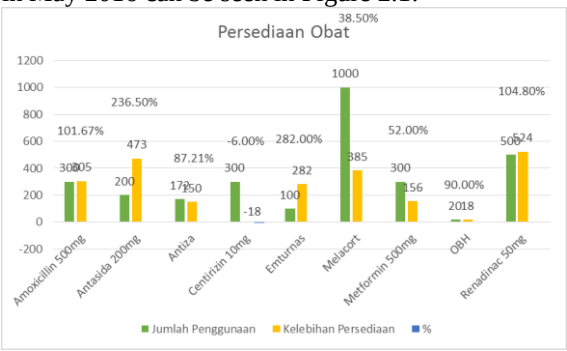


Figure 2.1 Monitoring Drug Procurement

2.4 Action Analysis Needs Identification

Based on the evaluation of the monitoring of the action taken by the Pharmacy Pharmacist business is doing repairs at the planning stage.

Table 2.7 Evaluation Results

Medicine name	Evaluation Results (%)	Action / Action
Amoxicillin 500mg	101.67%	Pressing Purchase
Antasida 200mg	236.50%	Pressing Purchase
Antiza	87.21%	-
Centirizin 10mg	-6.00%	Make a plan improvement

Medicine name	Evaluation Results (%)	Action / Action
Emturnas	282.00%	Pressing Purchase
Melacort	38.50%	-
Metformin 500mg	52.00%	-
OBH	90.00%	-
Renadinac 50mg	104.80%	Pressing Purchase

The conclusion of the evaluation results in Table 2.7 are action or actions to be performed by Bhakti Sandaan Clinical Pharmacy, Pharmacy where the pharmacist business must suppress drug purchase Amoxicillin 500mg, 200mg Antacids, Emturnas, and Redinac 50mg because too much excess inventory. Excess inventory is too much expressed by the percentage points each - each type of drug that is worth more than 100%, 500mg Amoxicillin drug samples has a value of 101.67% means the percentage of drug overdose too much so must suppress their purchases in the coming period. Instead of pressing the purchase of certain types of drugs, Clinical Pharmacy Bhakti Sandaan also have to make improvements in the planning of Centrizin 10mg drug because the amount of drugs purchased are still lacking. The drug shortage is expressed with a percentage value Centrizin 10mg drug that has a percentage value -6.00%, while the percentage value is minus the stated drugs purchased from suppliers have been exhausted before the specified period. To overcome gaps or shortages solved by buying drugs from a pharmacy partners, value or amount of drug purchases at pharmacies partner is the one who will be empty inventory value at the planning stage to correct the calculations performed using the method of consumption.

2.5 Planning Analysis Supplier Selection

Selection of suppliers is an activity where every potential suppliers than to get results in the form of the order of priority. Based on Business Rules in Clinical Pharmacy Bhakti Sandaan, supplier selection activities carried out by the Procurement Section, to assist in selecting a supplier Procurement Section made a decision support system using AHP. Prospective suppliers will be compared can be seen in Table 2.7.

Table 2.7 Candidate Drug Suppliers

No	Prospective Suppliers
1	PT. LAPI
2	PT. Meprofarms
3	PT. Penta Valent
4	PT. Singgasana Witra Suryamas
5	PT. Triman

Stages weighting procedure or suppliers performed using AHP method is as follows:

a. Defining the Problem, Goal Setting and Making Structure Hierarchy

Purposes of applying the AHP method to determine the supplier is to facilitate decision-making is done by the Procurement Section, suppliers compared based on several criteria that have been selected.

Hierarchical arrangement starting from the set goals, determine the criteria - criteria until an alternative - an alternative that will be compared can be seen in Figure 2.2.

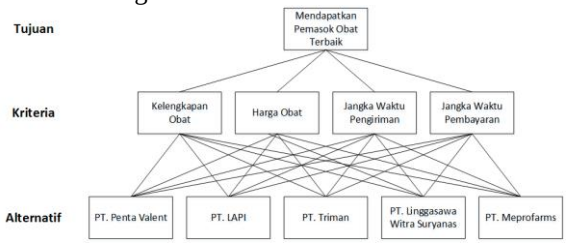


Figure 2.2 Hierarchy of Goals Drug Supplier Selection Process

Based on the criteria selected gambat 2.2 based on interviews at (Annex C) are as follows:

1. Completeness drugs (K1)
2. Price (K2)
3. Delivery Period (K3)
4. Term of Payments (K4)

Alternative or selected suppliers all suppliers are found in every type of need medicine, alternative or supplier are as follows:

1. PT. Penta Valent (A1)
2. PT. LAPI (A2)
3. PT. Triman (A3)
4. PT. Throne Witra Suryamas (A4)
5. PT. Meprofarms (A5).

b. Setting Priorities Elements

The first step is to make pairwise comparison matrix that can be seen in Table 2.8.

Tabel 2. 8 Table 2. Pairwise Comparison Matrix 8 (Criterion)

KRITERIA	K1	K2	K3	K4
K1	K1.K1	K1.K2	K1.K3	K1.K4
K2	K2.K1	K2.K2	K2.K3	K2.K4
K3	K3.K1	K3.K2	K3.K3	K3.K4
K4	K4.K1	K4.K2	K4.K3	K4.K4

The second step is pairwise comparison matrices were filled in using numbers to represent the relative importance of one element against the other element. The following priority elements that have been filled by Clinical Pharmacy Pharmacist business Sandaan Bhakti can be seen in Table 2.9.

Tabel 2.9 Pairwise Comparison Matrix (Criterion)

KRITERIA	K1	K2	K3	K4
K1	1	5	1/3	3
K2	1/5	1	1/3	1
K3	3	3	1	3
K4	1/3	1	1/3	1

c. synthesis

Consideration - consideration of pairwise comparisons in the synthesis to obtain the overall priorities. Things - things done in this phase are:

Adding up the value - the value of each column in the matrix can be seen in Table 2.10..

Table 2.10 Matrix Summation Each Column

KRITERIA	K1	K2	K3	K4
K1	1	5	1/3	3
K2	1/5	1	1/3	1
K3	3	3	1	3
K4	1/3	1	1/3	1
Jumlah	4,53	10,00	2,00	8,00

Dividing each column with a total value of the column in question to obtain a normalization matrix can be seen in Table 2.11.

Table 2.11 Normalized Matrix

KRITERIA	K1	K2	K3	K4
K1	0.2206	0.5000	0.1667	0.3750
K2	0.0441	0.1000	0.1667	0.1250
K3	0.6618	0.3000	0.5000	0.3750
K4	0.0735	0.1000	0.1667	0.1250

Summing the comparative value of each row and dividing by the number of elements to obtain an average value (relative priority) can be seen in Table 2.12.

Table 2.12 Matrix Values Criteria

K	K1	K2	K3	K4	Jumlah	Prioritas Relatif
K1	0.22	0.50	0.16	0.30	1.2623	0.3156
K2	0.04	0.10	0.16	0.10	0.4358	0.1089
K3	0.66	0.30	0.50	0.37	1.8368	0.4592
K4	0.05	0.10	0.16	0.12	0.4652	0.1163

d. Measuring Consistency

Things that are done in this phase are:

Multiply each value in the first column with the relative priority of the first element and so can be seen in Table 2:13..

Table 2.13 Matrix Multiplication Columns with Relative Priority

KRITERIA	K1	K2	K3	K4
K1	0.3156	1.5778	0.1052	0.9467
K2	0.0218	0.1089	0.0363	0.1089
K3	1.3776	1.3776	0.4592	1.3776
K4	0.0388	0.1163	0.0388	0.1163

Summing each line can be seen in Table 2.14.

Table 2:14 Matrix Summation Each Line

K	K1	K2	K3	K4	∑Baris
K1	0.3156	1.5778	0.1052	0.9467	2.9453
K2	0.0218	0.1089	0.0363	0.1089	0.2760
K3	1.3776	1.3776	0.4592	1.3776	4.5919
K4	0.0388	0.1163	0.0388	0.1163	0.3101

Determine the results of the sum of the line with the relative priority element in question can be seen in Table 2.15.

Table 2.15 Calculation of Ratio Consistency

KRITERIA	∑Baris	Prioritas Relatif	Hasil
K1	2.9453	0.3156	3.2608
K2	0.2760	0.1089	0.3849
K3	4.5919	0.4592	5.0511
K4	0.3101	0.1163	0.4264

Add up the results and divide by the number of existing elements, the result is called λ max

From 3:24 table obtained values - values like the following:

∑Hasil : 9,1233

n (Banyaknya Kriteria) : 4

λmaks=9,1233/4= 2,2808

e. Calculating Consistency Index (CI) based formulas in Chapter 2.

$$CI = \frac{2,2808 - 4}{4} = -0,4297$$

f. Calculating Consistency Ratio (CR) based formulas in Chapter 2.

$$CR = \frac{0,4297}{0,90} = -0,4775$$

g. Consistency checking Hierarchy

Consistency Ratio (CR) -0.4775 worth criteria matrix showed good consistency or received, because the assessment results as a whole hierarchy can be accepted if it has the consistency ratio is less than or equal to 10%.

2.6 Analysis of Implementation of Supplier Selection

The implementation stage is an activity where Procurement Section create documents RFQ *(Request of Quotation).* Procurement Section send documents to each supplier RFQ designated as a provider of a drug (Suppliers who have been at the planning stage of the selection of suppliers).

2.7 Monitoring Analysis of Supplier Selection

Monitoring stage is the stage where business Pharmacist Pharmacy watch every activity carried out by the planning. The activities are supervised or monitored in the selection of suppliers is to check the consistency of supplier assessment for each criterion and suppliers are compared based on AHP method. Here's an example of monitoring the selection of suppliers can be seen in Table 2.16

Table 2.16 Monitoring Supplier Selection

appraisal	Consistency ratio	Consistency accepted ratio (CR <10% or 0.1)	Information
Kriteria	-0,4775	-0,4775 < 0.1	Be Accepted
Alternatif K1	-0.4001	-0.4001 < 0.1	Be Accepted
Alternatif K2	-0.5483	-0,5483 < 0.1	Be Accepted
Alternatif K3	-0.4165	-0,4165 < 0.1	Be Accepted
Alternatif K4	-0.5912	-0,5912 < 0.1	Be Accepted

2.8 Action Analysis of Supplier Selection

Based on the monitoring results can be known; that the election conducted by the drug suppliers Clinic Pharmacy Bhakti Sandaan there are actions that must be performed for the evaluation results indicate the selection of suppliers has been tested consistency penilaianya.

2.9 Design Data

Table relationships are used to classify the data into tables that show the entities and relationships that function to access data. Diagram table on this system can be seen in Figure 2.2.

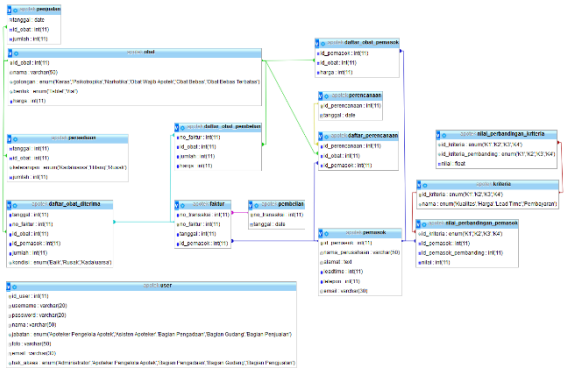


Figure 2.2 Table Relationships

3. FINALE

3.1 Conclusion

Based on the results obtained from the manufacture of this thesis, it can be concluded as follows:

1. Drug Procurement Management Information Systems already can assist in planning the procurement section identification requirement is to determine the number per type of medication needs Bhakti Sandaan Clinical Pharmacy.
2. Drug Procurement Management Information Systems already can assist Pharmacy Pharmacist business and Procurement Section in planning the selection of suppliers to determine the best supplier based on the criteria proposed Bhakti Sandaan Clinical Pharmacy.

3.1 Suggestion

Based on the positive results achieved so far, management information systems procurement of these drugs still have some drawbacks. It is advisable to add things that can complement procurement information system that will come, including adding a forecasting system to predict the cost of purchase.

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