

# FACTORS AFFECTING THE QUALITY OF SERVICES IN THE MALUKU PROVINCE OF HEALTH LABORATORY DURING THE COVID-19 PANDEMIC

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## ABSTRACT

The quality of health services is health services that can satisfy every service user of health services in accordance with the level of satisfaction, namely with various factors. These factors are physical evidence, empathy, affordability/access, convenience, information, timeliness. The purpose of the study was to determine: factors that affect the quality of service at the Maluku Provincial Health Laboratory Center during the Covid-19 pandemic. This study uses an analytical survey with a cross sectional approach. The population in this study were all patients who visited the Maluku Provincial Health Laboratory to conduct laboratory examinations, while the population of patient visits for one month was 260 people. The sample of this study were people who came to check at the Maluku Provincial Health Laboratory Center at the time of the study with a total of 158 samples, the sample size was calculated using the Slovin formula. Data analysis used chi-square and multiple linear regression. The results showed that the factors affecting the quality of service were physical evidence ( $p=0.000$ ), empathy ( $p=0.000$ ), affordability/access ( $p=0.001$ ), convenience ( $p=0.000$ ), information ( $p=0.000$ ) and timeliness ( $p=0.000$ ) and timeliness ( $p=0.000$ ).  $p=0.000$ ). After further analysis, it was found that the comfort factor greatly affects the quality of service. Customers/patients have not been satisfied with the services provided by the Maluku Provincial Health Laboratory Center during the Covid1-19 pandemic. The Maluku Provincial Health Laboratory will further improve the quality of services so that it can improve the quality of services during the Covid-19 pandemic.

**Keywords:** Physical evidence, empathy, affordability/access, convenience, information

## I. INTRODUCTION

Quality improvement efforts are steps taken to meet health service standards and try to meet and even exceed customer satisfaction both internally and externally (Ministry of Health, 2016). Service quality in the laboratory is related to data from laboratory analysis test results [1]. Based on research reports from [2]. It was found that as many as 267 patients (7.03%) still complained about laboratory services, where the waiting time was more than 140 minutes.

To achieve quality laboratory results that have high accuracy and precision, all laboratory operational methods and procedures must be integrated from sample preparation, sampling, sample examination to reporting laboratory test results to customers [3]. Similar to other health services, clinical laboratory services must be able to consistently implement quality health services, higher than competitors [2]. The key to laboratory services is to meet or exceed patient expectations about the quality of service they receive. If the quality of laboratory services is not improved, it is likely that service users will file complaints and, in the end, will not return to use the laboratory services [4].

As a determinant of diagnosis, the ability and experience of human resources (HR) in conducting sample examinations are considered to have an effect on the speed of laboratory services[5]. Infrastructure factors also

affect the quality of laboratory services, the availability of adequate laboratory facilities and infrastructure can provide speed of examination results and the convenience of officers in working.

The Maluku Provincial Health Laboratory Center is an intermediate-level clinical laboratory which is the UPTD (Regional Technical Implementation Unit) of the Maluku Provincial Health Office which has carried out an accreditation survey in 2018 and will be reaccredited in 2021. The task of the Maluku Provincial Health Laboratory Center is to carry out health services, examination of laboratory results in the form of blood chemistry, clinical pathology, microbiology, and parasitology.

Based on the results of initial data collection conducted by researchers, the number of personnel (HR) of the Maluku Provincial Health Clinic Laboratory consists of 1 General Practitioner, 1 Pathologist Specialist, 6 Health Analysts, 3 Nurses, Chemistry/Biology 16 people. and 27 administrative officers. According to Permenkes No. 411 in 2010 the staff at the Intermediate General Clinic Laboratories Center consisted of 1 pathology specialist, 4 health analysts, 1 nurse and 2 administrative officers.

Based on the circular letter of the Governor of Maluku number 443-80 of 2020 concerning the work system of the state civil apparatus in the new normal order within the Maluku Provincial Government during the Covid-19 pandemic, Regional Civil Servants carry out official duties at home/place of residence (Work From Home) because the number of Covid-19 patients is increasing. Therefore, the Health Laboratory Center divides work hours based on shifts because the number of patients who make examination visits increases. The results of interviews with researchers during initial data collection, namely during the Covid-19 pandemic with several officers, obtained information that the equipment was inadequate and the human resources of the Laboratory Hall were not appropriate so that the officers had concurrent jobs. From the description above, the researchers are interested in conducting research on Factors Affecting Service Quality at the Maluku Provincial Health Laboratory during the Covid-19 Pandemic.

## II. METHODS

The type of research used is quantitative research using a survey assessment approach with a cross sectional design. The population in this study were all patients who visited the Maluku Provincial Health Laboratory to conduct laboratory examinations. The population of patient visits for one month is 260 people. The sample in this study were people who came to check at the Maluku Provincial Health Laboratory at the time of the study with a total of 158 samples. Data collection was obtained through interviews using a questionnaire. Data processing was carried out computerized using the SPSS program. Data is presented in narrative form, frequency distribution table accompanied by interpretation.

## III. RESULTS

### Univariate Analysis

Based on table 1, it is known that the frequency distribution based on physical evidence is mostly in the good category (137 respondents, 86.7%), and the rest are in the bad category (21 respondents, 13.3%). The frequency distribution based on empathy was mostly in the good category (132 respondents, 83.5%), and the rest were in the bad category (26 respondents, 16.5%). The frequency distribution based on affordability/access is mostly in the good category (131 respondents, 82.9%). Most of the frequency distributions based on comfort are in the good category (136 respondents, 86.1%). The frequency distribution based on information is mostly in the good category (134 respondents, 84.8%). The frequency distribution based on timeliness is more in the good category (142 respondents, 89.9%). The frequency distribution based on service quality is mostly in the good category (143 respondents, 90.5%).

Table 1. Frequency distribution based on research variables at the Maluku Provincial Health Laboratory in 2021

Variable	Category	n	%
Physical Evidence	Good	137	86.7
	Bad	21	13.3
Empathy	Good	132	83.5
	Bad	26	16.5
Affordability / Access	Good	131	82.9
	Bad	27	17.1
Comfort	Good	136	86.1
	Bad	22	13.9

Information	Good	134	84.8
	Bad	24	15.2
Timeliness	Good	142	89.9
	Bad	16	10.1
Quality Of Service	Good	143	90.5
	Bad	15	9.5
Total		158	100

Source: Primary Data, Year 2021

### Bivariate Analysis

Table 2. The influence of research variables on the quality of services in the Maluku Provincial Health Laboratory Hall in 2020

No	variable	category	Quality of Service				Total		
			good		Bad		n	%	
			n	%	n	%			
1	Physical Evidence	good	137	100,0	0	0	21	100	$p = 0,000$
		Bad	6	28,6	15	71,4	21	100	$a = 0.05$
2	empathy	good	132	100,0	0	0	132	100	$p = 0,000$
		Bad	11	42,3	15	57,5	26	100	$a = 0.05$
3	Affordability / access	good	123	93,9	8	6,1	131	100	$p = 0,001$
		Bad	20	74,1	7	25,9	27	100	$a = 0.05$
4	comfort	good	136	100,0	0	0	136	100	$p = 0,000$
		Bad	7	31,8	15	68,2	22	100	$a = 0.05$
5	information	good	134	100,0	0	0	134	100	$p = 0,000$
		Bad	9	37,5	15	62,5	24	100	$a = 0.05$
6	Timeliness	good	142	100,0	0	0	142	100	$p = 0,000$
		Bad	1	6,3	15	93,8	16	100	$a = 0.05$
Total			143	90,5	15	9,5	158	100	

Source: Primary Data, Year 2021

Based on table 2 shows that the value of  $p = 0.000$  which indicates that there is an influence between physical evidence, empathy, comfort, information, affordability / access and timeliness of service quality at the Maluku Provincial Health Laboratory.

### Multivariate Analysis

At this stage, a multivariate analysis of variables that are directly related and have an influence on the dependent variable ( $p$  value  $< 0.05$ ) is carried out, namely the variables of physical evidence, empathy, affordability/access, convenience, information, and timeliness. Multivariate analysis with linear regression test obtained the effect of the independent variables together (simultaneously) on the dependent variable, as shown in the table:

Tabel 3. Results of Independent Variable Linear Regression Analysis on the quality of services in the Maluku Provincial Health Laboratory Center during the Covid-19 pandemic.

Variable	B	S.E.	Beta	t	itself.	Collinearity Statistics	
						Tolerance	Bright
Physical Evidence	.088	.051	.131	1.739	.084	.749	1.335
Empathy	.137	.057	.185	2.398	.018	.721	1.387
Affordability/Access	.039	.052	.050	.736	.463	.912	1.097
Comfort	.175	.046	.305	3.807	.000	.666	1.501
Information	.099	.098	.070	1.004	.317	.867	1.153
Constant	4.664	2.045		2.281	.024		

Source: Primary Data, Year 2021

Table 3 shows that after multivariate analysis using multiple linear regression obtained a constant value ( $B_0$ ) = 4.664, the value of the regression coefficient for the physical evidence variable ( $B_1$ ) = 0.088, empathy ( $B_2$ ) = 0.137, the affordability/access variable ( $B_3$ ) = 0.039, comfort variable ( $B_4$ ) = 0.175, information variable ( $B_5$ ) = 0.099. The  $p$  value of each variable is physical evidence = 0.084, empathy = 0.018, affordability/access variable = 0.463, convenience variable = 0.000, information variable = 0.317. By paying attention to the  $p$  value, only the

convenience variable has the smallest p value, which is  $0.000 < 0.05$ . It can be concluded that this variable was determined as the most influential factor on the quality of service at the Maluku Provincial Health Laboratory during the Covid-19 pandemic.

#### IV. DISCUSSION

Physical evidence is what can be seen including the physical appearance of facilities, equipment, employees and communication tools [6]. A good clinical laboratory must meet organizational criteria, space and facilities, equipment, materials, specimens, examination methods. Health service infrastructure and health service quality variables simultaneously affect patient satisfaction [7]. During the Covid-19 pandemic, sampling officers always use personal protective equipment so that they are not directly exposed to customers/patients who carry out examinations so that it can be said that physical evidence has an influence in providing services. By having good physical evidence such as facilities, equipment, employees are very supportive in providing services that satisfy consumers so that they can improve the quality of service so that patients feel satisfied with the services provided [8].

In the results of the analysis of physical evidence has an influence on the quality of service during the covid-19 pandemic where the dimensions of physical evidence are the basic support in providing services at Santa Anna Hospital the effect of service quality on consumer satisfaction at the *litte a coffee shop sidoarjo* said that physical evidence had a significant influence on consumer satisfaction [9]. Physical evidence factors affect patient satisfaction in the emergency department at Sumedang District Hospital [10].

During the Covid-19 pandemic, the lack of communication between officers and customers can occur due to changes in the pattern of interaction between officers and customers because they have to follow the applicable health protocols. Based on the results of the research above, it is in line with [11] the dimension of empathy has an influence on the quality of service where the personal attention given by pharmacists to consumers has an influence in providing services at Santa Anna Hospital during the Covid-19 pandemic. Based on the results of the analysis [10] the dimension of empathy also has a significant effect on patient satisfaction in the Emergency Room at the Sumedang Regency Hospital. This research is in line with who says that empathy has an influence on consumer satisfaction *di the litte a coffee shop Sidoarjo* [9].

During the Covid-19 pandemic, the scope of customers/patients was limited where customers/patients who were referred from the area for further examination had to go through the stages and procedures of the applicable health protocol. Affordability/access such as geographic location, signage and signage greatly affect consumers to carry out health checks. Affordability/access had an influence on the satisfaction of BPJS participants at the Makassar Haji Hospital in getting health services [12]. This research is in line with the results of this study who said that there was an influence between service access and the utilization of health services at the Paniki Bawah Public Health Center, Mapanget District, Manado City [13]. Mileage has a significant effect on the patient's return visit interest [14].

Convenience is the degree to which service providers use appropriate professional behavior and style while working with customers. In this case, the comfort can be felt by the customer with fast, timely action and a response from the company when the customer needs something [15]. This aspect is then embodied in certain relevant statements. The quality of the service is also said to be good if the customer is satisfied with the level of comfort provided by the service provider, namely with fast, precise action and a good response to service recipients [12]. The dimension of comfort affects patient/customer satisfaction so as to encourage the patient's desire to come back to visit, comfort can lead to consumer trust in health service organizations.

The quality of service is said to be good if the patient is satisfied with the explanation of the health information, the flow of the service, the response of the officer and the delivery of the examination results by the doctor can be understood and understood well. The effect of public perception of service quality on the utilization of health services, information has a significant influence on satisfaction with basic services at the Simalingkar Public Health Center [16].

During the COVID-19 pandemic, officers provided timely services but with limited transportation, due to having to carry out health protocols for customers/patients who did not check on time and the number of customers/patients who checked out of the area so that it affected customers/patients. in taking results due to limited equipment and officers who have concurrent jobs. Health services are said to be successful if service providers must be carried out in the right time and manner and use the right tools and drugs.

## V. CONCLUSION

This study concludes that there is a significant influence between the factors of physical evidence, empathy, affordability/access, convenience, information, timeliness of service quality at the Maluku Provincial Health Laboratory Center during the Covid-19 pandemic. The most influential factor on the quality of service at the Maluku Provincial Health Laboratory during the Covid-19 pandemic is the convenience factor. Customers/patients have not been satisfied with the services provided by the Maluku Provincial Health Laboratory Center during the Covid-19 pandemic. The Maluku Provincial Health Laboratory will further improve the quality of services so that it can improve the quality of services during the Covid-19 pandemic.

## REFERENCES

1. Siswanto, P. D. Indrasari, O. R., Anggraini, E. R. (2019). Hubungan Kualitas Pelayanan Laboratorium Dengan Loyalitas Pelanggan Laboratorium Di Rumah Sakit Muhammadiyah Ahmad Dahlan Kota Kediri. *Jurnal Analis Kesehatan*, (7)2.
2. Siagian, M, T. Sinaga, J. Mokoagow, W. N.. (2019). Analisis Faktor-Faktor Yang Mempengaruhi Waktu Tunggu Hasil Pemeriksaan Laboratorium Klinik Di Rsup Haji Adam Malik Medan Tahun 2019. *Jurnal Kesehatan Masyarakat dan Lingkungan Hidup*, 4(2), 27-43.
3. Tuntun, A. (2018). Hubungan Tingkat Keparahan Demam Berdarah dengan Kadar Hemoglobin, Hematokrit, Dan Trombosit di Puskesmas Rawat Inap Way Kandis Bandar Lampung. *Jurnal Analis Kesehatan*, 6(2), 616-624.
4. Rosita, K. (2018). Analisis Lama Waktu Pelayanan Laboratorium di Rumah Sakit Umum Daerah Pasaman Barat. *Jurnal Kesehatan Perintis (Perintis's Health Journal)*, 5(1).
5. Yaqin. (2015). Analisis Tahap Pemeriksaan Pra Analitik Sebagai Upaya Peningkatan Mutu Hasil Laboratorium Di Rs. Muji Rahayu Surabaya. *Jurnal Sains*, 5(10).
6. Nofiana, H., & Sugiarsi, S. (2011). Hubungan Mutu Pelayanan Pendaftaran dengan Kepuasan Pasien Rawat Jalan Di Rumah Sakit Pku Muhammadiyah Karanganyar. *Rekam Medis*, 5(1)
7. Darmawansyah, A. D. (2018). Pengaruh Kualitas Pelayanan Kesehatan Terhadap Kepuasan Pasien Peserta Bpjs Di Rumah Sakit Umum Daerah Haji Makassar. *Jurnal Kesehatan Masyarakat Maritim*, 3(1), 10.
8. Palutturi, S. (2020). Indonesia Perang Melawan Covid-19. Yogyakarta: Pustaka Pelajar.
9. Apriyani, D. A., & Sunarti, S. (2017). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Konsumen (Survei Pada Konsumen the Little a Coffee Shop Sidoarjo). *Jurnal Administrasi Bisnis*, 51(2), 1-7.
10. Septiani, A. (2016). Pengaruh faktor-faktor kualitas pelayanan terhadap kepuasan pasien di instalasi gawat darurat RSUD Kabupaten Sumedang. *Coopetition*, 7(1)
11. Sabarudin, S., Solo, D. M., Sida, N. A., & Asdia, W. O. (2020). Evaluasi Mutu Pelayanan Kefarmasian Pada Masa Pandemi Covid-19 Di Rumah Sakit Santa Anna Kota Kendari. *Journal Publicuho*, 3(4), 447-453.
12. Datuan, N., Darmawansyah, D., & Daud, A. (2018). Pengaruh Kualitas Pelayanan Kesehatan Terhadap Kepuasan Pasien Peserta Bpjs Di Rumah Sakit Umum Daerah Haji Makassar. *Jurnal Kesehatan Masyarakat Maritim*, 1(3).
13. Rumengan, D. S., Umboh, J., & Kandou, G. (2015). Faktor-faktor yang berhubungan dengan pemanfaatan pelayanan kesehatan pada peserta BPJS kesehatan di Puskesmas Paniki Bawah Kecamatan Mapanget Kota Manado. *Jikmu*, 5(2).
14. Gusmawan, F., Haryadi, H., & Sutrisna, E. (2020). Pengaruh Kualitas Pelayanan Dan Karakteristik Sosiodemografi Terhadap Minat Kunjungan Ulang Yang Dimoderasi Oleh Kepuasan Pasien Pada Pelayanan Rawat Jalan Puskesmas Kedungbanteng Kabupaten Banyumas. *Jurnal Ekonomi, Bisnis, dan Akuntansi*, 21(4).
15. Kasnaini. Palutturi, S. Reza. A. A. (2018). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Pasien Umum Instalasi Rawat Inap RSUD La Temmamala Soppeng Tahun 2018. *Jurnal Mitrasedhat*.
16. Lubis, S. (2020). Pengaruh Persepsi Masyarakat Tentang Mutu Pelayanan Terhadap Pemanfaatan layanan Kesehatan Dasar Di Puskesmas Simalingkar