

# Analysis of the implementation of minimum service standards indicators radiology unit at RSUD X Padang

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## ABSTRACT

Radiology services are an important and integrated part of healthcare services in hospitals. A survey on the Minimum Service Standards (SPM) for the radiology unit only evaluated 3 indicators, with problems found in the waiting time indicator that exceeded 3 hours. This study aims to evaluate the implementation of the SPM indicator in the radiology unit at RSUD X Padang. The research method used is qualitative, with data collection through in-depth interviews, FGDs, document review, and observations of 14 informants. The variables studied include the SPM indicators. The research results show the availability of SPM policies, but the number of radiology staff is not yet in accordance with the regulations. The survey was well-organized, but routine socialization has not been carried out. The service is not yet effective because the radiology specialist doctors are only present twice a week. Efforts to achieve the SPM targets are constrained by the limited presence of radiology specialist doctors. It can be concluded that the implementation of the SPM indicators in the radiology unit is not yet optimal. The suggestions given are the commitment of radiology specialist doctors to be present according to the set schedule, as well as proposing an increase in radiology staff.

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## INTRODUCTION

The Implementation of radiology services needs to be adjusted to the development and needs of health services, the legal needs of the community, and the development of science and technology (Continuity and Coordination of Care: A Practice Brief to Support Implementation of the WHO Framework on Integrated People-Centred Health Services, 2018). The ability of radiology services provided must have competent human resources and equipment must be maintained and maintained in accordance with the standards and provisions of laws and regulations (Permenkes RI, 2020).

Hospitals as health service providers need to carry out services in accordance with the Hospital's Minimum Service Standards (SPM). The implementation of the Minimum Service

Standard Indicator (SPM) in the radiology unit is important in order to improve the quality of health services (Alvarez et al., 2022). RSUD X Padang as one of the regional public hospitals has the responsibility to implement this standard so that the services provided are in accordance with the needs of the community (Motsumi et al., 2020).

In its implementation, the hospital radiology unit has SPM that must be carried out, including indicators of waiting time for photo thorax service results, indicators of implementation of examination results, incidence of X-ray service failures, and customer satisfaction (Menkes RI, 2008).

At X Padang Hospital, the radiology unit is the main support of the existing superior products, including integrated heart and lung services, orthopedic services, TB DOTS services, and skin care. Therefore, RSUD X Padang is ready to optimize the quality of service and is ready to compete with private hospitals in Padang City (RSUD Dr. Rasidin, 2021). RSUD X Padang has a Minimum Service Standard (SPM) which is stipulated through Padang Mayor Regulation number 39 of 2014. This SPM is specifically applied to X Padang Hospital as a strategic and comprehensive instrument to improve the quality of health services. The main goal is to improve and ensure the quality of services carried out as best as possible to the community (Perwako, 2014).

In its implementation, the radiology unit of RSUD X Padang has not fully met the achievement of the Minimum Service Standard (SPM) indicator which is applied as a benchmark for the performance assessment of the hospital. The SPM indicators that apply in the radiology unit of X Padang Hospital include four aspects, namely; First, the waiting time for thoracic photo examination should not exceed 3 hours of service. Second, the examination must be carried out by a radiologist who has the appropriate expertise and competence. Third, the percentage of damage or failure of X-ray photos must be at the level of  $\leq 2\%$ , and fourth, the level of customer satisfaction with radiology unit services is set to reach a minimum of 80% patient satisfaction (Stansfeld et al., 2021).

However, based on the available data and information, the radiology unit of RSUD X Padang has not been able to reach the standards set on all SPM indicators. This indicates that there is room for improvement and improvement of the quality of radiology services in hospitals to be in accordance with the minimum service standards that have been set (Sethi et al., 2019).

Efforts to optimize the performance of radiology units need to be carried out comprehensively, namely by considering all aspects of SPM indicators that have not been met. Corrective and innovative actions are needed to ensure that radiology services at X Padang Hospital can meet patient expectations and satisfaction and are in line with the applicable minimum service standards (Mohamed et al., 2020). With improvements that must be expedited, for this reason it is necessary to conduct an Analysis of the Implementation of the Minimum Service Standard Indicator (SPM) of the Radiology Unit at X Padang Hospital.

## RESEARCH METHOD

This study uses a qualitative approach with a descriptive design. The purpose of this study is to provide a comprehensive and in-depth overview of the implementation of the Minimum Service Standard Indicator (SPM) of the radiology unit of X Padang Hospital. This research was carried out in the radiology unit of X Padang Hospital in the period from May 2023 to August 2023.

The sample in the qualitative research (informant) was selected by purposive sampling technique. Consideration is made based on the informant's knowledge of the problem more broadly and deeply about the research object and the informant can be trusted and competent as a source of data in relation to the research object.

Data collection was carried out using various qualitative techniques, namely in-depth interviews with key informants, such as the director, the head of the medical service and medical support division, the head of the radiology room unit, the chairman of the quality committee, radiology specialists, and radiology staff as service implementers. Focus Group Discussion (FGD)

with 6 (six) radiology patients. Review of documents, such as the radiology SPM policy, the annual report of the X Padang Hospital, and other related documents. As well as observation, namely direct observation of activities in the radiology unit of X Padang Hospital. The tools used in this study are interview guidelines, FGD guidelines, observation sheets, tape recorders, and cameras.

## RESULTS AND DISCUSSIONS

### Waiting Time Indicator Photo of X-ray Service Results

The achievement of the Minimum Service Standards (SPM) of the radiology unit related to the indicator of the waiting time for the results of the photo thorax service, obtained through in-depth interviews and FGD that the radiology unit service is not in accordance with the SPM target standards due to the length of the examination process from radiology specialists which takes more than two days of service.

Based on the review of the document, it was found that the SPM survey on the Waiting Time indicator for X-ray Service results had been carried out, where it was obtained that the Minimum Service Standard (SPM) of the radiology unit had been met, which was  $\leq 3$  hours.

The following are the results of the triangulation matrix of the Waiting Time Indicator Photo of X-ray Service Results:

**Table 1.** Triangulation matrix waiting time indicator photo x-ray service results

Report	Conclusion
Interview	The results of the SPM indicators include, the length of waiting time for X-ray services which requires more than two days of service
FGD	
Document Review	

Based on table 1, it is known that the waiting time indicator for thorac photo service results is obtained that radiology unit patients need more than two days to get expert results from radiology specialists.

### Indicators of Implementation of Inspection Results

In the indicator of the implementation of the examination results, the results were obtained through in-depth interviews that the reading of the patient's X-ray photos was carried out directly by a radiologist, the radiology unit had met the SPM target standards in accordance with what had been set.

Observations were made in the radiology unit, it was found that radiology specialists were present at the hospital on Tuesdays and Thursdays as scheduled, although the entry hours were often later than the hours set by the X Padang Hospital.

Based on the review of the document, the SPM survey on the Ekpertise Implementing indicator has been carried out with the results that radiology specialists have been available, but the status is still a referral (not fixed).

The following are the results of the triangulation matrix of the Radiology Unit Examiner Implementing Indicators:

**Table 2.** Triangulation matrix of ekpertise implementation indicators

Report	Conclusion
Interview	The results of the SPM indicators include, the implementers of the experiment who have met the standards, namely radiology specialists
Observation	
Document Review	

Based on table 2, it is known that the indicators of the implementation of the experiment have been fulfilled well, indicating that the implementation of the experiment has adequate competence.

### Indicators of X-ray Service Failure

In the indicator of X-ray failure, the results were obtained through in-depth interviews that the X-ray damage survey could not be carried out because the damaged photos were not counted and the report on the amount of damage was not summarized by the head of the radiology unit. This causes the absence of a data source to conduct a survey of the incidence of X-ray failure of radiology units (Guidelines for Reporting Patient Safety Incidents (IKP) Year 2015, 2015).

Observation was carried out by looking at the results of X-rays that were damaged, it was found that there were 3 X-rays that were damaged within a week. X-rays that have been damaged are placed in a disposal area for items that are no longer used.

The following are the results of the triangulation matrix of Radiology Unit X-ray Failure Incidence Indicators:

**Table 3.** Triangulation matrix indicators of x-ray failure incidence

Report	Conclusion
Interview	The results of photo damage that cannot be counted because the results of damaged rongen are only placed in the disposal area, and no report is made on the amount of X-ray damage.
Observation	
Document Review	

Based on table 3, it is known that the X-ray service failure incident indicator cannot be calculated because the officer does not summarize the number of each photo that is damaged, and there is no report on the number of photo damage every month.

### Customer Satisfaction Indicators

Customer satisfaction of the radiology unit was obtained based on the results of in-depth interviews that the services of the radiology unit had been carried out well, and to provide optimal service, the service implementer must always be consistent in providing friendly, polite, and patient safety in X-ray examinations.

Meanwhile, through FGD with radiology patients related to customer satisfaction expressed satisfaction with the services provided by radiology unit officers. The waiting room is comfortable, the service from the staff during the X-ray examination is quite good, the directions given are also clear and understandable, the skills and knowledge of the officers are good, and the availability of equipment that has met the needs of patients in the X-ray examination (Buil et al., 2019).

Furthermore, based on the review of the document, it was found that the customer satisfaction survey has been carried out every year, with satisfactory average results for patients who get services at the radiology unit.

The following are the results of the triangulation matrix of the Radiology Unit Customer Satisfaction Indicator:

**Table 4.** Triangulation matrix of customer satisfaction indicators

Report	Conclusion
Interview	The service has been carried out optimally by radiology officers so that the average patient feels satisfied with the service.
FGD	

Based on table 4 of the customer satisfaction indicators, it was obtained that the average patient was satisfied with the services of the radiology unit.

## Discussion

### Waiting Time Indicator Photo of X-ray Service Results

The thoracic photo examination process requires a waiting time of three days to get the interpretation results from a radiologist. Meanwhile, the provisions in the Padang Mayor Regulation number 39 of 2014 state that the standard waiting time for photo thorax service results is a maximum of only 3 hours. This is due to limited medical resources, where the radiologist who handles the photos is not a resident doctor, but a referral doctor who works at another hospital with scheduled working hours on Tuesdays and Thursdays. Therefore, patients are forced to wait a few days to get X-ray results (Ayisa et al., 2021). Based on the Service Standards, the radiology unit states that the waiting time for the results of the photo thorax service is a maximum of 3 hours.

Research (Lestari, 2017) explained that the factors that can cause the long waiting time are due to patients who come at the same time so that the queue piles up, and the busyness of radiologists so that they cannot standby in the room. Meanwhile, in the research (Hermiati et al., 2017) explained that the problems at the waiting time varied greatly including the absence of administrative staff, forcing radiographers and specialist doctors to carry out their duties concurrently which allowed them to be present above 13.00 WIB.

Government Regulation number 56 of 2005 stipulates that SPM must ensure that the community can get basic services from the local government in accordance with the prescribed size. SPM is set by the government, so in planning and budgeting must consider the following principles: simple, concrete, easy to measure, open, affordable, accountable, and has a deadline for achievement (Nair, 2022).

In its implementation, the services of the radiology unit have been carried out optimally even though they have not run effectively considering the schedule of doctors who can only provide services for 2 times a week.

### Indicators of Implementation of Inspection Results

The doctor in charge of conducting the X-ray examination results is a radiology specialist. However, the specialist doctor is still a referral (not permanent) doctor. This shows that the implementer of the experiment has met the standards or criteria set to carry out his duties well.

Research (Rahmaddian et al., 2019) explained that in the indicators of the implementation of the experiment, the results were obtained through in-depth interviews that the reading of the patient's X-ray photos was carried out directly by radiologists, the radiology unit had met the SPM target standards, namely the availability of radiology specialists.

Radiologists play an important role in the healthcare system. They help establish disease diagnoses, provide guidance for treatment, and monitor treatment progress. Competent and professional radiology specialists are very important to ensure the safety and quality of health services for patients in the radiology unit in the hospital (KKKI, 2013)

In this case, the presence of specialist doctors in the radiology unit will improve the quality and accuracy of patient disease diagnosis. Radiologists have in-depth knowledge and expertise in the field of medical imaging, so they can interpret the results of the examination more accurately and thoroughly (Azis et al., 2020). This can help establish disease diagnosis more quickly and accurately, so that patients can immediately get the right radiography services and treatment (Quality Committee of Dr. M. Djamil Padang General Hospital, 2022).

### Indicators of X-ray Service Failure

Based on the Minimum Service Standard indicator, RSUD X Padang states that the standard of X-ray failure in 1 (one) month  $\leq 2\%$ .

The unavailability of X-ray photo damage reports due to the negligence of officers requires firmness from the leadership of X Padang Hospital, especially for the head of the radiology unit

who does not make a report on the number of X-ray photo damage, so that the target target on the X-ray failure incidence indicator cannot be calculated.

Research (Pratama et al., 2021) explained that the causative factor that most affects the occurrence of radiograph failure and repetition is the positioning factor and followed by the exposure factor. The same is true for research conducted by (Wibowo, 2020), that the biggest factor in the recurrence caused by the failure of the Panoramix photo is due to the asymmetrical position of the patient.

Research from (Ananda, 2022) added that the occurrence of damage to the X-ray photo requires repeated photo taking which can have an impact on patient safety, where repeated examinations carried out can cause the risk of radiation dose received by patient 10 to increase so that it will endanger the patient.

In general, the impact of X-ray failure can be in the form of health risks, delays in treatment, additional costs, and psychological impacts. It is very important for hospitals to avoid the occurrence of X-ray failures through adequate procedures and training.

#### **Customer Satisfaction Indicators**

The customer satisfaction indicator was obtained that the average patient was satisfied with the services of the radiology unit. This can be used as a reference that the service has been carried out well. If the implementation of services has been carried out properly, it can improve the quality of service, efficiency, and effectiveness of the radiology unit, so that the achievement of the radiology unit customer satisfaction indicator can meet the 80% standard (Boroumand et al., 2018).

Research (Jannah et al., 2018) explain that radiographers can provide concrete examples according to the type of examination with simple language. This is to make it easier for patients to understand the examination procedure. Radiographers serve patients with friendliness and humility to achieve a satisfactory service for patients.

In its implementation, the radiology unit's patient satisfaction is largely determined by the radiology team's ability to provide professional and patient-centered services.

## **CONCLUSION**

In this study, it was found that the achievement of the Minimum Service Standard indicator has not been achieved in several indicators, including the indicator of the waiting time for photo thorax service which is more than 3 hours, and the absence of a list of reports on the number of X-ray photo damage.

Based on the SPM survey of RSUD X Padang, it was found that the implementation of the survey was only carried out on the indicator of the waiting time for thoracic imaging services with an average result of 3 days, the implementer of the experiment with results according to the standard, namely radiology specialists, and customer satisfaction that has exceeded the standard, namely achieving 90% customer satisfaction. Meanwhile, the number of X-ray failures was not performed by the radiology unit.

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