Safer City:  
Public Services Improvement Through Emergency Management System

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Abstract—Tulungagung District succeeded in developing a technology-based integrated emergency management system called Public Safety Center (PSC). This success brought Tulungagung District to receive various awards and became a model for other districts because it was considered successful in implementing integrated emergency management. This innovation is significantly able to reduce mortality and accelerate the response time in an emergency. The PSC is an integrated emergency program which is a collaboration of several agencies namely Hospitals, Community Health Center (Puskesmas), Police, Firefighters, Regional Disaster Management Agency, Military District Commander, and Civil Service Police. This paper aims to describe the success of the PSC in Tulungagung Regency as an improving public service that has changed the system of handling emergency conditions. This study uses descriptive qualitative research methods, data collection through interviews, observations, literature reviews, and data from the results of the PSC Monev and related agencies. The results showed that the success of the Tulungagung PSC began with a meeting of three policy streams: problem streams, political streams, conducive policy streams. PSC is one form of public service improvement that arises from the innovation of one of the service provider agencies and has developed into a joint integrated system of several agencies due to conducive collaboration between sectors.

Keywords—public safety center, safer city, collaboration, emergency management system, public service improvement

I. INTRODUCTION

In developing countries, handling emergencies is an important part that is still a challenge in public service innovation. The high mortality rate due to emergency cases has prompted the government to immediately establish an integrated emergency system as an effort to provide services to the public and reduce mortality.

Emergency is an event that is unexpected or sudden, often a dangerous event [1]. One effort to deal with emergencies is to develop an integrated emergency management system. Responding to this, in 2016 the Ministry of Health launched medical emergency services known as the Public Safety Center (PSC) or National Command Center (NCC) with 119 call center numbers. At present, there are only 27 Public Safety Centers (PSCs) from 539 Districts / Cities in Indonesia. Of course, this number is very low compared to the increase in cases of traffic accidents, which are the second contributor to death after a heart attack, which occurs because the victim does not get a proper immediate treatment. PSC is the first center for handling emergencies in the community that is expected to guarantee a fast and appropriate response to prevent disability and save lives. Establishment and development of Integrated Emergency Service Posts tailored to the conditions of each region.

Each region is actually required to have a system for handling integrated emergencies with the legal basis as follows:

- President Instruction Number 4 of 2013 concerning the Decade of Road Safety Action Program;
- Decree of the Minister of Health of the Republic of Indonesia Number 462 of 2002 concerning on Safe Community;
- Decree of the Minister of Health of the Republic of Indonesia Number 1529 of 2010 concerning on General Guidelines for Village and Urban Village Development Active Alert;
- Decree of the Minister of Health of the Republic of Indonesia Number 882 of 2009 concerning on Guidelines for Medical Evacuation Handling;
- Decree of the Minister of Health of the Republic of Indonesia Number 301 of 2012 concerning on Safe Community Development Team and Emergency System;
- The Makassar Declaration of 2000

Even though it has set rules, the government has not succeeded in developing an integrated emergency handling system that can be easily implemented in each region. This encourages regions to independently develop Integrated Emergency Response Systems (SPGDT).
Tulungagung District successfully developed the PSC and became a national scale pilot area. The Tulungagung District Public Safety Center (PSC) named the Integrated Emergency Response System (SPGDT) was formed in 2015 with the aim of bringing emergency services closer to the community by shortening response time. This Integrated Emergency Handling System Service is regulated in Tulungagung Regent Regulation Number 29 of 2015 concerning Integrated Emergency Handling System in Tulungagung Regency. In supporting these emergency services, there are several public service agencies incorporated in the Integrated Emergency System. Various achievements at the national and international levels were able to be achieved by PSC Kabupaten Tulungagung. In addition, it is a reference for other regional governments, both districts / cities and provinces to conduct benchmarking. It was noted that in 2017, one year after the start of the PSC, there were four provinces and thirty regencies in Indonesia benchmarking the PSC program run by dr. Iskak Public Hospital as Tulungagung Public Hospital.

The Tulungagung District Integrated Emergency Response System service is centered on the 2nd floor of the Emergency Room Installation dr. Iskak Public Hospital, this room is the center of coordination between sectors incorporated in the Integrated Emergency Response System service in Tulungagung District. Here, the operator of the Integrated Emergency Management System will coordinate the emergency situation according to telephone reports from the public.

PSC was an emergency call center with a call number 0355-320119 and then 119, and is now equipped with the innovative PSC 119 Emergency Button, an application intended for mobile phone users.

In the division of tasks between agencies, dr. Iskak Public Hospital has a dual role, because the existence of Tulungagung Emergency Medical Service as a separate part of the PSC that handles emergencies in the medical field and also as a controlling center for the integration system between stakeholders through call center 119 is in Dr. RSUD Iskak. Besides that, most emergency conditions lead to medical services which are the work area of Dr. Iskak.

The contribution of RSUD Dokter Iskak to the improvement of emergency services for the people of Tulungagung received appreciation from a number of institutions with several awards, including Best Champion I Innovation Category SPGDT Pre-RS INDOHCF Innovation Award I-2017 from Indonesia Healthcare Forum (INDOHCF) received by RSUD dr. Iskak Tulungagung on May 23, 2017, the TOP 99 Award for the 2016 National Level of Public Service Innovation, Top 35 Public Service Innovations by the Ministry of Administrative Reform and Bureaucratic Reform (PANRB), the UN Public Service Forum also awarded Dr. Iskak because of the success of a series of innovative programs that support the PSC, starting Instagram, TEMS, and Laskar.

The purpose of this paper is to know, describe and analyze how the Emergency Management System as one of public services improvement developed in Tulungagung. It is important to know how collaboration between agencies, whether policy maker or implement or, is a crucial part of the success of this program. This research is an important research topic because even though the system and equipment have been duplicated, it is not easy to be adopted in other cities / regencies.

II. THEORETICAL CONCEPT

A. Three Flow Meeting in the Policy Agenda

Appreciation for the journey of the Tulungagung PSC was based on the success in achieving common goals in a multi-sectoral policy advocacy process. Initiated by professionals who understand the dynamics of emergency so that they are able to design a system, and obtain political support that makes it easy to gather the support of various stakeholders both within their own government and the wider community. The theoretical framework that is very relevant to the data is the "Window of Opportunity" approach also commonly known as "Multiple Streams Model". This theoretical framework rationalizes the information of several speakers who see and have practiced this policy as an effort to provide good public services for the community. The role of digital technology has provided a significant impetus for countries to be more responsive, inclusive and transparent in providing public services. Technocratic in nature, political opportunities at that time strongly supported the consolidation of the parties to realize the stated policy objectives.

It sees that change is open when several currents, political currents, problem flows, or flow of policies are combined. In political currents, the implementation of elections or changes to certain political events can lead to reform movements. This situation provides opportunities for groups that were not too strong to reveal their issue. Next, in the flow of problems, changes in perceptions about problems will also influence the opening of opportunities for policy change. The last is policy flow. Changes in policy can affect the opportunity to change [2].

In the agenda process, setting the meeting of actors in the three currents (Problem stream, politics stream and policy stream); serves to ensure the opening of policy windows in the agenda setting process. From here we will establish an interaction that will later result in a policy agenda. In the agenda setting, determining the priority of a problem is a process that can attract various parties to be able to join it. The large number of actors incorporated in the agenda setting process also greatly influences the determination of priority issues and also affects the open process or the closure of the policy window.

Through the flow of problems (problems stream) issues are represented and selected by the government as a solution that has just been completed. Through the flow of policy (policy stream) an alternative solution or solution to the problem is made. In the last instance is political stream, These problems
are then processed by the political forces to be determined as a policy agenda. The three schools meet when the policy window is opened (the policy window) and the meeting is managed by parties who have the ability and resources (policy entrepreneur).

The mission of implementing merit systems in organizations, prevention of corrupt practices and formal bandits in local politics that often become parasites in carrying out government programs, as well as socializing the benefits of information technology in people's daily behavior and educating the public to be responsive to emergency conditions.

B. Collaboration

The development in policy studies got a breakthrough with the presence of a meta-analysis of collaborative governance that was far from the impression of a normative approach. It is not seen as a method or mechanism for policy formulation that contains instruments that are rigid and merely applicable. He was seated as the first, arena or contestation room. It means that, collaborative governance is a meeting place for a variety of interests that are trying to be "reconciled" by consensus. The consensus building imagined by this idea can be different in practice. Second, it is understood as a form of power. As a research ontology, collaborative governance is interpreted as an embodiment of power from the actors involved because of its interlocking nature. That is, those who have power are not only policy makers, but also those involved in implementation.

Ansel and Gash pay attention to what factors the collaboration can run successfully or vice versa, these factors include; face to face dialogue, trust building, the development of commitment, and shared understanding determine the collaboration process. Meanwhile, the variables including the prior history of conflict or cooperation, the incentives for stakeholders to participate, power and resources imbalance, leadership, and institutional design are also important parts of collaboration. It is necessary to deepen whether the cooperation and agreement of actors in a policy is determined by a certain consensus orientation. The approach to collaborative governance that develops in the policy-making process, offers up-to-date involvement of stakeholders and accommodating all interests for the sake of consensus. And claims can resolve the scourge of policy that often occurs, among others, caused by politicization of regulations, budget swelling, failure of implementation and so forth.

Philosophically, collaboration is an effort made by various parties to achieve the same goal. The nature of collaboration according to Raharja is a collaboration between organizations to achieve common goals that are difficult to achieve individually [3]. From the analysis of this definition requires that, initially the organization is autonomous, then there are limitations in achieving the goals behind the organization in collaboration with other organizations or individuals. Thus, the PSC program which initially only covered emergencies in the medical field then became an integrated program involving various agencies, Police, Regional Disaster Management Agency, Firefighter, Civil Service Police, and Military District Commander. This is inseparable from the collaborative power where there is a process that raises awareness from various parties who have limitations in seeing a problem and then try to explore the differences to find a solution.

The same thing was expressed by Leeper who stated that, collaboration is a concept used to explain cooperative relationships that are carried out during an effort to incorporate thoughts by certain parties [4]. In its journey, each agency that has had an SOP in handling these emergencies must merge into a work team, at this point absolute synergy and adjustments exist to achieve the success of the program.

C. Public Service Improvement

In a book entitled "Managing to Improve Public Service", published by Cambridge University Press 2008, we can recognize there are two chapters on innovation and various links to improvements provided by Hartley (chapter 10) and Walker and Damanpour (chapter 11). Both chapters go beyond private sector literature, suggesting the need to consider the context in considering innovation management. They concern the need for research focused on public services, which still have serious shortcomings. In each chapter we know there are various strategies for, and catalysts of, innovation, and that there is a clear need to consider not only products but also processes (eg service innovation, organization, governance, inter-organization). The idea of innovation and development could start from managers and staff within the organization, others are initiated by policy makers, while others are still shaped by normative and mimetic institutional forces between organizations.

Government provides a source of legitimacy and authority for public services. This involves arrangements to establish values, identify needs, set public goals, and supervise and monitor performance and improvement through management actions. Management is a system for utilizing and using organizational resources for public purposes, and for generating results and improving performance, some of which can be assessed through performance metrics. Results include people for citizens and users of services and management and organizational procedures. This management process occurs in the context of different policies. The policy context can be defined very professionally (such as in the field of police and health) or more complex and less structured, such as in urban regeneration and poverty reduction.

This framework can be used to see the phenomenon of PSC innovation, so that it can understand well the PSC whose presence has improved the pattern of emergency response services so far. The PSC not only promises because it is the starting point in efforts to shorten the response time to save the lives of patients who need emergency medical services, but has also revolutionized the pattern of governmental work to work collaboratively and real time. There is no longer a barrier between government agencies related to handling emergency conditions for coordination, dispensing tasks, and taking action, this is also part of our observation. The PSC also raises
III. METHODOLOGY

This study used qualitative approaches with descriptive method, in order to understand the process of developing emergency management system as an integrated system, and to know how collaboration between agencies. Descriptive method that is trying find a proper explanation of activities, object and people. Descriptive research methods associated with the process of collection of fact, identify and predict relationship within and between variables.

IV. RESULTS AND DISCUSSION

To track how policy makers are able to influence the establishment of a policy agenda in Tulungagung District, multiple-stream theory will be used to see and analyze the journey. This multiple-stream theory assumes that the window of opportunity for change will open when two or more currents are combined. These flows are political currents, problem flows, and policy flows [2].

This strong political support is the main capital to be able to deliver an idea to know the concept to be a policy. Bring up an urgency problem and gather political support in achieving goals. To create political support, a setting agenda is needed. The agenda setting is the initial stage of the overall policy stage. In each component of the agenda setting (problem stream, political stream and policy stream) process, John Kingdon explained that the agenda setting is a matter of determining priorities for himself in relation to other actors involved in competing for priority agenda [5].

Kingdon’s own agenda words have a meaning in the form of a list of subjects or problems that have links with government officials and people outside the government, where they struggle to give serious attention at a certain time including the government agenda that gets government attention and a decision agenda in the list championed into a policy. Where the role of the actor itself is different in each of these components. The existence of actors in each of these flows serves to ensure the opening of policy windows in the agenda setting process. Next is the process factor, in the process factor agenda setting there are several components, namely problem stream, policy stream, politics stream and policy windows. From these four components an interaction is established which will later produce a policy agenda. In the context of the PSC, the driving force was the Director of the dr. Isak Public Hospital who brought this integrated system idea to the Regional Head (Regent). Professional capacity of a leader who is able to bring about breakthroughs and innovations, the ability of lobbying and political access, allows change. Leadership and political access are important factors in preparing the government’s agenda. Political leaders are driven by consideration of political gain or achievement in managing an area to be an important actor who determines the direction of policy. It becomes a strong impetus for local governments to claim that the PSC program is a superior program of public service innovation that has been successfully developed.

In the formulation of the Integrated Emergency Response System (SPGDT) in the regions, technically, each agency that has the task and responsibility in dealing with emergencies has its own SOPs. Coordination between agencies has also been established. The police in Tulungagung, for example, has a Command Center that was inaugurated since April 2015. The Command Center is the center of community reporting in the event of a traffic accident or complaints relating to police duties. At the same time, officials of the Tulungagung Hospital who have carried out a lot of reforms, realize that the readiness of the Emergency Room to realize the integrated system is very important, because all emergency cases involve the Hospital. This condition then prompted the Tulungagung Regional Hospital to innovate in the form of a program in response to the needs of the community in the medical field with the help of technology.

Control of digital technology in everyday human life and its use for public services has changed some paradigms in public services, especially regarding health services that are very close to humanitarian aspects. Technology is able to break technical and non-technical gaps to reach people who are in a crisis situation rather not continue to drag on.

The Tulungagung District Government is not too difficult to develop the PSC and its innovations because since the beginning the RSUD has had a full commitment in developing the system. Indeed, the challenge is to embrace stakeholders in the region to participate and mobilize their resources. The cross-sectoral collaboration network was built with the Health Service, the Resort Police, the Regional Disaster Management Agency, and the puskesmas, sub-district police, babinsa, and koramil as the initial treatment unit before assistance from the center arrived.

To maintain the solidarity between these sectors in the PSC program coordination meeting, the Director of the RSUD always focused on the issue of emergencies that the purpose of the PSC was a Goal safe community in accordance with the regional vision that was to be built, namely creating Tulungagung Ayem Tentrem Muyo lan Tinoto (Tulungagung which is Peaceful and Ordered).

Based on the regency regulation tulungagung number 29 of 2015 concerning the integrated emergency treatment system in tulungagung district, joint work began in creating synergies between agencies. The success of the Tulungagung PSC was heard to the center, which then led to the emergence of the Republic of Indonesia Minister of Health Regulation No. 19 of 2016 concerning integrated emergency response systems. Adopting both in terms of systems and hardware and software that has been running in Tulungagung, the Ministry of Health legitimizes the PSC program through legal products that bind each region to be able to implement PSC innovations.
A. Collaboration
From the Tulungagung PSC experience there are some interesting things to see, especially the pattern of relationships that are built between sectors. In addition to digital technology, it is increasingly easy to bring the reach of the people to get emergency services, the interesting thing is the cooperative relationship that is built between stakeholders at the government level to mobilize the financial, human, and technological resources they have. There are several agencies involving in this collaboration:

1) dr. Iskak public hospital: The rapid adaptive ability of the hospital in learning IT devices and the software needed to build a command center encourages the acceleration of PSC formation. This is because there are not a few costs needed to build the technology needed. Goals built from emergency technology are aimed at bringing closer service to the people in need by trying to shorten the response time. In law number 44 of 2009 an emergency is the clinical condition of patients who need medical supervision immediately to save lives and prevent further disability. The approach used must be fast, precise, accurate and safe so that this activity involves cross-sectors, underlying that hospitals have a dominant role portion.

The determinant of the rapid development of the PSC program is nothing more than funding issues. A hospital as a government agency can be flexible when it needs provision in the form of goods and / or services, because financial management is run on business principles but is not oriented in seeking profit. However, it still runs sound business practices, which means that it is based on good management principles including planning, organization, implementation, control and accountability. In the realm of supervision, for example, routine audits are carried out by public accountants.

2) Health service and community health center: One of the actors that determines public health life is the Health Service. The Health Service has three main programs, including environmental health, health services, and health promotion, especially in the scope of the health service program, there are sub-disaster management programs in this case has elements of emergency response, as well as prevention of infectious and non-communicable diseases that can rise to the emergency level when it becomes an outbreak. This effort has been regulated since 2014 in the Decree of the Head of the Health Service Number 188.4 / 168 / SK / 103/2014 concerning the Establishment of the Health Crisis Management Team, Health Crisis Response Team and the Rapid Reaction Team for Overcoming Extraordinary Events.

From the above program it can be concluded that the Health Service with Tulungagung Emergency Medical Service has the same knowledge about emergency conditions. The Health Service already has an emergency response team which can then reinforce each other, as in the collaborative principle. The Health Service has prepared Community Health Center infrastructure facilities supporting Tulungagung Emergency Medical Service in the form of ambulances and trained human resources such as doctors, nurses, and ambulance drivers.

3) Police, regional disaster management agency, firefighter, civil service police, military district commander: Tulungagung Police (Polres) is one of the important actors in the success of the PSC as an integrated emergency program. The emergency action that many people have reported so far is then where the culture that is built is to report to the nearest police station to get help. The community does not have the perception to call the hospital in the event of an accident, then what often happens is asking for police assistance or bringing the victim accident to the nearest hospital. Such methods are reviewed from the perspective of the Police Standard Operational Procedure have the disadvantage of losing or changing the scene of the case. Prior to the existence of the PSC, in cases of severe accidents, partial handling was carried out between the police and medical personnel, each carrying out the procedure without a one-door coordination process, now the PSC makes everything more coordinated by prioritizing speed.

The challenges experienced in the initial process of collaborating with the PSC are influenced by the situation of state police organizations that have a period of rapid transfer of leadership changes that affect decision making, focus on police programs, and support the PSC program. This is an obstacle for other districts in starting the PSC.

With the geographical location of the southern coast of Java, Tulungagung is an area prone to the potential for natural disasters, the tsunami threat. Based on the mapping carried out by Regional Disaster Management Agency there were eight villages prone to the tsunami disaster, in addition to the tsunami there were 48 villages with potential landslides, 47 villages with potential floods, 80 villages with potential drought, 88 villages affected by angina pickaxe, and several points of fire. From this picture the Regional Disaster Management Agency has important responsibilities to provide a minimum response time to provide disaster response services.

Before the presence of the PSC, when a disaster occurred and the community needed medical services, the handling was very slow. The service bureaucratic flow requires a long response time because the village head must report to the sub-district, sub-district to the Regional Disaster Management Agency, and only the Regional Disaster Management Agency can report to the hospital or Health Service to provide medical assistance to the community. But now, with the presence of the PSC the community can report directly through the PSC, so that medical emergency assistance can be as fast as possible to the community by way of the PSC ordering the nearest healthcare center 24 hours to provide a response to the disaster scene.

Some other agencies that joined the PSC were Firefighter, Civil Service Police, and Military District Commander. Firefighter had alarms connected to the PSC control center, when a report occurred then the control center would
immediately continue the information and together to the scene.

Civil Service Police and Military District Commander are agencies that are responsible for security and order, they are usually involved in reports relating to riots, reports of violations of order, and are often seconded as backup personnel in dealing with disasters.

B. Public Service Improvement

Since the beginning, the presence of PSC has been designed to shorten the response time and present medical services for emergency services pre-hospital with the Tulungagung Emergency Medical Services (TEMS) system. In terms of this alternative product intended to create a superior service concept which is also useful, in this case the Tulungagung PSC has developed several innovations, in addition to call centers service 119 for cellphones, 0355-320119 for telephone, and 082230094119 for WhatsApp, PSC developed INSTAGRAM (Modern Emergency Installation) and LASKAR (Integrated Komaria Syndrome Service). INSTAGRAM answers the problem of the still high mortality rate due to the absence of management for the selection of emergency patients.

While the LASKAR innovation is present to answer the problem of heart attack rates in the community that continues to increase, the pre-hospital stage has not yet formed a medical team to handle while at the intra-hospital stage does not have an integrated reperfusion team and the response time of reperfusion measures is still long and average of 250 minutes.

Most of the technologies designed to reach crisis situations or conditions are still bottom-up, in this approach that humanitarian actors (PSC teams) wait for data / case reporting coming from the community. Although there was an increasing trend in the activities of TEMS (Tulungagung Emergency Medical Service) in 58 cases in 2016 and 327 cases in 2017 that had been handled, as well as an increase in the number of 911 PSC calls totaling 707 during the launching November 28 2015 to December 2016 and 1415 calls during 2017, and the latest data that was produced was updated during January to December 20, 2018 or at the time of the implementation of monitoring and evaluation of total PSC calls as much as 1937. However, it must be understood that this does not necessarily mean the indicator of response increases, even if management analysis and capacity are running smoothly without obstacles and challenges.

The PSC 119 basically aims to control mortality with the health care system in the emergency phase. However, what needs to be underlined is that the technology used only uses a bottom-up approach, Emergency Button or telephone service 119 relies heavily on educated communities to report themselves or emergency conditions around them. Absolutely PSC 119 must be well-socialized in the community sambal provides education to the community regarding knowledge about disaster emergency response and digital technology used to respond to these conditions.

This emergency response service is made a superior innovation program by the Government, it is no longer the domain of one or two government agencies, but involves many agencies that have the same tasks and functions to collaborate in a coordinative and collaborative manner. With the PSC that applies the Tulungagung Emergency Medical Services (TEMS) system, the community is getting easier to get optimal emergency services, in the sense that it is faster, more precise, accurate, easier and safer.

V. CONCLUSION AND FUTURE SCOPE

A. Conclusion

Increasing public services in the regions will hardly succeed without strong commitment and innovation and support from professionals who understand a problem. PSC 119 which runs in Tulungagung Regency gives a small example of how the region begins to build an emergency system by mobilizing its resources by utilizing fairly comprehensive information technology.

With these IT devices the mechanism of the old way of working bureaucracy in handling public safety issues can be replaced by a managerial system that is more responsive to the needs of the community. Namely by reducing the response time to a minimum of emergency response services, as a result of the presence of a control mechanism and coordination between stakeholders connected through the PSC system.

But there are still political factors that make the performance of the PSC work well, institutionally the PSC organization has the legitimacy of being a regional program under the responsibility of the regional head. The PSC has the power to provide direction of coordination to the institutions incorporated in the Working Group (PSC Working Group), as well as those that are not incorporated but which are related to the work of public safety services based on directions from the Regional Head.

Starting from the thought that all emergency conditions will lead to medical actions, Dr. Isak as a regional government institution that initiated this public service innovation, began to succeed in creating innovation management. This implication can be seen from public service innovations that have continued to be developed since the PSC was present.

Tulungagung is continuously becoming a safer and emergency response city. Effective and efficient collaboration and strong commitment enable innovations involving these cross-sectors to be realized. In other fields, referring to the pattern of the implementation of the PSC in Tulungagung the government can develop digital technology to improve other public services The findings in this study showed that the success of the Tulungagung PSC began with a meeting of three policy streams: problem streams, political streams, conducive policy streams. PSC is one form of public service improvement that arises from the innovation of one of the service provider agencies and has developed into a joint integrated system of
several agencies due to conducive collaboration between sectors.

B. Future Scope

Based on observations in the field, here are some recommendations for improving the PSC program, including:

- The socialization of the PSC program to the public is still not optimal. There are still not many people who know about the service 119. So it is necessary to do a promotion-oriented effort at the 119 level or emergency button as the main choice in emergency conditions and public education about natural disasters and other emergency conditions.

- Coordination and communication inter-sector needs to be improved and strengthened. equal position is needed so that no one sector dominates, so that collaboration can be maintained

- Improvement of the regulatory aspects and technical aspects, in the regulatory aspect, namely the immediate establishment of legislation at the central level in reforming Primary Public Health in Indonesia, while at the local level PSC regulations can be completed in the form of Regional Regulations. Furthermore, from the technical aspects of maintenance and improvements to the software, frequency, radio medicine and hardware at the PSC and each institution, it still needs to be improved to maintain the best performance.

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