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Architectural Pattern of the Team Emergency Service Model as a Health Service Management Strategy in Wakatobi District

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Abstract

Public services in the health sector are the responsibility of the government so that efforts to improve services and improvements through health service innovation are continuously carried out. At present, due to advances in science and technology, it also encourages the emergence of ideas and the implementation of community interaction by monitoring and controlling various existing community resources by means of technology. One of them is the concept of development and management using Information and Communication Technology (ICT) in the health sector. One of them is an effort to differentiate the emergency service model in the form of an emergency service team program.Next, it is necessary to identify innovative alternative architectural patterns for the emergency service team model that is adaptable and characterizes health services with appropriate geographical conditions and population topography and reaches all sides of the Wakatobi district area so that its implementation can be utilized and become an alternative that answers community complaints about services, especially emergency services.

The aim of this research is to find out the architectural pattern of the emergency service team model that can be applied to health service settings in Wakatobi Regency.

The research design used was qualitative, with analysis using the PIECES and TELOS methods which was carried out on 12-16 June 2023 with a sample of 15 people.

The research results show the existence of emergency services through the implementation of team emergency service innovation as a health service management strategy with new value attributes in the form of one-stop integrated services (One Stop Service), in the form of work teams (interprofessional collaboration/IPC), shortening service time (Respontime) and adaptation sophisticated technology in its application by considering the appropriate topography of the Wakatobi region is the architectural pattern of the convergence model which is a combination of simultaneous and parallel models.

Keywords: Architectural Patterns, Team Emergency Service, Service Management.

INTRODUCTION

Peservices to audiences or otherwise known as public serviceshealthso close and identicalwith service quality, Where felt by societystraight away andbe an indicator to take into accountthe quality of services provided. The main goal of health care is the output of health service products with the value of the benefits obtained by customers, as well as the track record of services obtained into the accumulation of customer experience with the dichotomy of value of fulfilling customer expectations in the form of satisfactorion or vice versa dissatisfactorion. This assumption indicator is literateatin every aspect of the service process, especially in front-line health worker service contacts.SThe system is a micro service system known as a direct service system that is directly in contact with the targets who are users of te servicesrse but (Tjahyono Koentjoro, 2007).

Problem health services yes general g as well as menyesThe complaint in the field is the absence of clear data on the availability of potential sources of health facilities so thatp.seA proactive service approach is an option, so that the desired service is not only a process but also the most important thing in seeking long-term health services (Gandhi, 2000 and Reid, 2008). This is where the alibi of the existence of the Government emerges as innovation to meet public needs the health servicesfulfil the latest professional standardsfulfil customer needs,emaximum efficiency, so strategic breakthroughs are needed that not only meet the affordability of health services but also fulfill efficiency and effectiveness as anamodern service management.

Emergency health services viaThe real manifestation of the Public Safety Center (PSC) is the implementation of Presidential Instruction Number. 4 of 2013, that every district/city in

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Indonesia is obliged to form a PSC.Then seLike an innovation, the emergency service team program will run successfully and well, of course supported by good facilities and infrastructure as well as collaboration between agencies in its development. Seso that analysis and in-depth analysis are needed aexternal reaAnd internally so that they can compete and achieve goals efficiently and effectively (Kotler & Keller, 2009). Innovation can toobecome recommendations for improvements to the system to be developed (Fatta, 2007; Ramadhan & Kusumaningtyas, 2021).

The results of Hasan.E, et., al (2022) research show that it is very feasible to develop emergency services in Wakatobi districtwhere the support of strength (Strength) and opportunities (Opportunity) is greater than other aspectsand precisely in the position of Rapid*growth*which means a strategy in the form of aggressive growth support (growth oriented strategy). The problem then is the architectural pattern for implementing emergency service teams that is in accordance with regional characteristicsso that the emergency service team as a pre-institutional service has become fashionablel information technology (IT) based services which have a surprising effect on the speed and coordination of referral maps and become an alternative choice for emergency health services by the community. So as a new way of providing health services and providing added value to services, it is necessary to identify an architectural pattern for an adaptable emergency service team model that characterizes health services according to the geographical conditions and topography of the population in the Wakatobi Regency area.

In this 2nd year position (multi year) a feasibility study will be used to determine whether the system project development is worth continuing. So the method used to assess and test the feasibility of the system is more appropriate for the emergency service team to use 2 (two) approach methods to determine whether the system project development is suitable for development and the form or mechanism for its management. In this case, measurements are used with PIECES (Performance, Information, Economic, Control, Efficiency, Services) (Wetherbe.J, 2012) and TELOS (technical, economic, legal, operational, and schedule feasibility) (Hall.J, 2011) which producedeveloping an emergency service team prototype that will give rise to evaluations and recommendations that will become an architectural pattern that is worthy of implementation.

RESEARCH METHODS

This type of research is qualitativebThe aim is to obtain an in-depth overview of the adaptable

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call center implementation modelby using the method*PEACES(Performance, Information, Economics, Control, Efficiency, Service)*and TELOS (Technical, Economic, Legal, Operations and Schedule), which took place from 12-16 June 2023 with 15 respondents.

RESEARCH RESULTS AND DISCUSSION

Results

1. Pattern Qualitative Analysisarchitecture to beemergency service team model

a. PI method analysis ECES

1). Performance

a) Throughput

So far there have been so many calls to one village, imagine if all the villages, especially at night so that the manpower of each village is sometimes very overwhelmed."

(Source: Interview with informant 1, June 12 2023)

"Manpower is felt to be lacking, maybe communication needs to be added or what else needs to be added, especially since we are still using the WA group, so it's not finished yet, there are more calls, especially the demand for this is a healthy independence program with staff in every village. But... yes, it's not balanced with the many people who report that they are sick.... ".

(Source: Interview with informant 3, 14 June 2023)

b) Response time

"There are actually a lot of people who want to call, sometimes it's a pity that there are no officers in the village because they go to the health center to take sick people, many people don't know about this, the officers will be even busier, the risk will be more time...".

(Source: Interview with informant 5, 15 June 2023)

".....well there are officers handling it, but for transportation through contact groups to deliver patients to the puskesmas, so sometimes the time is not always fast to get to the patient's puskesmas, we try to do it as soon as possible, sir."

(Source: Interview with informant 2, June 13 2023)

"We don't have a standard for how long it takes for treatment outside the puskesmas, because sometimes it's far away, sometimes not. We haven't set a standard time between the first contact and the arrival of the patient being treated at the health facility,".

(Source: Interview with informant 8, 13 June 2023)

"Don't have a standard yet... it's good if there is a set time, maybe you need to use a zone

so you can measure the due time."

(Source: Interview with informant 11, 15 June 2023)

c) Audibility

"We don't have standard standards yet, sir. Services like this used to exist, but in factor, individual health centers have now been activated and are really needed by the community. Maybe in the future, each step or part of it will have to have guidelines or some kind of benchmark, yes... of course for all of its parts."

(Source: Interview with informant 9, 12 June 2023)

"Well, we want to handle this problem as quickly as possible, but also appropriately, and this is an active program to pick up patients in accordance with the efforts of all of us health people, this is very good, we must strive to continue to develop it...".

(Source: Interview with informant 2, June 13 2023)

d) Communication

"To contact officers in the village, it has been prepared but people in the village forgot or didn't know so just look for the officer straight away, it's good if there is a fixed number to call, especially if it's a symbolic number."

(Source: Interview with informant 11, 15 June 2023)

"Now we communicate using the WA group including from the agency, but residents who are sick contact the village officials, there are officers in each village, they are in charge in the field, that's just the process takes time."

(Source: Interview with informant 2, June 13 2023)

e) Completeness.

"We only use WA and group communication, all information comes from field officers, so this officer is important, the problem is that it is impossible to be ready 24 hours/day."

(Source: Interview with informant 12, 14 June 2023)

"Only officers know the number, for calls there is a field officer's number... eee but the communication network is a bit of a problematic area, maybe Wakatobi 2 is still a lot, here it's a bit tolerable."

(Source: Interview with informant 13, 16 June 2023)

f) Fault Tolerance

"..... a lot of patients who are sick are actually helped because they are handled more quickly than before the implementation of this healthy independence, so if added it

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will be even better to....."

(Source: Interview with informant 8, 13 June 2023)

2) Information

a). Accurancy

"A lot of sick patients are actually helped because they are treated more quickly compared to before the implementation of this healthy freedom, so if you add more, it will be even better..."

(Source: Interview with informant 9, 12 June 2023)

".....if the information from the sick person must be accurate because there are officers, whether sooner or later depends on the position of the sick person and the officer, that's where the information is hampered. ,..."

(Source: Interview with informant 3, June 13 2023)

"...there is no time limit as an SOP, the main thing is that the action should be taken as soon as possible if the information is received...."

(Source: Interview with informant 5, 15 June 2023)

b). Relevance of Information

"The information is clear, the officer conducts an assessment in the field..... so the patient or family goes to the officer, the officer puts it in a group for coordination, after analysis, the action is decided including mobilization or other needs, so we can get here as soon as possible (Puskesmas)"

(Source: Interview with informant 6, 13 June 2023)

Communication is appropriate and good, it's just that sometimes the network doesn't support it, not all areas have good signal, especially those who aren't good at using cell phones."

(Source: Interview with informant 12, 14 June 2023)

c). Accessibility of information

"Communication relations are starting to be good, of course there are problems both timing and other things, but it's better than before."

(Source: Interview with informant 10, June 16 2023)

" ..... many are starting to take advantage of this communication, maybe the officers are getting more active in the village."

(Source: Interview with informant 5, 15 June 2023)

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"Each village supports this because the village is involved through its apparatus, ... in collaboration with field workers, it's been 24 hours."

(Source: Interview with informant 7, 14 June 2023)

3). **Economics**

a). Reusability.

" ..... many are starting to take advantage of this communication, maybe the officers are getting more active in the village."

(Source: Interview with informant 6, 13 June 2023)

b). Sresources

"The number of sick complaints has increased, it feels like it's starting to get busy, so itfeels like the tasks are piling up because of the field and the puskesmas, so we just share."

(Source: Interview with informant 7, 14 June 2023)

"On average, the community already has a communication tool, sometimes complaints are received at the same time. If possible add officers or information models so that everything is served quickly."

(Source: Interview with informant 5, 15 June 2023)

".....if possible, increase resources, yes... vehicle personnel, medical equipment too."

(Source: Interview with informant 11, June 15 2023

4). **Control and Security**

a). Integrity

"Information on complaints is reported by health workers on duty in the village, and forwarded to a special group of health workers at community health centers and government offices. Yes, there are many people in that group. The recording aspect may not be accurate because it is attached to reports from officers at service institutions."

(Source: Interview with informant 6, 13 June 2023)

".....if there is an increase, it would be good if it was just one channel and there was a person in charge like that"

(Source: Interview with informant 12, 14 June 2023)

b). KeaManan

"There is no special program, we still use WA to communicate with field people or for coordination,"

(Source: Interview with informant 10, June 16 2023)

"We have arrived at this time because there is no system that is identical to that.....to use There is no special IT system or collaboration with communications services to support the service."

(Source: Interview with informant 6, 13 June 2023)

5**). Efficiency**

a). Usability

"The communication is not very efficient yet. If there are officers, there is a communication channel starting from the first information until deciding on the action. We haven't used it yet. We have heard from many areas where this service is provided with one channel, OK?"

(Source: Interview with informant 1, 12 June 2023)

"If the example you explained earlier is applied here... it would really be good if it was applied here, because one number is identical to the emergency call,"

(Source: Interview with informant 1, June 12 2023)

b). Maintanability

"If the example you explained earlier is applied here... it would really be good if it was applied here, because one number is identical to the emergency call,"

(Source: Interview with informant 2, June 13 2023

"We depend on WA, there is no alternative communication, if there is a problem with the network or the officer's cellphone there is a problem... nothing can be done,"

(Source: Interview with informant 10, June 16 2023)

6**). Service**

a). Accuracy

"The information aspect is accurate, yes, it's accurate..... it's only a matter of speed, if there is communication control, like you said, the fast and precise aspects will be more visible, right?"

(Source: Interview with informant 1, June 12 2023)

"Initial action by officers, not yet the full health team's action, just transport them first to the puskesmas.....,"

(Source: Interview with informant 14, June 13 2023)

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b). Reliabilities

"If an incident happens near a village where there are officers, it's good, but if there's an accident between villages and there aren't any officers, the longer the assistance effort will take... that means it will be handled, but that quick function cannot be measured, that's for sure,"

(Source: Interview with informant 4, 16 June 2023)

"As for contact services, I think there are problems but not enough, but it's difficult for 24-hour officers on site because sometimes there are other coordinating tasks that one day leave the place even though it's not for long,..... there needs to be a system that is on standby 24 hours but fast the response of officers especially emergency problems "

(Source: Interview with informant 10, June 16 2023)

c). Kesimplicity

"Complaints from the people are hard to memorize because they are long... yes, unless the number is stored, it is not known to all people or a number that is identical to help when there is a health problem"

(Source: Interview with informant 3, June 13 2023)

b. TELOS Method Analysis (technical, economics, legal, operational, schedule)

1). Techhical

"Our resources are very sufficient, the puskesmas facilities are such that even in the area of 1 sub-district there are up to 3 of them, so there is transportation for each puskesmas, reserves can be planned, even with the UPTD structure itself this service can be, ... special readiness for emergency services "This can be done with training for team members, basically it already exists because they are already working," he said.

(Source: Interview with informant 5, June 16 2023)

"The need to improve this model is quite adequate, the rest is to develop the communication model so that there are identical numbers and are easy for the public to know, the operation should have a person in charge or be centralized, right? This is a pre-puskesmas service,.....especially here it can be reached quickly"

(Source: Interview with informant 7, 14 June 2023)

"For direct services such as Wakatobi I, it's not bad, the remaining Wakatobi 2, if the disease is serious, referrals between health centers and hospitals need transportation facilities that are better prepared if needed, I mean ready people and transportation

equipment, maybe the model is different between regions. ..... ”

(Source: Interview with informant 14, June 13 2023)

".....we are ready sir, it will be better if the staff is trained.....if there is some kind of special work unit for handling this emergency, it can be from home or outside "

(Source: Interview with informant 4, 16 June 2023)

"..... if this area can be centralized, use a team like the example you mentioned from South Sulawesi, yes,,, but for Kaledupa and others, it might be different because the area is large, the workforce is..... .....if there was some kind of special work unit for handling this emergency, it could be from home or outside the home, so there would be no overlap in people's duties,....."

(Source: Interview with informant 2, June 13 2023)

2). Economics

"Currently, in my opinion, there is no new financing, only the relocation of personnel and operational costs have increased by a percent. "The proof is that this works, if there is development, the budget is mostly just to increase it so that it is more ideal, so that the region is not so burdened if this region can be centralized using a team like the example you mentioned from South Sulawesi."

(Source: Interview with informant 14, June 13 2023)

" ..... if the budget isn't too much, the officers will move to be more focused, there won't be many people either.....financing will be needed indeed, but development "Continue, to start with the innovation can already be implemented."

(Source: Interview with informant 15, 16 June 2023)

"Technological facilities are necessary, but not much.....if there is no problem with the manpower, only if there are standard noodles like SOP, maybe in the end there will be welfare, right....."

(Source: Interview with informant 12, 14 June 2023)

3). Legal

"This emergency team model is a development, there are already government programs that are similar to that model, this road is a healthy independence program, which basically means proactive health workers and facilities to the village level, has been implemented again..... ..if you need to be stronger, use local regulations.....”

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(Source: Interview with informant 1, June 12 2023)

"This is currently running the government's program, there is no specific local regulation on it, it would be better if there was, starting from the tupoksi program to very clear welfare....."

(Source: Interview with informant 3, June 13 2023)

"If the government wants to quickly have a legal umbrella, what's more, this is to improve existing programs....."

(Source: Interview with informant 15, 16 June 2023)

4). Operational

"Currently using telephone or WA to contact emergency services, there are officers in the village....."

(Source: Interview with informant 5, 12-16 June 2023)

"Between the community and officers, officers and officers, officers and referrals, communication via WA group or WA telephone, although sometimes the signal is weak, the signal is generally good....."

(Source: Interview with informant 14, June 13 2023)

".... it would be better if there was only one number, and the numbers were shorter... now it's the number for each village, the officer who coordinates with the health facility, meaning the community health center because the car picks up there,

(Source: Interview with informant 15, 16 June 2023)

".... so far, as we have heard from fellow officers, the rest has been refined to make it more effective,

(Source: Interview with informant 1, June 12 2023)

"If the service system is different on land and on the island, yes..... the model must be different but there is still a manager or one information door, whether it's going from there sooner or later to reach... land will definitely be faster, if between islands "It takes time, it's appropriate for the officers there who are already there to handle it"

(Source: Interview with informant 13, June 15 2023)

5). Schedule

"The time can be shortened even more if there is one report, meaning one system or centralized, right.....ohhh the process will be faster until the patient is treated, especially

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those with accidents who need quick treatment."

(Source: Interview with informant 4, 16 2023)

"We adhere to the principle of fast as well as appropriate action, so of course there is a time limit, and the quicker it is handled by officers the greater the chance of recovery"

(Source: Interview with informant 8, 13 June 2023)

DISCUSSION

1. Method Analysis ECES

The aspect of improving performance still has large room for improving service, system development, calls and actions can be increased in time, communication and referral connectivity, calls and actions are centralized, response time indicators do not yet exist, service speed indicators need to be increased. Whitten (2007) states that analyzing performance in a system can be measured by throughput and response time. Menreduce the response time for a minimum of emergency response services, as a result there is a control mechanism andcoordination (Hartono, AS.et;al, 2019)

In aspect analysisinformation (Information),Emergency services currently have no single number, not yet identical as an emergency call, multi-digit number (more than 3 digits), information relies on officers in the village/field. This encourages the need to develop an emergency service system with one number for all emergency complaints, centralized information (call center). Hatta (2011) Elements of health information must be of good quality, which is the characteristic of quality data, meaning that the data uses true and valid values or information. The same goes through the telephone line number 119, and will be connected directly to the call center which is on standby 24 hours at the Health Service Office (Yuliana, W. et;al, 2020).

In aspect analysisEconomicsshows that the costs are based on the operational costs of the puskesmas,A separate special development fund for emergency services has not been allocated. This encourages the need to develop an emergency service system withseparate technical services as a form of health services, so that they become innovative new services. according toLukas, et;al, (2000) Innovation is a concept that develops from time to time, so that it can adapt to the needs and developments of the times. innovation as the adoption of new ideas or behavior such as planning products or new programs in an organization

In aspect analysisControl and security (Control and security),shows that it is necessary to develop an emergency service system with information control and directly connected

to the emergency team that goes to the field, personnel work in a solid team. Control and security of this system needs to be done to prevent misuse of information by irresponsible parties. Monitoring of the running of the system needs to always be controlled so that it continues to run well, according to Whitten's statement (2007) that control can detect errors and deficiencies that will occur.

In aspect analysisEfficiency (efficiency),indicates that there is no benchmark time at each stage of service. Inefficient integrated services. So we need indicators of action and time. This is important as research by Belway (2010) shows the relationship between the time required to transport critically ill patients to be an important factoror

In aspect analysisPeservice (service),shows that pre-stitutional emergency services are not yet in the form of work teams and referral speeds are low, so it is necessary to develop an emergency service system that can contribute to emergency services in the form of teams and connectivity between referrals.

From the descriptionPI method*ECES*soThe Relative Advantage opens up opportunities for innovation in emergency services that are better or superior to those that have existed before. The magnitude of this advantage can be seen from the factor that this innovation can be quickly adopted. Increased service time (response time), interprofessional collaboration, autonomous organization, referral connectivity, information integrity and control (one door) in emergency services become labels that can be corrected and can be improved if connected with resources, facilities and economic support that health service institutions currently have.

2. TELOS Method Analysis

In aspect analysis *TELOS* where looking at the feasibility of the program shows that the current emergency service system is very feasible to develop and improve the system. This is in line with Usman (2011) that the government will create bureaucracy as a government instrument in providing services to create the best service to the community. goal-oriented paradigm new management approach. This innovation will also bring people closer to health services, especially emergency and remote service coverage, as stated by Hains, (2010) that increasing pre-hospital Emergency Medical Service (EMS) time is closely related to higher death rates in the area. rural or remote.

From the description TELOS method CompatibilityIt was found that the development of the implementation of emergency service team servicesin accordance with values,

previous service experience and community needs that are consistent with applicable values, where the belief is that the service architecture pattern that will be implemented can answer the community's needs for emergency services.

3. Evaluation and alternative implementation of the emergency service team model architectural pattern

From the results of the evaluation through ECES and TELOS analysis, it can be described the current situation and recommendations for an architectural pattern of an adaptable emergency service team model in encouraging the improvement of emergency services through innovation, namely:

No	Service Aspect	L Available services	Development	Prototype
1	Administration	- Doesn't stand alone - This is a community health center activity - Services and reports are based on primary care/puskesmas - Budget allocation follows the community health center program - Does not have special procedures - Not toll free yet	- Stand alone/autonomy - UPTD is under the health service - Allocation of your own budget - Has special procedures - Have your own building or room - Toll free	- Have procedures. Technical guidelines, operational guidelines are clear and permanent - Management of autonomy and one door - Your own budget - 24 hours non-stop - Pelathe service is emergency, non-emergency, delivery - Organizational form - Have a

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				coordinating team, tduties and responsibilities, technical implementer of services - Toll-free communication
2	Resource mhuman	- Community health center staff on duty at that time - Transportation is the property of the health center - Work not in an interprofession al team when pre-stitutional - Staff do not have certificates with special emergency skills	- Personnel assigned specifically to the emergency service team - Have your own means of transportation - Work must be in a team (IPC) - All staff have certificates with emergency expertise	- Team work model of interprofessiona l collaboration (1 or more teams) - Specific skills with training - Technical team: Doctors, nurses, midwives, pharmacists, operators, drivers

3	Facilities and Infrastructure	- Does not have its own building - Phone number is not single - Utilize contact media from field/village staff - Stand-by means of transportation at the puskesmas - Not a patient or family communication tool ps	- Has its own building - The telephone number that is identical to the emergency call for the transportation tool itself - Own communication tool	- Rely on IT - Special phone number - Own building, call center room - kocomputers, LAN and wifi networks, - tooperational vehicle or ambulance - integrated communication
4	mmanagemen t	- Waitress yet with one door (call center) - Initial identification relies on field officers - Not yet using the work team model (IPC) - Providing special pre- and intra-institutional services with the same staff - People who need to report to field/village	- One door service (call center) - Using the work team model (IPC) - Providing special pre-institutional services - Each region has a different service model based on topography	- Complaints from centralized community (one channel) - Multi-disciplinary (IPC) - The team works in a controlled and coordinated manner - Pre-institutional based services - The public is involved through reports - Has standar operational

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		staff		service procedures or service flow (Flow Chart) - Team on duty 3 x 24 hours - Prioritize first aid in the field - Treat services differently between wakatobi 1 and wakatobi 2

Based on the analysis map above, an emergency service architecture pattern can be described using an innovative emergency service team model that can be applied to the Wakatobi district area as an alternative, namely:

a. Alternative architectural pattern 1 (one)

The architectural pattern of alternative 1 (one) emergency service team service model is referred to as a simultaneous model (emergency service team that is more than one teamwith activities at the same time or simultaneously with one door as its own unit)that is, the main institutional mechanism is that in total all pre-institutional or field emergency services starting from the first contact to action and field evaluation for referrals are fully carried out by the emergency team personnel themselves. Where the main strength is the existence of a team that is ready to have more than one team to anticipate calls at the same or almost the same time and in different places. Emergency service team staff after there is an emergency call or case of illness will go directly to the location and carry out anamnesis/identification, if it is a mild case (code green) then self-care observation will be carried out at home.

In this pattern, if analyzed further, the strength factoror is the health infrastructure that supports the provision of follow-up/referral health services with facilities and infrastructure already owned by 20 community health centers. Emergency calls pile up at the call center. Existing human resources in the required professional disciplines, including

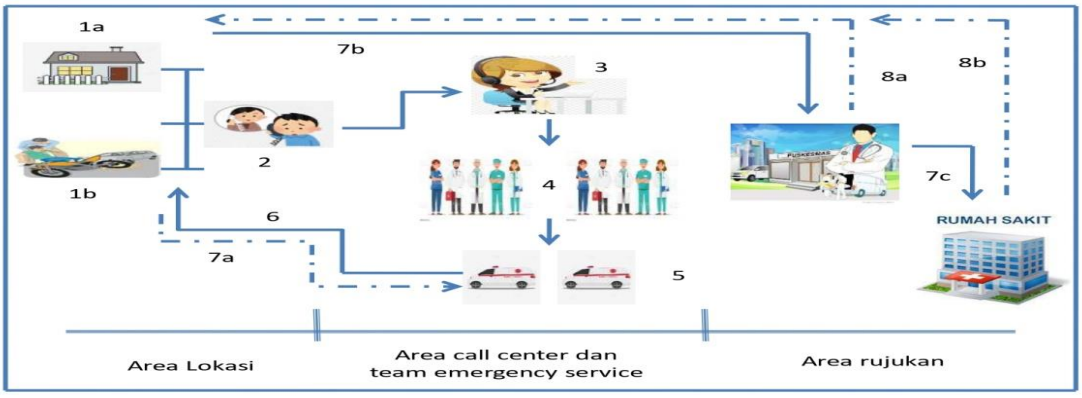
emergency response training programs that can be carried out, work as a team (team work) with a professional and solid interprofessional collaboration (IPC) model.

Factor The weakness is that effective response time can be achieved over a small area and land transportation can only be effective based on topography and can only be applied to part of the Wakatobi area, not the whole.

Factor opportunity factoror for developing the team emergency service model is the enthusiasm of the community who want to use the emergency call service at each health center that currently exists as an implementation of the regional government's healthy independence program. It is marked by the high number of emergency service users and increasing every year. Apart from that, the pick-up and drop-off program is currently an alternative for the community in an effort to obtain services and overcome complaints about slow information, slow diagnosis, slow action, slow referrals.

Factor The r threat is an unstable cellular network and that can be the biggest threat to the call center because if the network is not good, the community will have difficulty accessing it as well as the emergency service team having difficulty determining the location, while the vital communication is determined by this communication technology device.

The architectural pattern of the team emergency service with the simultaneous model can be described as follows:



Model simultan

Figure 4.1. Image of the architectural pattern of the simultaneous emergency service team model

b. Alternative 2(two) architectural patterns

The architectural pattern of the alternative 2 (two) emergency service team service model is referred to as the parallel model (emergency service team with services arranged

sequentially, concurrently, successively, in a row) namely the main mechanism institutionally is the overall call center through a (centralized) call center controlled by the operator such as the simultaneous model. However, the call center only forwards emergency call information after it has been identified to the team on standby at the health center in each region, namely the health workers on duty. The characteristic as its main strength is the existence of a team and transportation equipment owned by the puskesmas which anticipates calls for cases in their respective work areas. After an emergency call or case has been received, the emergency service team goes directly to the location and takes anamnesa/identification, if treatment or observation is deemed necessary, they will be mobilized to a health institution or hospital referral.

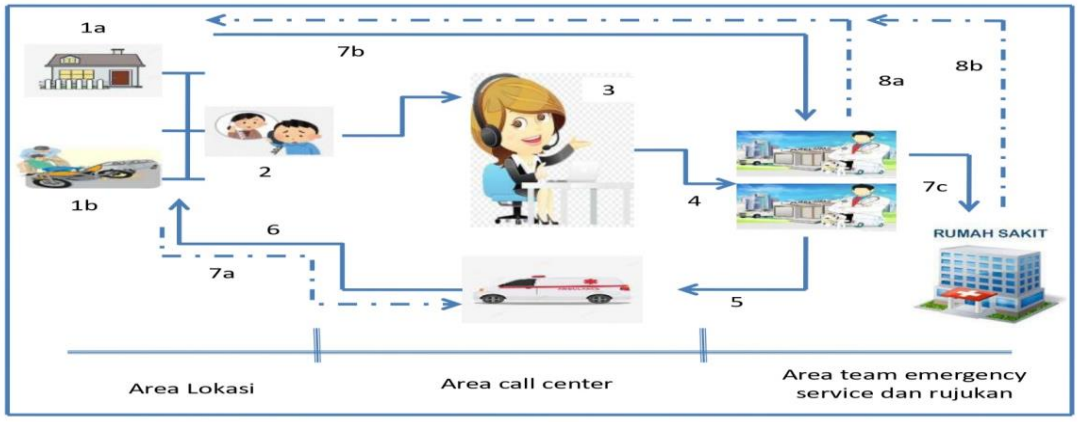
Factor strengths, namely health instruments in community health centers, not having to reposition personnel, speeding up health service time (response time) by making support more effective from 20 community health centers spread across

Factor weakness is that a solid team work model requires time and consolidation to be implemented, especially working in the form of an interprofessional collaboration (IPC) team model. Existing human resources work in accordance with the needs of primary services at the community health center and pre-institutional activities are only one of the activities of the community health center.

Factor opportunities for the development of this parallel model is ideal for large areas coupled with transportation than the simultaneous mode l.

factor threat, namely cellular networks that are unstable and the further away and remote the more problematic it will be.

The team emergency service architectural pattern with a parallel model can be described as follows:



Model paralel

EDI HASAN*: [4]*Makassar Ministry of Health Polytechnic*

Figure 4.2. Drawing of a parallel model emergency service team architectural pattern

c. Architectural pattern 3 (three)

The architectural pattern of the alternative 3 (three) emergency service team service model is referred to as the convergence model(emergency service team is a combination of simultaneous and parallel models) with 2 service flow mechanisms. The first mechanism is that in total all pre-institutional or field emergency services starting from first contact to action and field evaluation for referrals are fully carried out by the emergency team personnel themselves. This is applied to areas that are not large with land dominance, dense population, location of referral places, both health centers and hospitals that are easily accessible, while the second mechanism is the overall call center through a (centralized) call center which is controlled by the operator, then forwarding emergency call information to teams at the health centers in each region, and health workers on duty (puskesmas shift officers).

In this pattern, when analyzed further, the strength factoror is that in dense areas, connectivity and high mobility use the simultaneous model and in wider areas use the parallel model. strong and solid working team. So that a team (team work) with an interprofessional collaboration (IPC) model can be formed, the response time is very effective with a zoning system and staff repositioning as needed. This is as described by A. Fajarria & A.shodiqin (2018) that emergency service innovation from its attributes has many advantages, including one-stop integrated services, sophisticated technology in its application, and shortens response time.

factor the opportunity to develop an emergency service team model with the application of 2 (two) models can cover problems that can occur during the implementation process in the field so as to encourage public trust and enthusiasm in utilizing easy and close services through community empowerment, because in essence the government cannot run alone without an active role from society as the object and subject of development (A. Fajarria & A. Shodiqin, 2018)

Factor threat is an unstable cellular network, but this problem can be carried out in cross-sectoral collaboration with IT providers by increasing improvements so that it does notbecomes a problem in the future, especially anticipating changes and developments (Wulandari, 2009).

The architectural pattern of the team emergency service with the convergence model can

be described as follows:

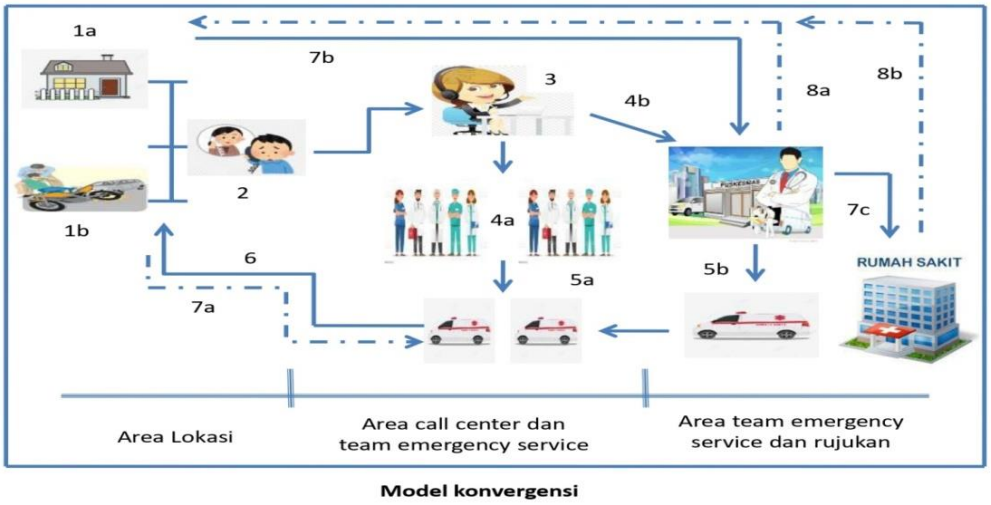


Figure 4.3. Image of the convergence model emergency service team architectural pattern

4. Recommendations for implementing the architectural pattern of the emergency service team model

Based on the results of the analysis of the ECES method to identify current problems and the TELOS method in examining the feasibility of implementing an emergency service team, the results of the evaluation are based on the strengths possessed and opportunities for implementation as well as existing weaknesses and threats that can occur, the architectural pattern is adaptable to the topography of the archipelago and the prototype of the emergency service team as one of the recommended health service management strategies in Wakatobi district is the convergence model (a combination of simultaneous and parallel models), with the following reasons:

a. All emergency calls with one door controlled by the call center (One Stop Service)
b. Emergency service team with work team (IPC) which is centered on a call center serving case complaints in densely populated areas, the distance is no more than 30 minutes, by land, the referral center can be reached (Wakatobi I area includes Wangi-Wangi sub-district and South Wangi-wangi sub-district / Wangi-wangi Island and its surroundings)
c. Emergency service team with a team centered on community health centers that serves case complaints located in areas with small populations and large areas, long distance from the call center, land areas dominate, referral centers are difficult to reach quickly (the Wakatobi 2 area includes the islands of Kaledupa, Tomia and Binongko and their surroundings)

Isu strategy as a crystallization of all adequate aspects into a framework and strategic plan (framework and strategic planning) to encourage opportunities to implement emergency service team services as a public innovation in the health sector is very open. Furthermore, the existence of emergency services through the feasibility of implementing an emergency service team is an urgent need to support the potential for sustainable health services, with new attributes, namely: 1) Handling one-stop integrated emergencies (One Stop Service), 2) Working teams using inter-professional collaboration methods. (IPC) and 3) Adaptation of sophisticated technology in its application. 4) Response time can be further shortened. So the opportunity to implement emergency service team innovation as a health service management strategy becomes a necessity (Hasan, E, et,

In conclusionthe existence of emergency services through the implementation of team emergency service innovation as a health service management strategy by considering the topography of the Wakatobi area. The appropriate architectural pattern is the convergence model which is a combination of simultaneous and parallel models, so that the Regional Government can implement the architectural pattern of the convergence model early by making corrections. adjustments to existing emergency services.

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