



**ANALYSIS OF BLOOD SERVICES STRATEGY WITHIN BLOOD TRANSFUSION UNIT TO ENCOUNTER COVID-19 PANDEMIC**

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**ABSTRACT**

The Covid-19 pandemic has had an impact on a number of health facilities. This study aims to find out how the blood services strategize in dealing with the impact of Covid-19 pandemic, particularly within the Blood Transfusion Unit of Dr. H. Abdul Moeloek General Hospital, Lampung Province. The type of this research is qualitative. The populace was all the officers within the Blood Transfusion Unit and the samples were taken using purposive sampling technique. The research instruments used were interview guidelines and checklists. The data analysis technique used were data reduction, analysis, data interpretation, and triangulation. The results showed that the Blood Transfusion Unit had implemented a good service strategy and incorporated risk management, but did not arrange for supplements for the staff. In conclusion, the service strategy applied is already satisfactory, and only needs to further boost risk management, in order to achieve 100% blood needs, as regulated by Minimum Service Standards.

**Keywords:** covid-19 pandemic; risk management; services strategy

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**INTRODUCTION**

The *coronavirus* 2019 pandemic has spread in the whole world, including Indonesia. This Covid-19 pandemic has had an impact on a number of health facilities. Regardless, health facilities always try to administer best services, as regulated by Minimum Service Standards. Regulation of the Minister of Health of Republic Indonesia Number 4 of year 2018 on The Role Of Hospitals stated that hospital is a health institution providing personal health services flawlessly, provides in-patient services, polyclinics, and emergency units.

Blood Transfusion Units are part of hospital services that organizes blood and are responsible for the availability of blood for good and comfortable transfusion and for being in ample quantity to support health services within the hospital. Blood Services is the health service that uses people's blood as basic material for humanity purposes. As stated in Government Act Number 36 of year 2009 on Health, as well as in Government Regulation Number 7 of year 2011 on Blood Services, the Government is responsible for the implementation of convenient, easily accessible blood services, as the citizens need. Blood Services are held using promotive, preventive, curative, and rehabilitative methods.

Hospitals, as one of health facilities providing health services for citizen, are required to give good services, complying to Minimum Services Standards (Astari, 2021). Chaerunnisa (2016) conducted research on health services management, finding the benefits of having planning,

organizing, motivational leadership, and up until evaluation properly carried out, with Minimum Services Standards compiled to appraise achieved targets.

Accordingly, the World Health Organization journal stipulated measures to be implemented by Blood Transfusion Units to provide sufficient blood supply during Covid-19 pandemic, such as: mitigating the risk of disease transmission through transfusion of blood and blood components, mitigating the decrease in number of blood donors, regulating the blood needs and blood products, organizing equipment inventory to ensure adequacy, maintaining communication to ascertain people's trust in Blood Transfusion Units, as well as organizing and keeping Convalescent Plasma in safe and guaranteed quality. Dr. H. Abdul Moeloek General Hospital in Lampung Province, a government hospital, is the top referent in Lampung Province, as established by Hospital Director's Decree Number 445/600/II.13/I/5.1/III/2015. As an amiable hospital to the citizen of Lampung, it has reached "Perfect Level" accreditation according to SNARS Type Version I of year 2019. Blood Transfusion Unit is one of the facility that hospitals of such accreditation level must have.

Since the inauguration of its own Blood Transfusion Unit in January 7<sup>th</sup>, 2019, the hospital faces increases in blood services. The Covid-19 pandemic has also impacted the hospital's Blood Transfusion Unit, such as diminished number of staff owing to Covid-19 transmission, as well as dwindling amount of blood donors since 2020 until now. The Blood Transfusion Unit itself has implemented latest Standard Operational Procedure (*New Normal*), to prevent further spread of Covid-19. Aside from the continuation of blood services, the procedure also mandates the application of risk management, such as implementation of social distancing for blood donors, patient's families, and even among Blood Transfusion Unit officers themselves.

In 2020, there was a decrease of blood needs fulfillment around 10%, the lowest in May 2020 of about 83,92%, the highest in January 2020 of about 99,11%. In contrast, the Regulation of Minister of Health Number 129 of year 2008 on Hospital Service Standards demands the achievement of 100% blood services. Thus, the researcher wished to analyze further on the strategy within Blood Transfusion Unit of Dr. H. Abdul Moeloek General Hospital Province Lampung, as affected by the pandemic of Covid-19.

## **METHODS**

The type of this research is qualitative with descriptive method. The populace is all the officers within Blood Transfusion Unit of Dr. H. Abdul Moeloek General Hospital Lampung Province, during the month of May until July 2021. This research used purposive sampling, one of non random sampling methods. The informants were those comprised in the implementation of blood services strategy, and had been working for about 3-4 years and were still working during the research. Accordingly, 8 people were found for sampling, one person as key informant (head of the unit), 4 people as main informant (the people in charge), and 3 people as support informant (staff). The research instruments used were interview guidelines, recorder, and checklists. The qualitative methods included were interview results, reduction of information, data analysis, interpretation of information, and triangulation. Finally, the researcher made conclusions from the information analysis.

## RESULTS

Table 1.  
The Informant Data

Informant Code	Age (Years)	Position	Working Period (Years)
IK	41	Head of the Unit	13
IU1	35	Responsible for Laboratory	10
IU2	34	Responsible for Quality	13
IU3	36	Responsible for Technical Services	3
IU4	37	Responsible for Administration	4
IP1	33	Crossmatch Staff	10
IP2	28	Aftap Staff	3
IP3	27	Counter Staff	3

### Blood Services Strategy

Strategy management is not unlike other type of managements, comprising of planning, organizing, implementing, and evaluating.

#### 1. Planning

During planning, steps to be taken are to pinpoint the problems, prioritize them, and identify techniques to utilize. There is also need to analyze on setting aims and plans of the strategy, the formulations, locations and occasions of implementation, as well as budgeting.

*“There are meetings every month in Blood Transfusion Unit. All personnel can suggest on matters to discuss. From each problems, we decide what is the most important. And we search for solution. The one who affect patient is the highest priority. We should solve it first. Not only in meeting, the staff could tell me anytime about every problems in Blood Transfusion Unit” (IK)*

The interview expressed that Blood Transfusion Unit has been doing monitoring and evaluation every month. Blood Transfusion Unit has also been doing teamwork with others in order to formulate strategies, for example the Sub-Section of Medical Support as the supervisor of all support facilities in Dr. H. Abdul Moeloek General Hospital Lampung Province. Blood Transfusion Unit has its own budgeting, like other units within Dr. H. Abdul Moeloek General Hospital, which will be implemented as soon as possible after approval.

#### 2. Organizing

Managements need organization to achieve more effective implementations, such as organizing human resources, splitting the staff shifts, and organizing their schedules.

*“Because we open 24 hours, there should always be staff working. We split and work in teams, like in other units, we work the morning shifts, afternoon shifts, and night shifts. In each shifts there should be staff in each section, as in donor selection, aftap, component, crossmatch, in counter and administration.” (IUI)*

The interview divulged the management of staff, including selecting shifts. The informant said that there are time schedules for all staff who work as their responsibility. This also involved reorganizing upon decreasing staff number due to Covid-19 exposition.

### 3. Implementing

Throughout implementations, changes are to be monitored, on modifications possibly needed in organization structure, on prevailing organizational culture, and on impediments to strategy implementation, as well as on how the leadership motivate their staff.

*“The staffs use protective equipment during work. But they find it hard to maintain distances between their own. They are very close to each others. Even our doctor has warned them to keep on distancing.” (IK)*

The interview revealed the changes in Standard Operational Procedures due to Covid-19 pandemic, as documented in New Normal Standard Operational Procedures. There is no need to change organization structure, only to alter the culture, to maintain distance between each others. The leadership has given motivation for all the staff.

### 4. Controlling

Controlling is done to supervise the implementation of services.

*“There are meeting every month, and leadership always control and warn the staff directly.” (IU3)*

The interview on supervising methods disclosed meetings held every month, internally, and externally.

### 5. Evaluation

Evaluation is the final step in management. By evaluating, the implementation of strategy management can be qualitatively assessed. Analysis is to be done, on the successfulness of the strategy, as well as on corrective measures to be taken against deviations.

*“If the services are good, and no problem arises, then we did the strategy impeccably. The most important thing is everyone works according to Standard Operational Procedure.” (IK)*

The interview described that if the strategy has been carried out according to SOP, and blood services has complied to Minimum Service Standards, then the strategy has been implemented properly. And the leadership has taken corrective measures as needed.

## **Risk Management**

Risk management is the part of management strategy. The following interviews were to understand the subject, as according to main and support informants.

### 1. Identifying the Risk

Apprehension on the definition of dangers and risks is requisite, along with potential dangers at workplace, including health risks, as well as dangers from equipment at work.

*“Potential dangers and risks that can happen at work involves electrocution from equipments, blood splatters, etc.” (IU2)*

*“During pandemic, there are risks indeed, since we don’t know whether the blood donor is infected by the virus or not, because they weren’t swabbed.” (IU3)*

The interview related the awareness the informants have on dangers and risks at work, on the various possible dangers which may coincide with work locations, and on health risks occurring on duty that can be caused externally (e.g. from donors and patients’ families) or internally (e.g. from amongst the staff). No major risks were found yet due to equipment.

## 2. Risk Analysis

Risk analysis was, based on interviews, classified on three specifics, i.e. likelihood, exposure, and severity.

*“Our equipments are in tip-top shape, due to routine maintenance schedule. All the staffs had also been given training on handling them.” (IU2)*

*“We utilize the equipments, in morning and afternoon shifts for about 6 hours, and 8 hours in night shifts.” (IP2)*

The interview recounted the prime condition of equipments, thanks to routine maintenance and the well-experienced handlers. The staffs were exposed to the equipment for 4-8 hours on the day. Regarding severity, they have been using necessary protective equipment, and no undesirable accident happened at work.

## 3. Management

Subsequent to risk analysis is exploring how risks were managed within Blood Tranfusion Unit.

*“We have enough protective equipment. But it will be better, if we get supplements.” (IU3)*

*“All good. But it can be better, for example by distributing supplements to us.” (IP3)*

The interview depicted how risk were managed, such as by having Standard Operational Procedures, and by maintaining enough protective equipments for all staff. Even so, there was aspiration for supplements.

## 4. Implementation

Implementation is the application of risk management in Blood Transfusion Unit.

*“This change is useful, in order to protect ourselves. But now, we need to keep a distance between ourselves.” (IP3)*

The interview illustrated applied risk management in Blood Transfusion Unit e.g. alterations owing to Covid-19 pandemic. There were then imposition on protective equipments, and on masks, not only for the staff, but also for blood donor and patients' family. The changes were convenient to some, yet were felt encumbering by others on what they perceive as being curtailed unlike before the pandemic.

## 5. Monitoring

Monitoring is a substantial step in evaluating the properness of risk management adopted.

*“If we all conform to Standard Operational Procedure, risk management is successfully implemented.” (IU1)*

*“It can be said as efficacious if there are no more exposed staff.” (IP2)*

The interview expounded on monitoring and evaluation on the risk management, direct supervision by the leadership, and meetings carried out monthly. The risk management might be cited as successful if the Standard Operational Procedure has been done to the letter. Although, inasmuch as the number of staff exposed to Covid-19, some believe the risk management could be improved. The leadership was understood to take corrective measures against digression as needed.

## **DISCUSSION**

### **Blood Services Strategy**

Blood Transfusion Units are part of hospital services that organizes blood donors, blood provisions and distributions, and are responsible for the availability of blood for safe and qualified transfusion and for being in ample quantity to support health services within the hospital and other health services facilities. The Regulation of Ministry of Health Number 129/Menkes/SK/II/2008 on Minimum Service Standards in Hospitals elucidated the standard as stipulations on baseline types and quality of service to be implemented by regional government (Peraturan Menteri Kesehatan Republik Indonesia Nomor 129/Menkes/SK/II/2018 tentang Standar Pelayanan Minimal Rumah Sakit, 2018). It also technically specified benchmarking on minimum services provided by Public Service Agency. Two indicators were established on minimum service standard for Blood Transfusion Unit i.e. 100% fulfillment of blood transfusion needs, and that transfusion reaction should be under 0,01%.

This research showed that during the pandemic, Minimum Service Standards was not achieved, reduced to only 80-90% fulfillment (from Blood Transfusion Unit Report in 2020-2021). There was a drop of around 10% as contrasted to previous year (from Blood Transfusion Unit Report in 2019). Nevertheless, no significant decrease was found on transfusion reactions, which still complies to standard. Interviews done established that Blood Transfusion Unit has implemented good strategy management on blood services. Problems were identified beforehand and through monitoring and evaluation done in monthly meetings. Standard Operational Procedure on New Normal was composed to suit the pandemic.

The leadership has been properly monitoring all activities within Blood Transfusion Unit. Informants stated the leadership was directly involved in supervising implementations. Evaluations, as previously mentioned, was done regularly within Blood Transfusion Unit, during internal meetings, as well as external ones. Should deviations arise, the leadership was to take corrective measures as necessary. Observations demonstrated blood services were performed according to Standard Operational Procedure. Fred R. David (2011) defined strategic management as the art and science of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its objective. Blood Transfusion Unit of Dr. H. Abdul Moeloek General Hospital has been applying strategy management structurally and based on theory.

Hospitals, as one of health facilities providing health services for citizen, are required to give qualified services, complying to Minimum Services Standards. (Alfajri, 2017). The World Health Organization journal titled "Maintaining a safe and adequate blood supply and collecting convalescent plasma in the context of the COVID-19 pandemic" estimated negative impacts on blood supplies through reduced blood donations. The solution to blood needs fulfillment to comply to Minimum Service Standards is by adjusting the first point of the strategy, that is increasing promotions and donor recruitments to achieve 100% fulfillment, by cooperating with other Blood Transfusion Units/Red Cross as well as established networks, promoting to other employees and students within Dr. H. Abdul Moeloek General Hospital area, and also intensifying communications to ensure citizens' trust on the Blood Transfusion Unit.

### **Risk Management**

Risk management is an inseparable part of strategy management (Erisman, 2019). Herman Darnawi (2010) specified risk management as attempts to identify, analyze, and manage risks in every organizational activity to achieve more effectivity and efficiency. This research discovered that all informant have understood the dangers and risks at workplace. Possible dangers encountered at work may vary, depending on specific work locations. Health risks occurring may be induced externally, either by blood donors or the patient's family, as well as from among fellow employees of the Blood Transfusion Unit. No work incidents occurred so far. All equipments were regularly maintained, and employees are experienced in using existing equipment.

Changes occurring within the Blood Transfusion Unit were not difficult to employ. Some informants found them beneficial, by increasing safety for the employees themselves. Others experienced discomforts, chiefly in maintaining distances between employees. Risk management in the Blood Transfusion Unit has been applied proficiently. Informants appraised the availability of Personal Protective Equipment. Some informants also wished supplements were provided for the staff. Risk monitoring may as well be rated effective. The differing informant opinions on indicators of risk management successfulness, some considering it has went well, others noting the number of employees expose to Covid-19, showed there are still room for improvements.

The Blood Transfusion Unit has applied risk management, in theory and practice, using risk reduction in implementations, by provisioning sufficient PPE (at least level 2 PPE), maintaining distances in the waiting room for donors, and the application of the 5 M provisions (wearing masks, maintaining distance, sanitizing hands, avoiding crowds, and reducing mobilities) strictly among employees. Despite having no employees facing work accidents, the number of staff exposed to the Covid-19 pandemic has shown the need to further improve risk management. The leadership has tried to reorganize the remaining employees, yet additional corrective actions may be applied. The provision of supplements as recommended by the informants is another point of input.

### **CONCLUSIONS**

The Blood Transfusion Unit has practiced strategic management according to the existing definition. Important concepts in the Blood Transfusion Department include increasing the promotion and recruitment of blood donors, increasing the safety and quality of blood products, and improving the quality of blood transfusion management. The Blood Transfusion Unit has also implemented risk management in accordance with the theory, namely carrying out risk reduction, by providing sufficient PPE (at least level 2 PPE), maintaining distances in the waiting room for donors, and the application of the 5 M provisions (wearing masks, maintaining distance, sanitizing hands, avoiding crowds, and reducing mobilities). Minimum Service Standards was not achieved during the pandemic, reduced to only 80-90% fulfillment in 2020-2021. There was a drop of around 10% as compared to 2019.

The result of the interviews exhibited perceptions on changes in regulations due to the pandemic, some find the benefits in self-safety, while for others the inconvenience of wearing PPE and of social distancing. It also indicated appreciation on provision of PPE for employees, though also noted the need for provision of supplements. The number of Blood Transfusion Unit employees exposed to Covid-19 also needed attention.

Through the interviews and observations, the researcher concluded that the Blood Transfusion Unit needs to optimize the existing strategic concepts, particularly in the first point, namely increasing donor promotion and recruitment efforts with a target of 100% of the need as an effort to mitigate the impact of the shrinking number of donors, as well as intensifying communication to gain people's confidence in the Blood Transfusion Unit. On the other hand, efforts to manage risk in the Blood Transfusion Unit may need to be further improved, especially in terms of providing supplements for employees of the Blood Transfusion Unit, as printed on the risk management form.

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