

## Institutional Arrangement in Public Health Services for Handling Malaria: Evidence from Indonesia

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### Abstract

This article describes the arrangement of public service institutions that were introduced, promoted, and actualized by the local government of Teluk Bintuni Regency, West Papua Province of Indonesia. The research method used is descriptive-qualitative. Data collection was carried out through observation and experience at the research locus, interviews with informants as public service providers with community members suffering from malaria, as well as conducting document searches on the institutional arrangement of services and handling of malaria. The data, information, and knowledge obtained were analyzed using descriptive-quantitative analysis techniques. The results showed that the institutional arrangement of public services in the health sector in handling malaria in Teluk Bintuni Regency, West Papua Province, Indonesia was carried out using methods, approaches, and systems that had been considered effective. The effectiveness of this institutional arrangement can be seen through the implementation of the Early Detection and Treatment (EDAT) system which has been applied since 2010. In 2018, this system received an award from the United Nations Public Service Awards (UNPSA) in Morocco, which is a prestigious award in the field of public services in the United Nations. Previously this system won an innovation award held by the Ministry of Administrative and Bureaucratic Reform of the Republic of Indonesia in 2017. Thus, institutional arrangements are needed to actualize and replicate the EDAT system in handling malaria and other diseases with similar characteristics.

**Keywords:** Institutional arrangement; Public service; Health; Malaria Disease; Papua Land.

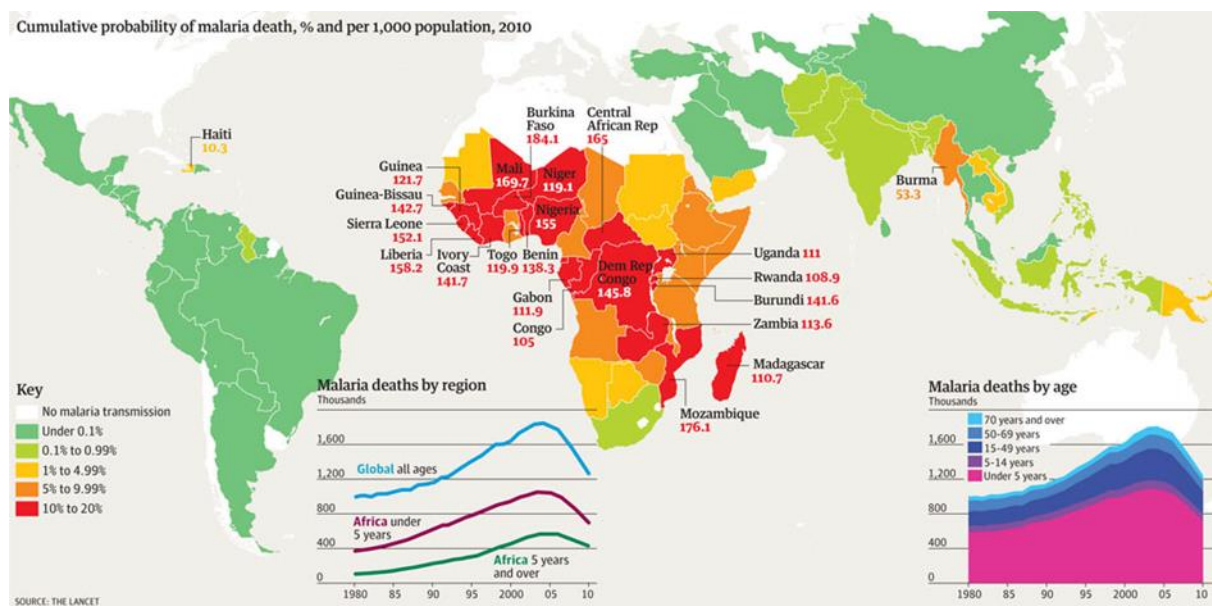
### 1. Introduction

Malaria disease is still a global system problem in efforts to handle and eradicate it. It is estimated that 41 percent or about 2.3 billion people in the world are at high risk of being infected with malaria, especially those who live in areas in tropical and subtropical countries (Mobilala et al., 2019; Putri, 2018; Tuhumury, 2022; Yuliyanti, 2020). Indonesia is also one of the countries in the world that has a fairly high case of malaria and a serious national system problem.

According to data from the Indonesian Ministry of Health in 2019, there are still 224 districts/cities out of 519 districts/cities in Indonesia that are not free from malaria. Around 79 percent of malaria cases in

Indonesia come from provinces in eastern Indonesia, such as Papua, West Papua, East Nusa Tenggara, Maluku, and North Maluku. Furthermore, based on data from the Papua Provincial Health Office and researchers' observations that some areas that have become malaria epidemics are Keerom regency, Mimika regency, Jayapura regency, Boven Digoel regency, Sarmi regency, and Teluk Bintuni regency in West Papua Province. Malaria transmission in an area is influenced by several main systems, namely system a, malaria, human systems, and environmental conditions. When an Anopheles sp mosquito-carrying system a plasmodium in its body lands on and punctures a person's skin, the system plasmodium will enter the blood vessels and infect the liver and spleen.

The spread of malaria is considered very urgent and interesting to talk about in the world and Indonesia, including in Papua, because it can threaten human existence. Systemic disease, in this case, malaria, especially in the Coronavirus Disease (COVID)-19 era can cause many victims if it is not handled quickly and appropriately. According to experts and researchers (Gallup & Sachs, 2000; Korzeniewski, 2009; Mobilala et al., 2019; Putri, 2018; Tuhumury, 2022; Yuliyanti, 2020) that international agencies, namely countries and international organizations often make serious efforts to prevent, reduce, and overcome malaria system disease that is oriented to the individual human system. The following is a picture of a map of the spread of malaria in the world and Indonesia (Figure 1).



Source: Accessed from the Internet, 2022.

Figure 1. The locus of the spread of malaria in the world

The data on the map of the spread of malaria in the world illustrates that malaria infects a lot of people who live in areas in tropical and subtropical countries (Gallup & Sachs, 2000; Korzeniewski, 2009; Mobilala et al., 2019; Putri, 2018; Tuhumury, 2022; Yuliyanti, 2020). Indonesia, which is a tropical country, is included as a country that has a fairly high case of malaria which has become a serious national health problem.

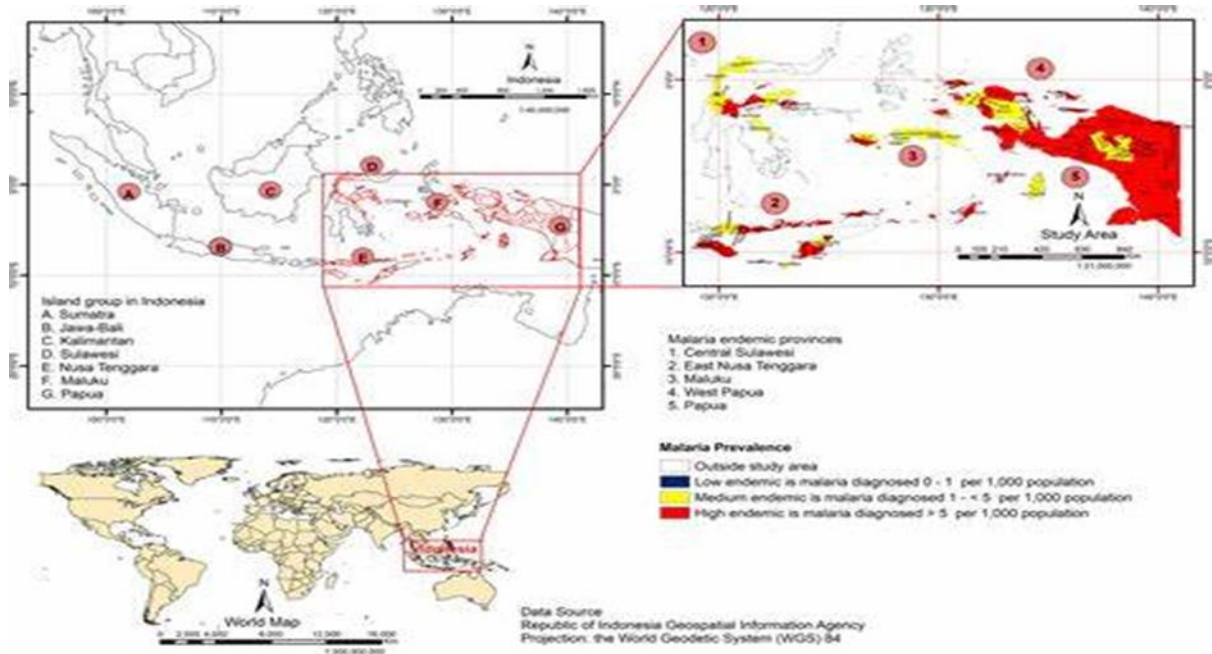


Figure 2. Locus of Malaria Spread in Indonesia

Source: Accessed from Internet 2022.

International media and systems (Tuhumury, 2022) reported that Malaria became the third disease with the most sufferers and the most killing disease after HIV (Human Immunodeficiency Virus). Malaria is a disease caused by the bite of a female *Anopheles* sp mosquito that contains *Plasmodium* (a system that causes malaria). The parasite will enter the human body and settle in the liver before it is ready to attack red blood cells. Symptoms of malaria occur 10-15 days after a mosquito bite with symptoms such as chills, fever, headache, and profuse sweating. This disease can be fatal, such as severe anemia, kidney failure, and even death where the groups most prone to malaria are pregnant women, infants, and toddlers. Therefore, malaria is a global issue in various countries, especially countries with tropical and sub-tropical climates, including Papua, in Teluk Bintuni Regency. Based on this reality about the implementation of the main tasks, functions, and the role of public institutions, this study aims to identify, analyze and explain the institutional arrangement of health services in handling malaria in Teluk Bintuni Regency, West Papua Province, Indonesia..

## 2. Methods

The research method used to identify, analyze and explain the institutional arrangement of public services in the health sector is descriptive-qualitative (Gunawan, 2022; Miles et al., 2018). Data collection was carried out through observation and experience at the research locus where researchers interacted directly with health service providers at various institutional levels, starting from the Head of Service level to employees in charge of serving malaria sufferers. Along with repeated observations, it can shape the experience of researchers as health service providers, especially at the Community Health Center (CHC) in Teluk Bintuni Regency, West Papua Regency. The researcher also searched for documents on the arrangement of service institutions and the handling of malaria. The data, information, and knowledge obtained were analyzed using descriptive analysis techniques (Miles et al., 2018)..

## 3. Results and Discussion

Preliminary research results show that both Papua and West Papua Provinces, especially in Teluk Bintuni Regency, have been known as provinces with very high malaria endemicity. Data from 2009 to 2017 shows that the number of malaria cases in the province of West Papua has decreased systematically, starting from 50,766 to 13,690. Teluk Bintuni Regency is one of the areas with relatively low cases and Annual Parasite Incidence (API) and has succeeded in reducing the number of people with malaria. The secret lies in the Early Detection and Treatment (EDAT) system which has been in use since 2010. In 2018, this system received an award from the United Nations Public Service Awards (UNPSA) in Morocco, which is a prestigious award in the field of system services by the United Nations. Previously, this system won an innovation award held by the Ministry of Administrative and Bureaucratic Reform of the Republic of Indonesia in 2017 (Mobilala et al., 2019; Putri, 2018).

Based on the results of the research above, it can be stated that the number of malaria cases in several areas in Papua, especially in Teluk Bintuni Regency, which was previously still high, is now starting to decline as a positive impact of the institutional arrangement program accompanied by the implementation of a comprehensive management strategy. by building cooperation between local governments and all elements of society in Papua. The positive impact of this institutional arrangement on the target group of programs is to suppress and reduce the number of cases of malaria sufferers. According to informants from the local government system and employees at the Community Health Center (CHC) that the handling of malaria has been carried out using handling malaria sufferers and controlling malaria systems.

Handling of malaria sufferers is done by providing appropriate treatment according to the type of plasmodium based on the results of the examination of the patient's red blood cells. The treatment aims to kill the Plasmodium system that infects the patient so that the patient becomes cured and will not become an agent of transmitting malaria infection to other people around him or in the community where he lives. Sources of secondary data, information, and knowledge that summarize this method of treatment explain that treatment for malaria sufferers must be complete because it can cause other secondary diseases and can even cause death, as in the cases that occurred in Teluk Bintuni Regency and several areas in Tanah Papua, because Papua is indeed famous for malaria, in addition to Papua which is famous for its Cenderawasih birds or red fruit producers (Tuhumury, 2022).

Handling malaria sufferers in addition to drugs but also educate patients as much as possible be able to consume nutritious and healthy food and drinks to help the healing process and build immunity so that they can recover from malaria. In addition, it is also given an understanding to patients and their families to always maintain personal hygiene, and family and maintain the cleanliness of the residence and the surrounding environment in the community. Likewise, the handling of malaria cases is carried out through the control of the malaria disease system. Control of malaria can be done physically, biologically, and chemically. Physical control is by distributing mosquito nets for the community, implementing the 3M system in Indonesian (*menguras/* draining, *menutup/* closing and *menimbun/* burying), maintaining cleanliness and personal hygiene as well as maintaining environmental sanitation, as a reference to malaria control methods introduced in the world by international institutions (Figure 3).

**WORLD  
MALARIA  
DAY**

25<sup>th</sup> April 2020

**Zero Malaria Starts With Me**

**Precautions**

- Use insecticide-treated mosquito nets (LLNs)
- Wear protective clothing to prevent mosquito bites
- Get indoor residual spraying
- Get intermittent preventive treatment in pregnancy
- Get the authorities to clear water collections and spray regularly

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KEM Hospital PUNE  
Quality and ethics in patient care

Source: Accessed from the Internet, 2022.

Based on the evidence of handling malaria as the impact of structuring public service institutions in Teluk Bintuni Regency, social learning can be obtained that health for the community in an area is one of the most important aspects of providing basic services, especially in efforts to improve the quality of human resources (HR), both knowledge, skills, and professional skills in life. The success of health services has become one of the prioritized demands for fulfillment in national development since 2014.

Normatively, this arrangement of public service institutions has been regulated in Law Number 17 of 2007 concerning the National Long-Term Development Plan of 2005-2025 which mandates that system development is directed at increasing awareness, willingness, and ability to live healthy for everyone so that the highest possible level of community system improvement can be realized (President of the Republic of Indonesia, 2007). System development is carried out based on humanity, empowerment, independence, fairness, and equity, and prioritizing and benefiting with special attention to vulnerable populations, including mothers, infants, children, elderly people, and poor families.

The reality in Teluk Bintuni Regency proves that the acceptability and accessibility of the community to health service facilities, especially in the handling of malaria continues to improve with the addition of system facilities such as CHC, sub-health centers, village health posts, and houses sick. The number of CHC continues to increase, although some are in damaged or heavily damaged condition. Thus, an increase in the number of system service facilities can be demonstrated by the increase in sub-health centers and mobile health centers. Meanwhile, more than fifty percent of the people have been able to reach system facilities within a short distance and travel time. Likewise, utilization of system facilities is increasing, but residents' access to facilities is not optimal so many residents still experience distance and cost constraints, because the natural and environmental conditions of Bintuni Bay Regency are different from other areas on the island of Java.

On the island of Java with a denser population, the accessibility of the community to system services is easy because the residential areas are closer to the CHC and its network, but in the Eastern Indonesia Region, especially in Papua Land (Teluk Bintuni Regency) as the locus of this research. With a small population and scattered residences, they face serious geographical constraints causing public access to system facilities to be lower, as reported by Novika's research (2020).

One form of innovation and reform in the system financing subsystem in Indonesia, including in Teluk Bintuni Regency is the development of the National Social Security System (NS3) which is stipulated by Law (UU) Number 40/2004 concerning NS3 (Santoso, 2014). The NS3 law is an innovation in the social security system that lays the foundation for the implementation of social security, including social security or insurance because it is consistent with the realization of universal principles and following the ILO's second generation of conventions (International Labor Organization) of 1952. In its development, every region in Indonesia, including in Bintuni Regency, has the right to develop a social security system. This authority is by the decision of the Constitutional Court regarding Judicial review of Article 5 of Law Number 40/2004 concerning NS3 and is a form of implementation of the regional government law, especially article 22h which requires regions to develop a social security system including quality and innovative system guarantees.

According to the views of experts and researchers (Dwiyanto, 2021; Fox et al., 2014; Hafizh, 2016; Muttaqin, 2011; A. Putra et al., 2017; R. M. D. Putra, 2018; Zulu et al., 2015) that the idea of improving the quality of service systems based on continuous innovation is a challenge for every organization, including organizations providing basic services in the field of health, such as hospitals and health centers. Thus, the arrangement of public service institutions is a necessity in the context of realizing a healthy and just Indonesia. Institutional arrangement in health services at the CHC level is the right choice to provide quality health services, prevent and cure diseases experienced by the community, and restore patient health. The community considers the CHC as the last closest interest for people who are sick. There is a health of community members who behave to quickly seek treatment at the CHC if they suffer from a certain disease.

To achieve a quality and sustainable level of system service, the CHC has tried various ways to improve its service facilities. Health services at CHC are a form of service provided to clients or patients by health workers (doctors, paramedics). The health service at this time has become the main service system where each CHC is innovating and is responsible for service recipients according to their level.

Based on these phenomena and expectations, the institutional arrangement of public service in the field of health, especially at the CHC level is understood as an effective vehicle for the community to achieve optimal health degrees because it provides units that provide services through quality improvement and service innovation. Some experts and researchers (Arsyad et al., 2020; Natassia et al., 2021; Prasojjo, 2017; A. Putra et al., 2017; Taufik et al., 2017) respond to this phenomenon by stating that the low quality of health service in an institution will affect patient or community dissatisfaction with the quality of outpatient and inpatient services. The health program by the Social Security Organizing Agency (SSOA), for example, can satisfy the community if all components involved understand each other about the program. Health officers do not necessarily provide services for free because they are free but must understand their respective duties and responsibilities following existing instructions and rules so that they will produce competitive advantages through quality, efficient, innovative services and produce customer responsiveness.

The health experience with the presence of SSOA on January 1, 2014, which was escorted by the government nationally on its journey turned out to be a lot of criticism and complaints from health providers for the delay in disbursing funds and SSOA patient services that were not optimal (Anggriani, 2016; Endartiwi, 2020; Ilahi, 2016; Sapitri & Sari, 2021), causing provider dissatisfaction which in turn reduces the quality of service to the community. Likewise, there are public complaints about the ignorance of some service items that are free of charge.

To overcome this problem, it is necessary to innovate health services and improve the performance of institutional (organizational) health so that the impact of the free health service system can be avoided and its positive impact can be increased. In carrying out its duties and functions to achieve organizational goals, many health affects the performance of the institution (organization) that organizes it. Organizational capability is influenced by at least three main things, namely organization, human resources, and finances. However, in preparing the CHC to carry out its function of providing services, several aspects need to be

considered, namely: regulation, organizational structure, human resources, socialization, vision/mission, and culture.

#### 4. Conclusion

The institutional arrangement of public services in the field of Health in handling malaria in Teluk Bintuni Regency, West Papua Province, Indonesia is carried out using methods, approaches, and systems that have been considered effective. The effectiveness of the impact of the institutional arrangement can be seen through the implementation of the Early Detection and Treatment (EDAT) system which has been applied since 2010. Thus, institutional arrangements are needed to actualize and replicate the EDAT system in handling malaria and other diseases that have the same characteristics.

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