

**Support and Effort of Cibalong Subdistrict Government Joining with the Institution of  
Research and Community Service of Universitas Padjadjaran in Decrease of Malaria Disease  
in 2011**

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**Abstract**

Cibalong Subdistrict in Garut Regency is malaria endemic region, for decrease and elimination of malaria incidence, Cibalong government did the elimination malaria program joining with the Institution of Research and Community Service of Universitas Padjadjaran.

The objective of the research was to monitoring the effectiveness of preventive malaria disease extension which was done in 2011, July to October. The Institution gave workshop about the elimination of mosquito growth and the preventive system of malaria disease, did assistance and monitoring the profile of malaria disease from July to December 2011.

Data of malaria incidence were gathered from medical record at Public Health Centre of Cibalong in 2011. There were 102 cases in 2011: 49 cases in January to June, and 10, 9, 13, 8, 7, and 6 cases in July to December respectively. All cases were infected by *Plasmodium Vivax*.

In conclusion, from July until December there has been a decrease in malaria incidence in Cibalong Subdistrict, it showed that the malaria elimination program gave the good impact to decrease the malaria incidence.

**Key words:** Cibalong subdistric, endemic disease, Garut regency, malaria.

## **Introduction:**

Malaria incidence was higher in village than urban areas in all West Timor, West Java such as the beach area of North West Java, e.g. Cibalong Subdistrict and Central Java, and until now it is a major public health problem. Number of very high-risk malaria villages was higher in dry than wet seasons in all areas.<sup>1</sup>

Malaria surveillance in Indonesia begins with patient registration and data collection at the primary health centres which is called Puskesmas (Pusat Kesehatan Masyarakat) or People's Health Centre. Primary health centres generate monthly malaria reports from out-patient services and malaria case detection activities. Primary health centres are responsible for analysing data and producing a local area monitoring report on the distribution and trends of the disease. In the specific case of malaria, a puskesmas sends a report to the district malaria control officer who in turn compiles all reports into a district health profile on malaria. The health profile describes monthly and annual malaria cases reported at village level. The district health office then sends aggregated malaria reports three times a year to the provincial health office, as well as to the Sub-Directorate of Malaria Control at the Directorate of Vector-borne Diseases in Jakarta. Malaria data also comes from laboratory examination in hospitals. The malaria data is collected through the Hospital Reporting System which is called SPRS, Sistem Pelaporan Rumah Sakit, which covers all private and government hospitals in Indonesia. The SPRS malaria figures go to the Directorate General of Medical Care, and they are then passed on to the Sub-Directorate of Malaria.<sup>1-4</sup>

The distribution of the Plasmodium/Parasites, the Malaria Atlas Project and its partners in the Sub-Directorate for Malaria Control in the Directorate of Vector-borne Diseases aim to assemble malaria parasite rate surveys across the Indonesian archipelago. Four species of malaria parasite routinely infect humans in Indonesia: Plasmodium falciparum, P. vivax, P. malariae and P. ovale. Plasmodium falciparum appears to be the most common Plasmodium species in Indonesia.<sup>1-3</sup>

Stoops CA, et al in 2006, found the species of *Anopheles* in Sukabumi: *An. Aconitus*, *An. annularis*, *An. Barbirostris*, *An. Flavirostris*, *An. Indefinites*, *An. Kochi*, *An. Maculates*, *An. Minimus*, *An. Peditaeniatus*, *An. Subpictus*, *An. Sundaicus*, *An. Tessellates*, *An. Vagus*.<sup>5</sup>

Syafruddin D, et al in 2010 found the existence of the insecticide-resistant allele, 1014F, in malaria vectors in Sumatera. It is important to explore the extent of the distribution of resistance alleles among the mosquito populations as various mosquito borne diseases such such as Dengue, Filariasis, Japanese Encephalitis and Chikungunya, are endemic to Indonesias.<sup>6</sup>

## Method

The Institution gave workshop about the elimination of mosquito growth and the preventive system of malaria disease on 26 July, and made the cadre groups that will go to the villages to give explanation to eliminate of mosquito growth and prevent malaria. The assistance did until October. The results or the data of malaria incidence and species of parasite were gathered from medical record at Public Health Centre of Cibalong Subdistrict in 2011, January until December.

## Result and Discussion

The situation of malaria incidence and species of parasite in Cibalong Subdistrict in 2011, January until December, can be seen at the table 1 below.

**Table 1. Situation of Malaria Incidence and Species of Parasite in Cibalong Subdistrict Garut Regency in 2011**

No	Village	Total Malaria Incidence and Species of Parasite in 2011, January to December												
		Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
1.	Mekarsari	5	3	8	3	1	4	3	2	3	4	2	2	40
2.	Karyasari	2	2	1	1	-	-	2	1	3	2	1	1	16
3.	Karyamukti	3	3	2	4	1	4	2	2	4	1	1	1	28
4.	Sancang	-	-	-	1	-	-	3	4	3	1	3	2	17
5.	Simpang	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	Maroko	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	Sagara	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	Mekarmukti	-	-	-	-	-	-	-	-	-	-	-	-	-
9.	Cigaronggong	-	-	-	-	1	-	-	-	-	-	-	-	1
10.	Mekarwangi	-	-	-	-	-	-	-	-	-	-	-	-	-

The monitoring from July to December the data of malaria incidence showed a decrease. In Mekarsari were 3, 2, 3, 4, 2, 2; Karyasari were 2, 1, 3, 2, 1, 1; Karyamukti were 2, 2, 4, 1, 1, 1; Sancang were 3, 4, 3, 1, 3, 2 incidences from July to December respectively.

**Table 2. Types of *Plasmodium* in Cibalong Subdistrict Garut Regency in 2011, January to December**

No	Types of <i>Plasmodium</i>	Species of Parasite in 2011, January to December												Total
		Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	
1.	<i>P. vivax</i>	10	8	11	9	3	8	10	9	13	8	7	6	102
2.	<i>P.palcifarum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	<i>P.mix</i>	-	-	-	-	-	-	-	-	-	-	-	-	-

The parasite in Cibalong Subdistric is *P. vivax*.

### Conclusion

The situation of the malaria incidence from July until December, 2011, showed there has been a decrease in malaria incidence. It showed the workshop of the malaria elimination program that was given by the Institution of Research and Community Service of Universitas Padjadjaran had a good impact to decrease the malaria incidence.

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