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BUREAU RÉGIONAL DES

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# MALARIA OUTBREAK IN GRAND'ANSE (HAITI)

August – September 2015

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# *Background*

- Haiti is the only Caribbean island where malaria remains endemic.
- Currently the disease is in a focused aspects in some areas.
- It has always been accepted that malaria transmission was almost null to beyond 500m. **Therefore, the sudden onset of an outbreak in areas over 600m altitude deserves to be reported and shared with all stakeholders involved in the ambitious project elimination of the island's malaria Haiti in 2022.**

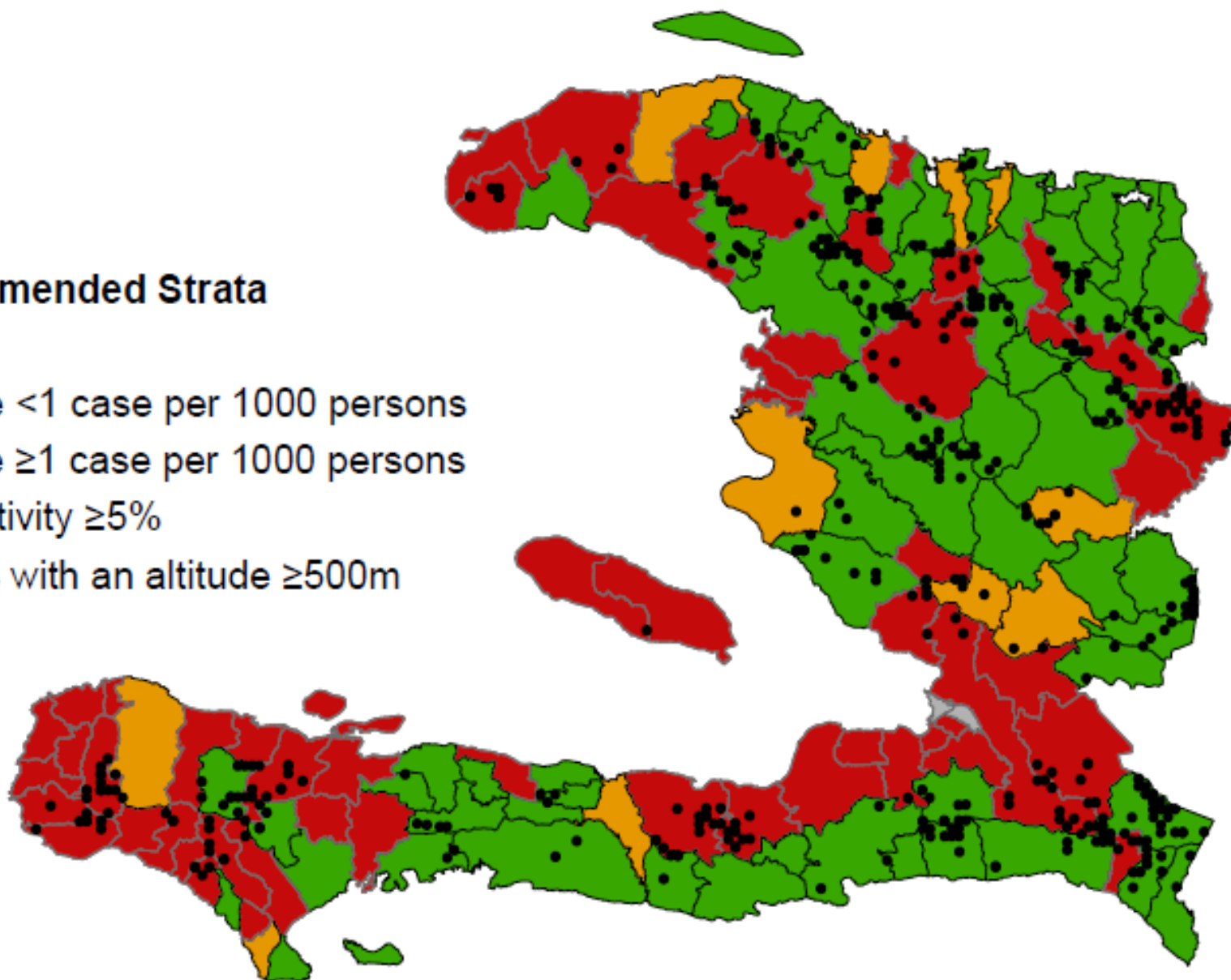
# *Case presentation*

- According to available data in Haiti, malaria which is mostly caused by *Plasmodium falciparum* is on the decline in most regions of the country;
- However, in the Department (Province) of Grand'Anse, the situation remains worrying. In fact, out of the twelve Communes that make up the Department of Grand'Anse, only **Beaumont** had so far been classified as "green" according to the stratification established by PNCM in 2014 (**incidence rate of 0.23%** ).

# WHO Stratification by Commune, 2014

## WHO Recommended Strata

- NA
- Incidence <1 case per 1000 persons
- Incidence  $\geq 1$  case per 1000 persons
- Test Positivity  $\geq 5\%$
- Localities with an altitude  $\geq 500\text{m}$



## ***Malaria stratification by Commune in the Department of Grand'Anse 2014***

<b>Departments</b>		<b>Communes</b>	<b>Population 2014 IHSI</b>	<b>Slide positive rate</b>	<b>Total of confirmed Cases</b>	<b>Incidence</b>
<b>Grand'Anse</b>	<b>12</b>	<b>12</b>	<b>461,174</b>	<b>12.5%</b>	<b>2,024</b>	<b>4.39</b>
Grand'Anse	1	Abricot	37,102	9.3%	128	3.45
Grand'Anse	1	Anse d'Hainault	35,847	20.5%	319	8.90
<b>Grand'Anse</b>	<b>1</b>	<b>Beaumont</b>	<b>31,098</b>	<b>3.0%</b>	<b>7</b>	<b>0.23</b>
Grand'Anse	1	Bonbon	8,481	11.0%	23	2.71
Grand'Anse	1	Chambellan	26,055	15.5%	55	2.11
Grand'Anse	1	Corail	19,268	11.0%	116	6.02
Grand'Anse	1	Dame Marie	38,157	24.1%	600	15.72
Grand'Anse	1	Irois	23,018	24.1%	61	2.65
Grand'Anse	1	Jérémie	132,272	4.6%	270	2.04
Grand'Anse	1	Moron	30,683	6.2%	55	1.79
Grand'Anse	1	Pestel	43,979	9.6%	67	1.52
Grand'Anse	1	Roseaux	35,212	25.3%	323	9.17

- On **23 August 2015**, the Health Department of Grand'Anse (DSGA) reported to the PNCM an unusually high number of malaria cases and four (**4**) deaths after fever episodes.
- The report to the PNCM follows another one that was sent to the DSGA by a team on the ground on 21 August 2015.
- Cases were primarily located in the locality of Ferace, situated in Beaumont, an area known for its low malaria morbidity.

- Based on data from the morbidity register at Beaumont Health Center, the area where **the malaria cases originated had not recorded malaria cases for several years;**
- That is why a registration of **dozens of cases within a few days** immediately alarmed the health authorities of the Department, especially as deaths were also reported.



***Malaria cases from August 22 to September 23 in the outbreak areas (DDGA)***

DATE	Number of tested cases	Number of positive cases	Number of treated cases	Number of severe cases	Number of deaths
8/22/2015	67	45	45	0	4
8/23/2015	255	93	93	1	1
8/28/2015	93	1	1	0	0
8/30/2015	119	7	7	0	0
8/31/2015	181	9	9	0	0
9/1/2015	120	8	8	1	0
9/2/2015	29	21	21	2	0
9/3/2015	146	18	18	1	0
9/11/2015	149	61	61	3	1
9/12/2015	231	52	52	0	0
9/13/2015	170	23	23	0	0
9/14/2015	137	21	21	0	0
9/15/2015	127	7	7	1	1
9/16/2015	115	15	15	0	0
9/17/2015	94	11	11	0	0
9/18/2015	247	16	16	0	0
9/19/2015	159	14	14	0	0
9/20/2015	332	46	46	0	0
9/21/2015	165	20	20	1	0
9/22/2015	157	11	11	0	0
9/23/2015	171	20	20	1	0
<b>TOTAL</b>	<b>3264</b>	<b>519</b>	<b>519</b>	<b>11</b>	<b>7</b>



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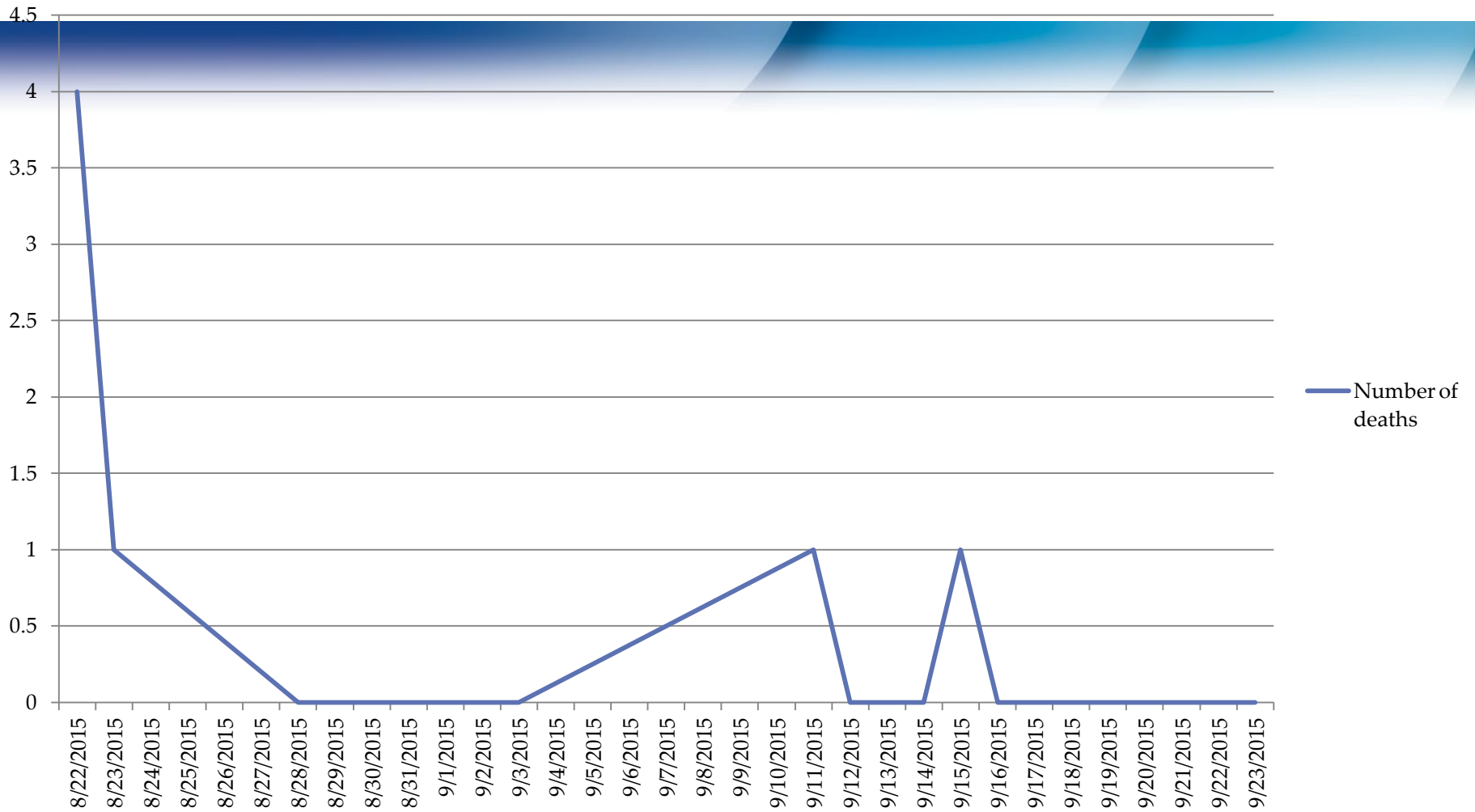
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- **3264** persons tested by mobile teams;
- **519 were positive** by rapid diagnostic tests (RDT), i.e. 16%
- All confirmed cases was treated (CQ+PQ)
- High fatality rate of the first week (**3.6%**) ; this rate fell to the end of the epidemic around **1.3%**;
- 7 deaths;
- Its impact was lessened by **the rapid and coordinated response** of the departmental authorities of the Ministry of Health, supported by the central level and experts from PAHO / WHO.

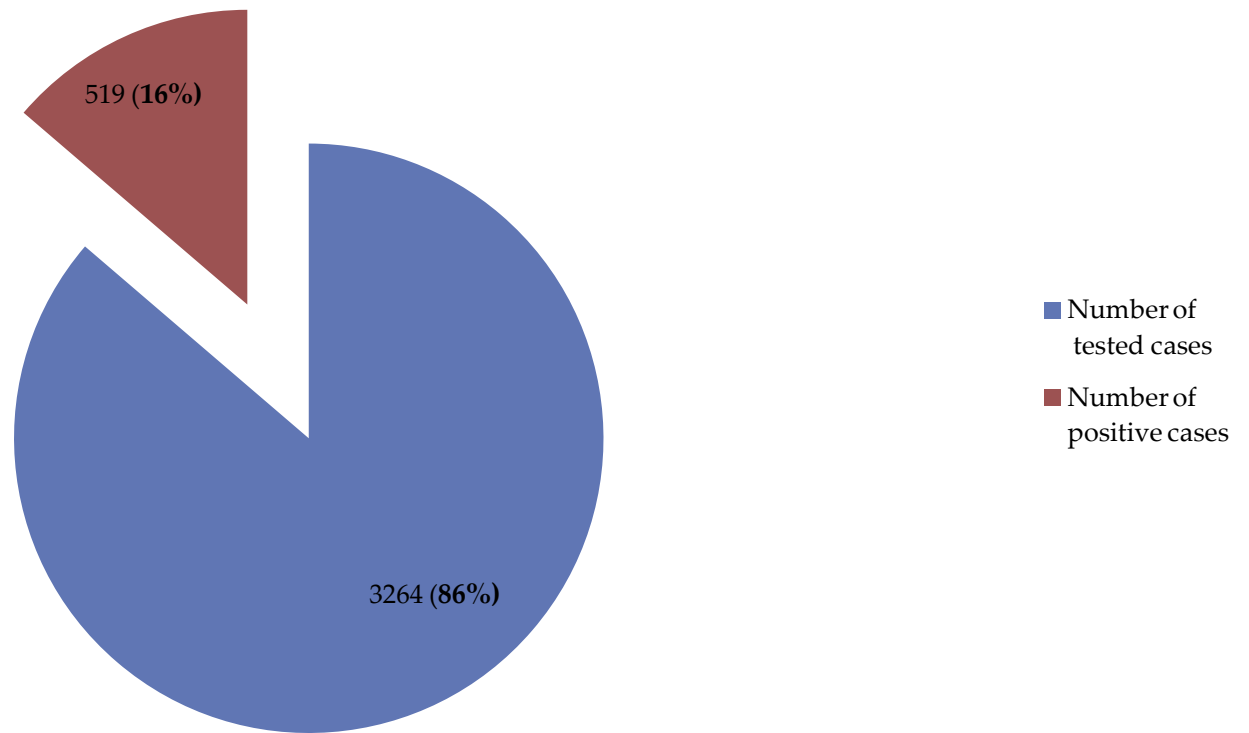
## Evolution of malaria cases from 8.22-23.9.2015



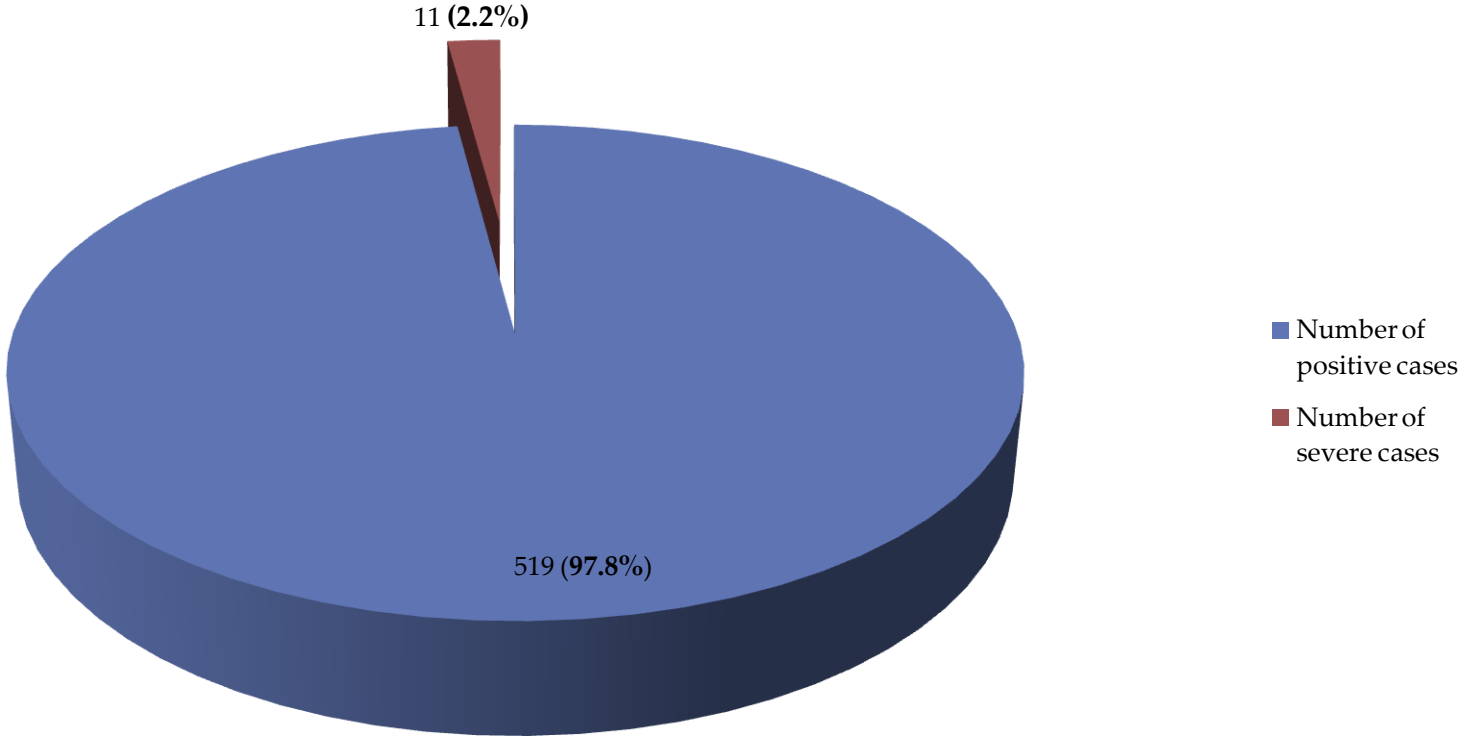
## Evolution of the number of deaths



# SPR



# PROPORTION OF SEVERE CASES



# LESSONS LEARNED / KEY CHALLENGES

- In Haiti, it is commonly accepted that malaria is virtually nonexistent beyond 500m above sea level;
- But in areas that was visited during the outbreak, altimeter readings showed **603m for *Ferace***, **609m for *Nan plaine*** and **663m for *Lacombe***;

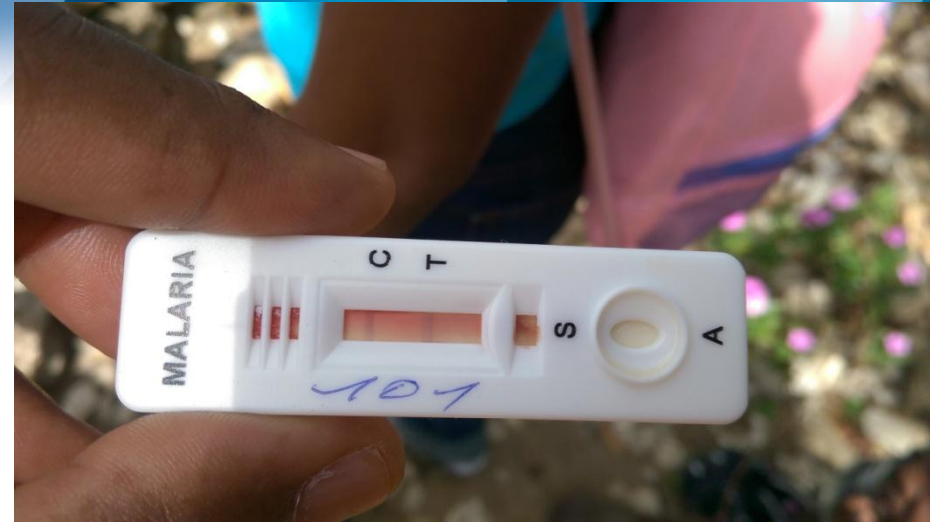


- Establishment of community strategies to support home-based malaria case management (integrated community case management) very relevant.





- PNCM & partners to build a strong and reactive surveillance system;
- Necessity to strengthen vector control activities;
- Strengthen case management (diagnosis & treatment) at community level.



# Pay attention to environment changes



# CONCLUSION

- The outbreak reminds us that the goal of malaria elimination in the next five years requires the establishment of an effective surveillance and response system across Haïti;
- As a matter of fact, asymptomatic carriers of *P. falciparum* gametocytes both in children and in adults (Raccurt et al, 2015) is a significant risk factor in the spread of malaria in communities across the country especially where the mobility of inhabitants is very high.

- In this regard, the recent explosion of the malaria outbreak in Grand'Anse must lead us to be more vigilant, especially as the *P. falciparum* cryptoinfections undetectable by traditional diagnostic methods seem widespread in the population (*Elbadry MA et al, 2015*).



# MUCHAS GRACIAS