



OPS



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BUREAU RÉGIONAL DES
Amériques

Labo-Moto PAHO/WHO Project to support Haiti national Cholera surveillance 2018 -2019

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By:

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17th April 2019

Plan

- **Context**
- **Objective**
- **Activity**
- **Results /Performance and monitoring**
- **Lessons learning**
- **Future plans**
- **Remerciements**

Context

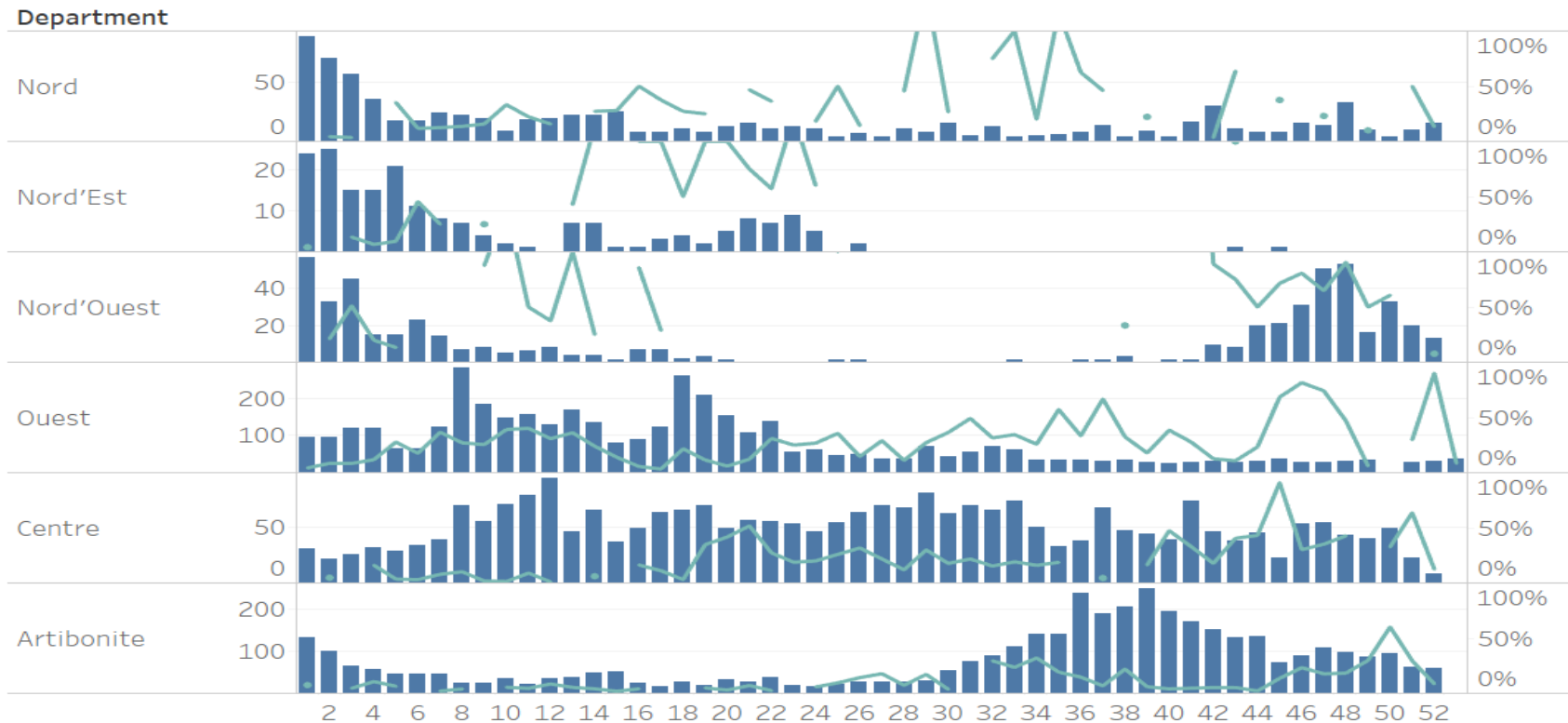
Number of suspected Cholera cases by department and year 2010-2017

Department	2010	2011	2012	2013	2014	2015	2016	2017
Artibonite	53,559	52,337	13,326	11,767	5,513	4,724	5,546	4,070
Centre	15,180	37,598	13,285	9,877	3,913	4,322	6,143	2,624
Grande-Anse	9,232	12,716	2,718	4,313	785	1,285	3,224	189
Nord	24,209	27,210	9,725	7,651	3,468	4,459	5,188	853
Nippes	946	6,598	1,061	377	287	411	870	253
Nord-Ouest	15,539	12,478	1,813	2,244	740	1,995	1,668	555
Nord-Est	4,647	22,030	6,655	1,297	598	357	1,147	196
Ouest	17,212	48,233	13,022	7,141	2,913	16,298	5,012	1,737
Port-au-Prince	39,313	101,680	33,043	11,360	9,578	9,800	8,943	2,476
Sud	4,156	24,184	4,413	1,248	963	1,710	3,307	551
Sud-Est	1,217	6,775	2,293	1,642	320	677	857	242
National	185,210	351,839	101,354	58,917	29,078	46,038	41,905	13,746

17th April 2019

2017

(n) and (%) of collection samples of suspected cases Cholera by epidemiologic Week 2017



- 13,681 suspected cases
- 159 deaths
- 2,806 **(20.8%)** samples collected
- 1,284 cholera positive by culture (45.7% of positivity)

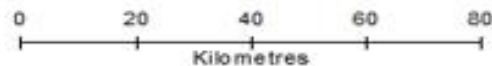
Sites PRESEPI par Commune Haiti, 2017



- ★ PRE SEPI Avril 2012 - Mai 2016 (4)
- ★ Site PRE SEPI 2017 (11)

Legende

- Département
- Commune



Objectives:

General :

Under a cholera elimination perspective, to assure that all cholera suspected cases are collected by nurses institution

Specifics:

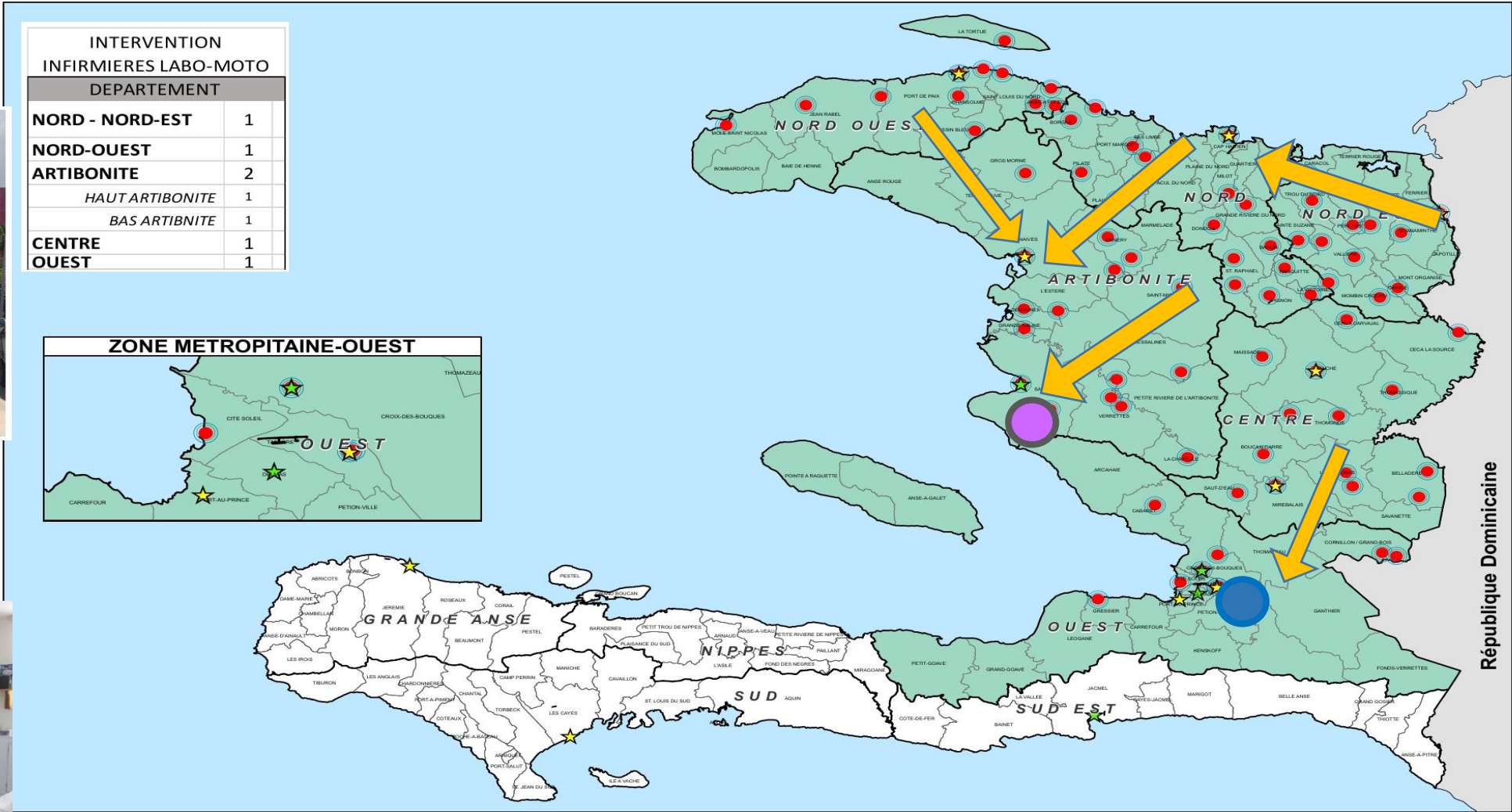
1. Assure stock of Cary Blair and the sample transportation material
2. Training of healthcare providers on sampling techniques and biosafety.
3. Transportation of the sample to a collection point or to the national lab
4. Ensure the retro-information of laboratory results to the CTDA.
5. Analysis and dissemination of the information to MoH (DELR/LNSP)

Labomoto

LNSP



INTERVENTION INFIRMIERES LABO-MOTO DEPARTEMENT	
NORD - NORD-EST	1
NORD-OUEST	1
ARTIBONITE	2
HAUT ARTIBONITE	1
BAS ARTIBONITE	1
CENTRE	1
OUEST	1

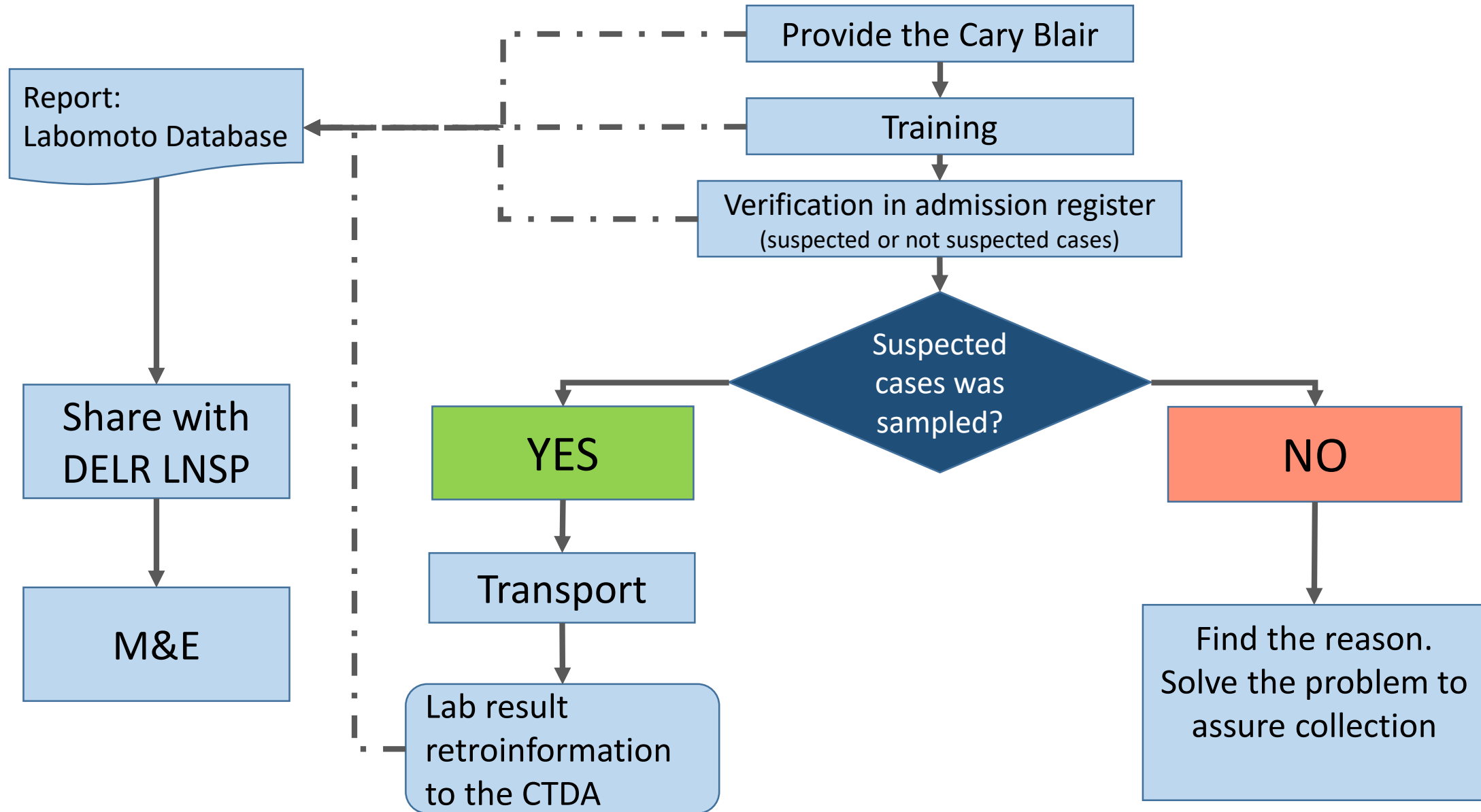


● Saint Marc



	ZONES D'INTERVENTION DES INFIRMIERES LABO - MOTO		SOURCE DE DONNEES Grid: WGS 1984 zone 18N Données Labo moto DELR CNIGS	1:1,350,000 VERSION 001 Date : 04 février 2019
	ZONES D'INTERVENTION ★ Site PRESEPI 2017 (11) ★ Site PRESEPI Avril 2012 - Mai 2016 ● Site Labo-moto OPS/OMS	LIMITES ADMINISTRATIVES ■ Avec Intervention Labo-Moto □ Sans Intervention Labo-Moto		

Labomoto Activity



Results – Number of activities

Table of monitoring performance indicators project lab moto, 2018 in Haiti

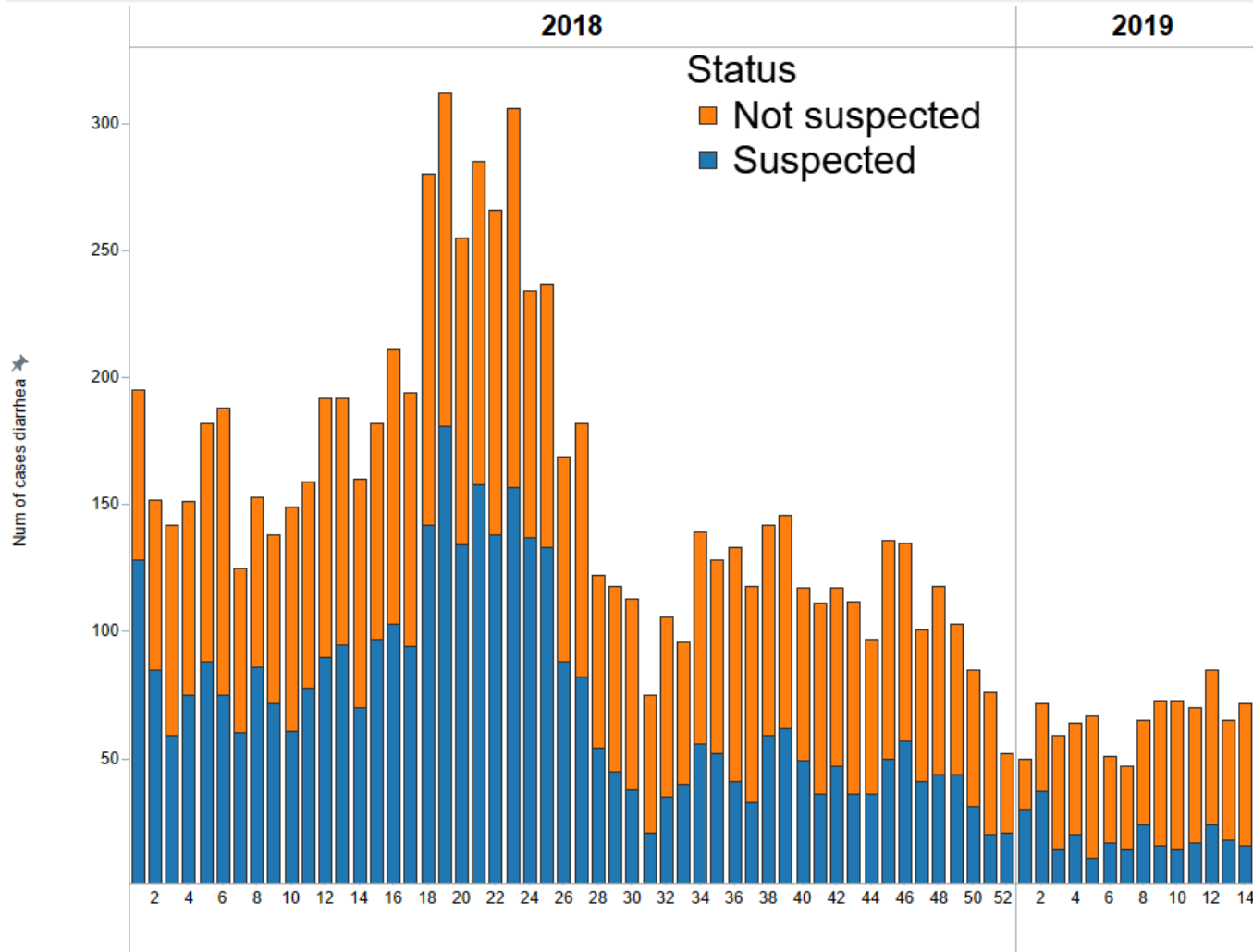
Department	Number of institution	Number of visits	Number of training	Number of Cary Blair provided
Grand Total	124	2,468	1,070	2,583
Artibonite	26	909	311	832
Centre	21	519	357	899
Ouest	13	432	220	677
Nord_Est	18	203	60	48
Nord	28	233	49	17
Nord_Ouest	18	172	73	110

Sources: Register of CTDA/DELRL. Lab: LNSP, ZL Saint Marc

Results – According to case definition: Suspected case or not

(n) of suspected of Cholera cases by epidemiologic Week, 2018 & Week 1-14 _2019, HAITI

Number of suspected cases Cholera by epidemiological week



(n) and % of suspected Cholera Cases by year ,2018 to EW14 - 2019

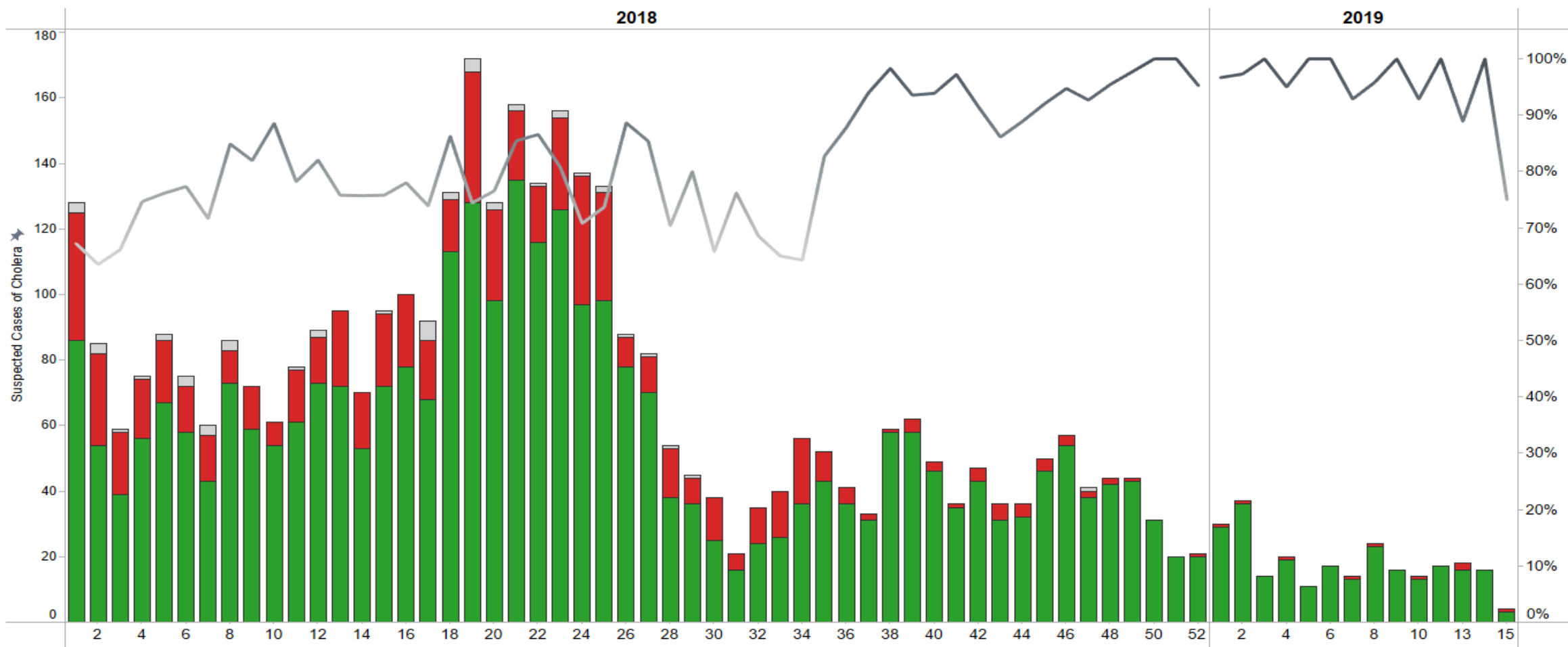
	2018	2019
Diarrhea cases	8,235	933
Suspected cases	3,818	276
% of suspected cases of Cholera	46%	30%

Department: Artibonite, Centre, Ouest, Nord, Nord-Est, Nord -Ouest

Results – reaching 100% of sampling

(n) and (%) of collection samples of suspected cases Cholera by epidemiologic Week 2018 & Week 1-14 _2019, HAITI

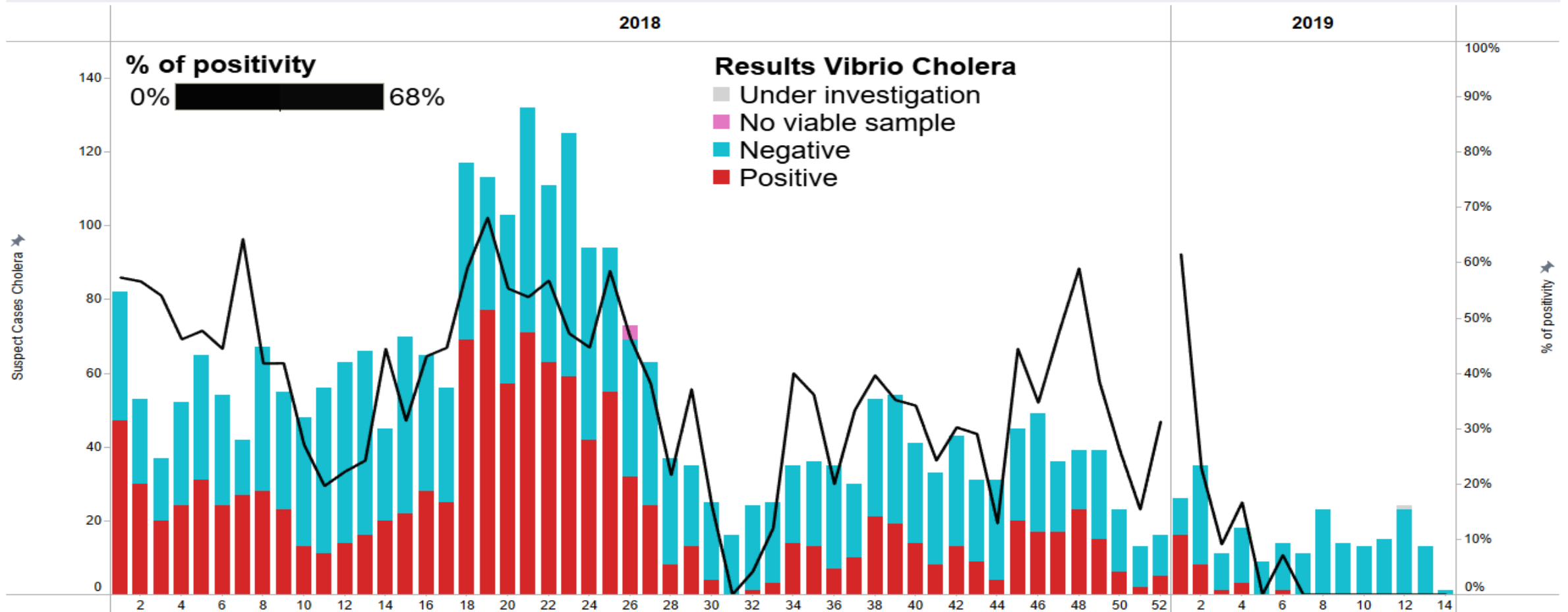
(n) and (%) of collection samples of suspected cases Cholera by epidemiological Week ,Year 2018 & WE 1-14 _2019, HAITI



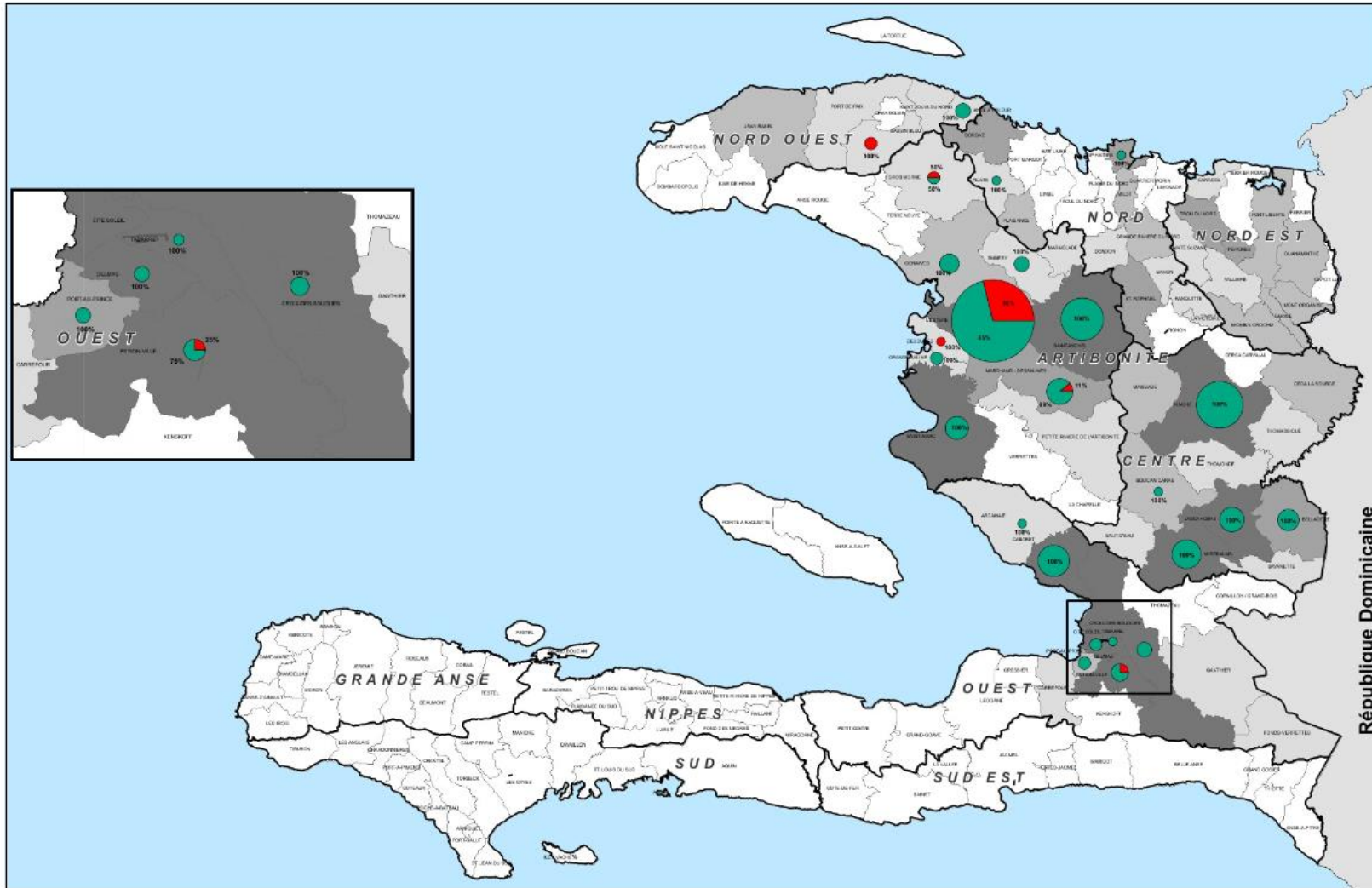
Results - % of positive samples

(n) and (%) of positivity of suspected cases of Cholera , 2019

(n) and (%) of positivity of suspected cases of Cholera by epidemiological week (1-52)- 2018 and Week (1-13)-2019



Results - % of positive samples



CULTURES DE SELLES AU LABORATOIRE PAR COMMUNE DE PROVENANCE SE 1 - 14 . 2019					
 	NBRE ECHANTILLON 	RESULTAT PRELEVEMENT % Positivité % Négativité	PROVENANCE PAR COMMUNE 0 Inférieur à 5 6 - 10 11 - 20 Supérieur à 20	LIMITES ADMINISTRATIVES Limites départementales Limites communales	SOURCE DE DONNEES Grid: WGS 1984 zone 18N Données Labo moto DELR CNIGS
	 1:1.350.000 VERSION 009 Date : 09 avril 2019				

Results – Comparison analysis within previous years

Results laboratories for *Vibrio cholerae* by LNSP and Saint Marc, EW (1-14), 2018 and 2019, Haïti

Results laboratories for *Vibrio cholerae* by LNSP and Saint Marc, EW (1-14) 2018, Haïti

	Grand Total	Suspected	Not suspected	Unknown
Diarrhea cases	1,019	846	162	11
Sample of diarrhea cases	1,006	839	156	11
% of sample-Diarrhea cases	99%	99%	96%	100%
Available tests	937	785	145	7
% of available tests	93%	94%	93%	64%
Positive cases of cholera	344	328	14	2
% of positivity	37%	42%	10%	29%

Results laboratories for *Vibrio cholerae* by LNSP and Saint Marc, EW (1-14) 2019, Haïti

	Grand Total	Suspected	Not suspected	Unknown
Diarrhea cases	331	263	67	1
Sample of diarrhea cases	327	263	63	1
% of sample-Diarrhea cases	99%	100%	94%	100%
Available tests	272	226	46	
% of available tests	83%	86%	73%	
Positive cases of cholera	32	29	3	
% of positivity	12%	13%	7%	

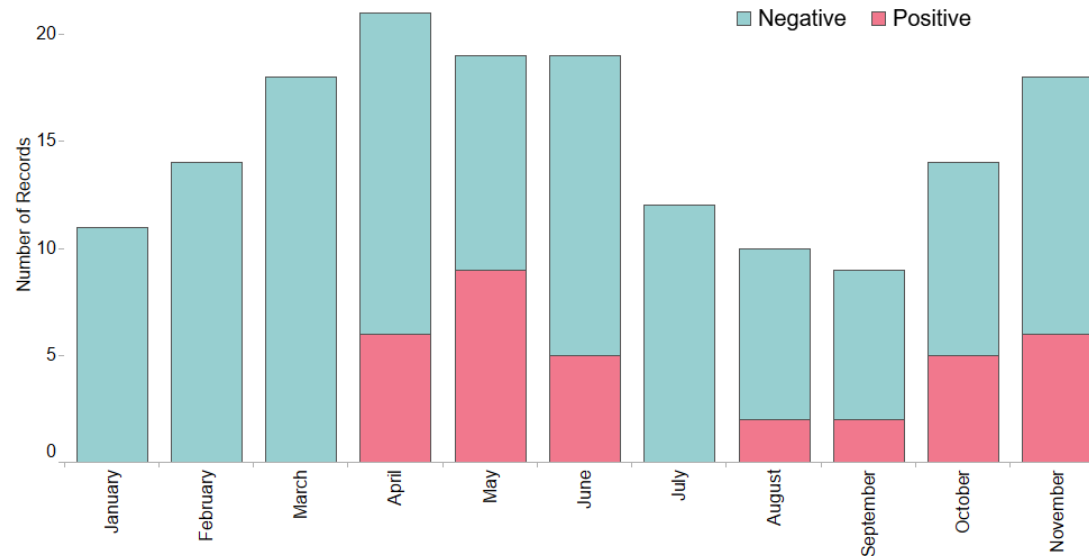
Experiences – Basic effectiveness vaccination analysis

OCV Campaigns in Mirebalais, Centre (Dec 2017)

Vaccine Effectiveness Exercise based in the cholera surveillance data that includes vaccination status and lab results during 2018 (Jan-Nov).

130 suspected cholera cases with “Mirebalais” as the commune of origin.

Culture lab results for cholera suspected cases during 2018 in Mirebalais (Centre)



OCV status	Lab Result (Culture)		
	Negative	Positive	Total
Vaccinated	49 (83%)	10 (17%)	59
Non Vaccinated	49 (69%)	22 (31%)	71
	98 (75%)	32 (25%)	130

Vaccine effectiveness (VE) test-negative design (TND)

$$\hat{\phi}^* = 1 - RR$$

VE= 45%

Results - Performance Indicators

Table of monitoring performance indicators project Labo-moto in Haïti

Table of monitoring performance indicators project lab moto by Department 2018

Residence of Department	Diarrhea cases	Suspected cases	Suspected cases of Cholera sample collected	% of csuspected cases sample collected	%of normal delays= admission date -Sample collected	% normal delay :Sample collected-deposit =2 days	% normal delays reception-results	% of available tests
Grand Total	8,235	3,818	3,068	80%	70%	68%	47%	92%
Centre	2,266	1,120	964	86%	89%	87%	36%	91%
Ouest	2,562	897	610	68%	73%	59%	72%	90%
Artibonite	1,636	1,162	1,069	92%	59%	82%	40%	99%
Nord	772	325	189	58%	39%	6%	40%	68%
Nord Ouest	534	302	227	75%	60%	26%	43%	92%
Nord Est	465	12	9	75%	17%			42%

table of monitoring performance indicators by laboratory 2018

Laboratoires	Sample of diarrhea cases	Available tests	% of available tests	% normal delays reception-results	% of positivity
LNSP	2,199	1,947	89%	51%	30%
ST MARC	1,332	1,310	98%	41%	52%

Department: Artibonite, Centre, Ouest, Nord, Nord-Est, Nord -Ouest

Delay reception - cultures results : 3 days

Future plans

- Use to support the MSPP process of documenting the verification of the transmission interruption.
- Support the new surveillance and sampling strategy, based in the National Long Term Plan.
- Quality assurance system from collection, transport and testing
- For future vaccination activities, access to improved vaccination effectiveness
- Support in other disease outbreaks (diphtheria, vaccine preventable diseases, arbovirusis).

Lessons learning

- Labomoto project complements the National Transportation System in situation of outbreaks and avoiding duplication.
- Cost effective cooperation project (US\$ 350,000/year)
- Flexible project that adapts to new challenges and other disease outbreaks.

Acknowledge

- **MSPP: DELR and LNSP**
- **MSPP local authorities and HCW**
- **Nurses project labo Moto**
- **Partners for Cholera response in HAITI: CDC, ZL Saint Marc and UNICEF**
- **World Bank**
- **PAHO regional office**
- **GTFCC**

Thanks

