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Outbreak of Febrile Acute Gastroenteritis at Delmas, Haiti, May 2016.



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Introduction

- **Acute gastroenteritis (AGE)**
 - Major cause of morbi-mortality in < 5 years, WHO.
 - Second etiology of death in Haiti, HSIS, 2015.
- **At Grace Children Hospital (GCH) :**
 - Increase of cases, mostly in children > 2 years, at the Epi-Week 18 (EW) of 2016.
 - Investigation : May 12th to May 20th, 2016.
- **Objective : Confirm and control the outbreak.**

Methods

- **Institutional and community investigation**
 - Identification and Characterization of patients,
 - Realization of biological tests
 - Observation of the environment
 - Implementation of preventive measure

- **Case-control study : ratio 1/2**
matched by age and address

Methods (2)

➤ Case definition

Any children with fever, vomiting, diarrhea and / or dehydration, at GCH from May 12 to 20, 2016.

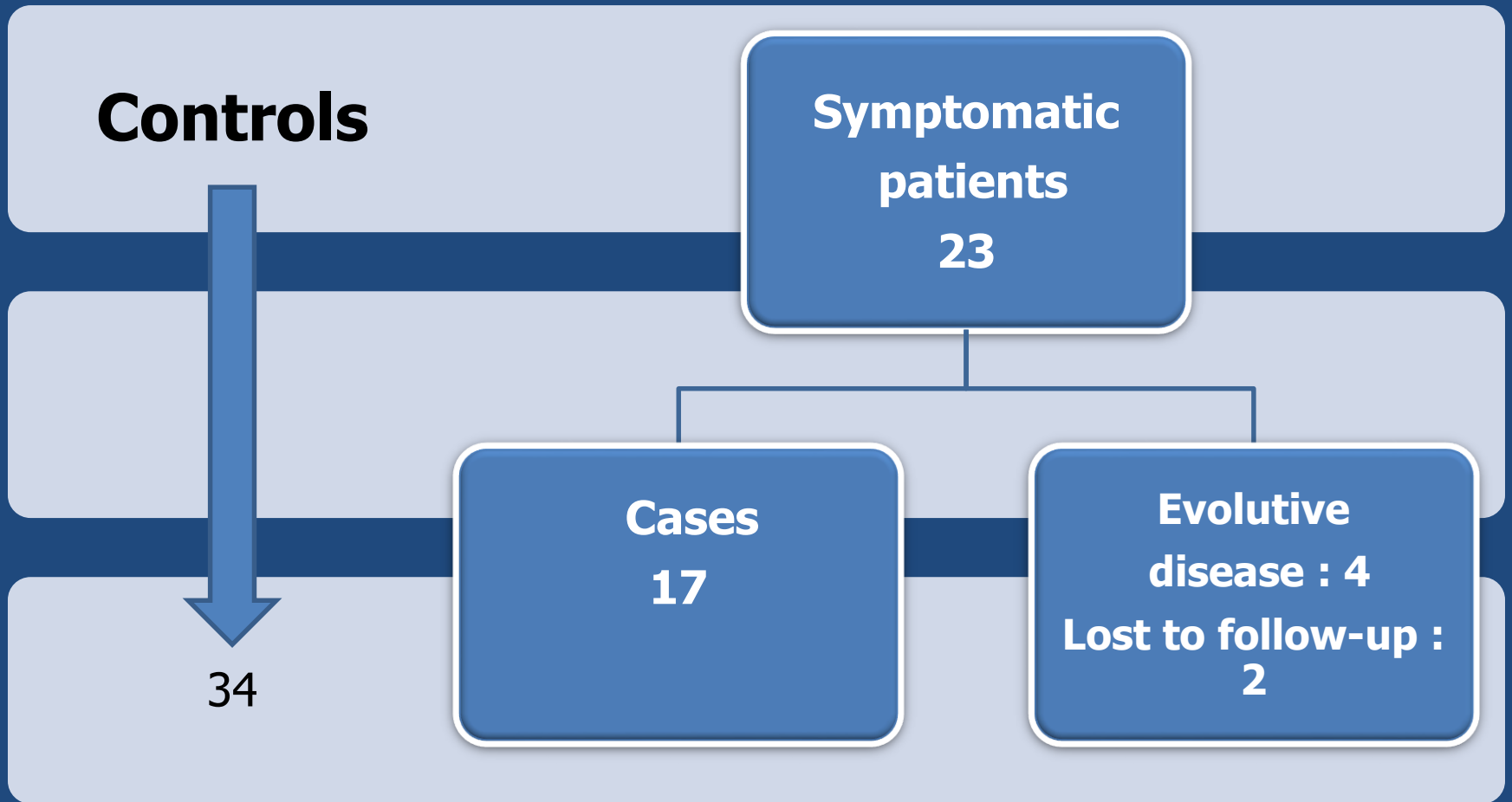
➤ Control definition

Children without AGE symptoms in the same period.

Methods (3)

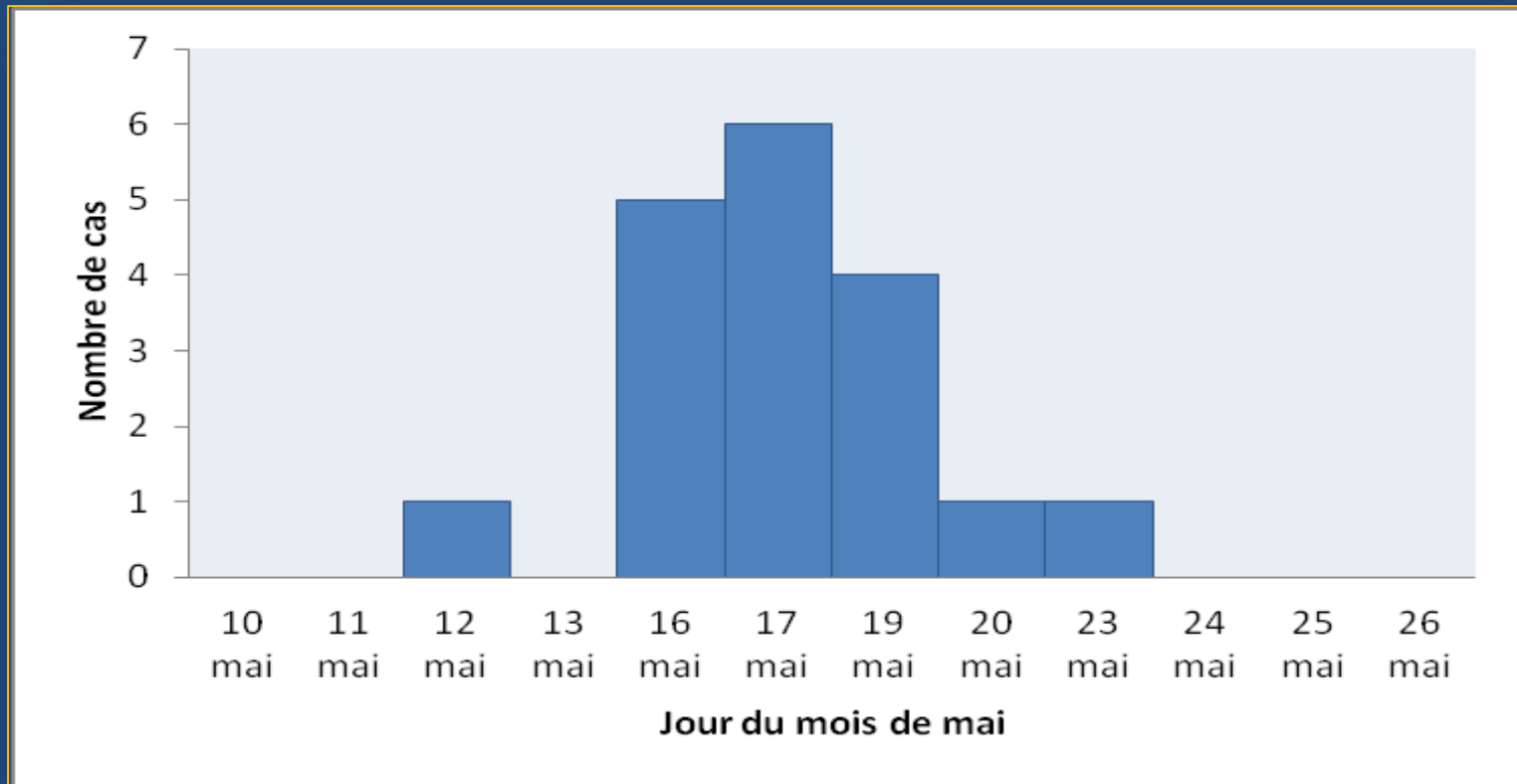
- **Collect of epidemiological, clinical, biological datas**
- **Collect of Risk factors informations : 8 indicators**
 - Consumption of raw vegetable/ street food
 - Contact with a GEA / a respiratory infection case
 - Promiscuity / child enrollment in community
 - Rotavirus vaccination / drinking water.
- **Data analyze : Epi . Info 7.1.5.2**
 - Calcul of proportion, OR (CI 95%), aOR (CI 95%)

Results



Results (2)

Figure 2: Distribution of Febrile Acute Gastro - Enteritis cases, Delmas, May 2016.



Register of morbidity, GCH, Delmas, Haiti, May 2016

Results (3)

Location of cases

- 41 % at Delmas 31

Age

- 88.3 % > 24 months
- [8-72 months]

Clinical characteristics

- 47.06 % Dehydration
- 0 % death

Laboratory : Viral infection
Poor environmental condition

Results (4)

Table 1 : Risk factors Characteristics of Cases, Delmas, May 2016

Variables	Case N(%)	Control N(%)	OR (CI 95%)	aOR (CI 95%)	P value
Drinking water					
Unpurified	7(41.18)	5(14.71)	4.06	9.65	0,04
Purified	10(58.82)	29(85.29)	(1.04-5.72)	(1.14- 82.07)	
Living with					
> 7 person	7(41.18)	4(11.76)	5.25	12.99	0,02
< 7 person	10(58.82)	30(88.24)	(1.25-21.75)	(1.58-106.74)	
Rotavirus Vaccine					
No	16(94.12)	24(70.59)	6.67	50.40	0,05
Yes	1(5.88)	10(29.41)	0.77-57.27	(0.93-2708.63)	

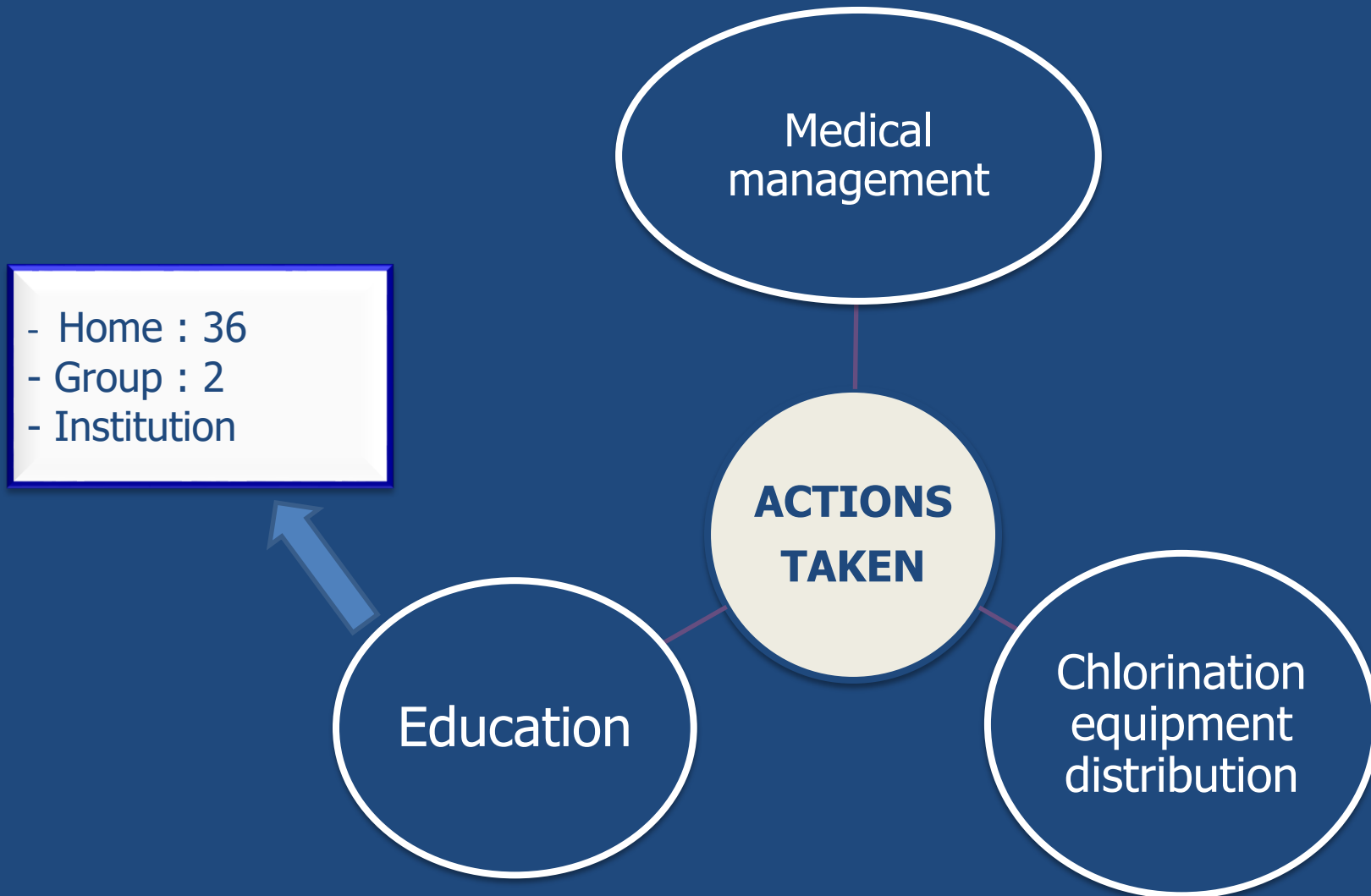
Discussion

- **Age > 2 years**
 - ❖ More exposition to poor hygienic condition
 - ❖ No accessibility to rotavirus vaccine (January 2014).
- **Absence of rotavirus vaccination**
 - ❖ Greater OR
 - ❖ Lack of statistical Power.

Discussion (2)

- **Promiscuity**
 - ❖ Transmission by contaminated surface
 - ❖ Chiapas, Promiscuity : OR = 2.4, IC=1.24-4.70 [1]
- **Untreated water**
 - ❖ Good vehicle of virus
 - ❖ Fecal contamination in rainy season
- **Limitation**
 - ❖ Impossibility to Virus identification

Control Measures and Prevention



Conclusion

- A viral AGE outbreak was confirmed in Delmas community
- Cases were precipitate by poor socio-economic, environmental and educational conditions
- Non Vaccinated children were most affected by this outbreak.

Recommendation

- ◎ Strengthen health education in the community especially about children.
- ◎ Ensure continuous accessibility to purified water
- ◎ Reinforce laboratories capacity
- ◎ Realize a study on a large population to evaluate the rotavirus impact

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Thank you for your attention

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Muitos Obrigado

Aguíje