

**Is there measles virus
circulation in Venezuela?**

We don't know...

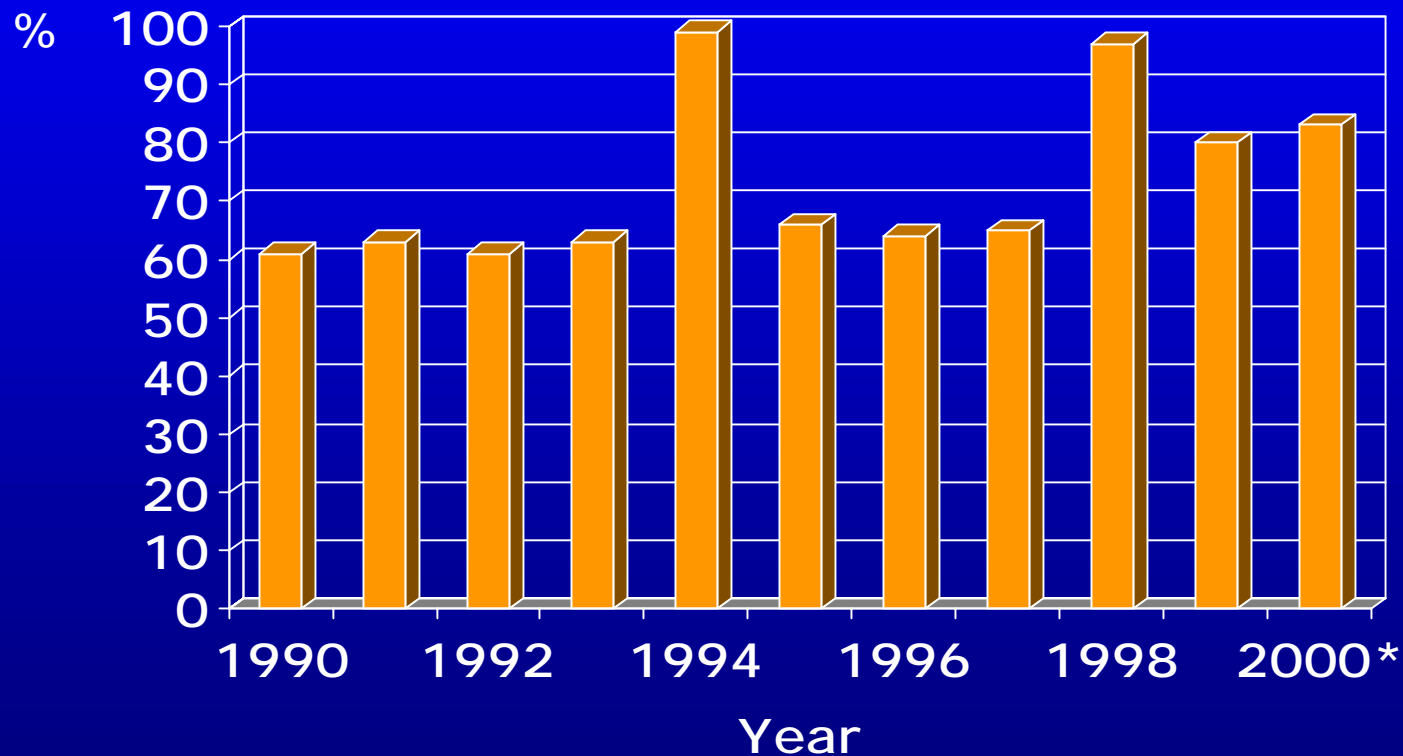
Venezuela - Measles Vaccination

- 1994: “Catch-up” campaign
(9 months to 14 years old): 99%
- “Keep up” vaccination (9 months old)
- 1998: “Follow-up” campaign
(1-4 years old): 97%
- Schedule:
 - 1998 MMR 1 dose 1 year old

Measles Vaccine Coverage Rates Venezuela 1990-2000

"Catch-up"

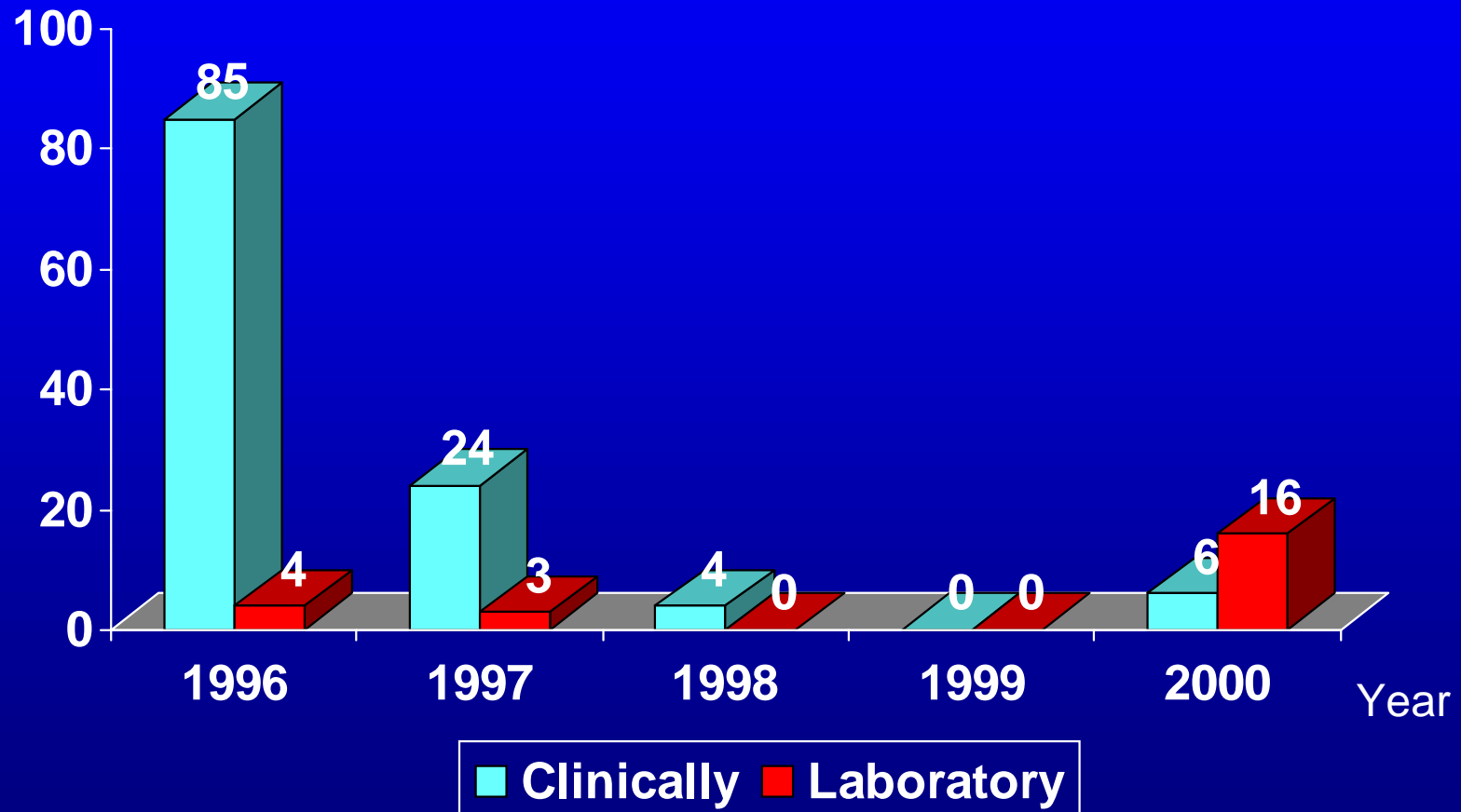
"Follow-up"



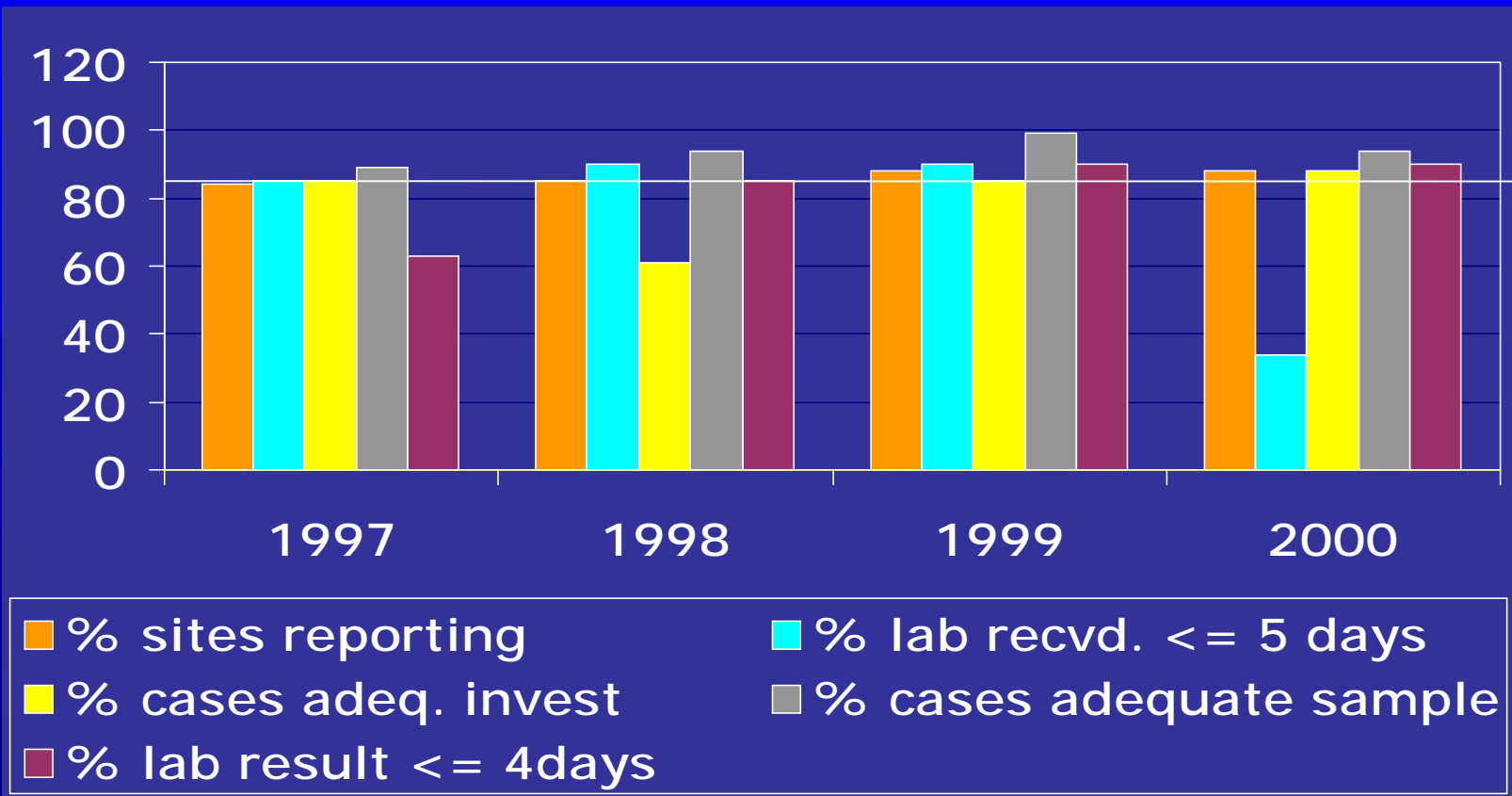
*Estimated 2000

Measles Confirmed Cases Venezuela, 1996-2000

cases

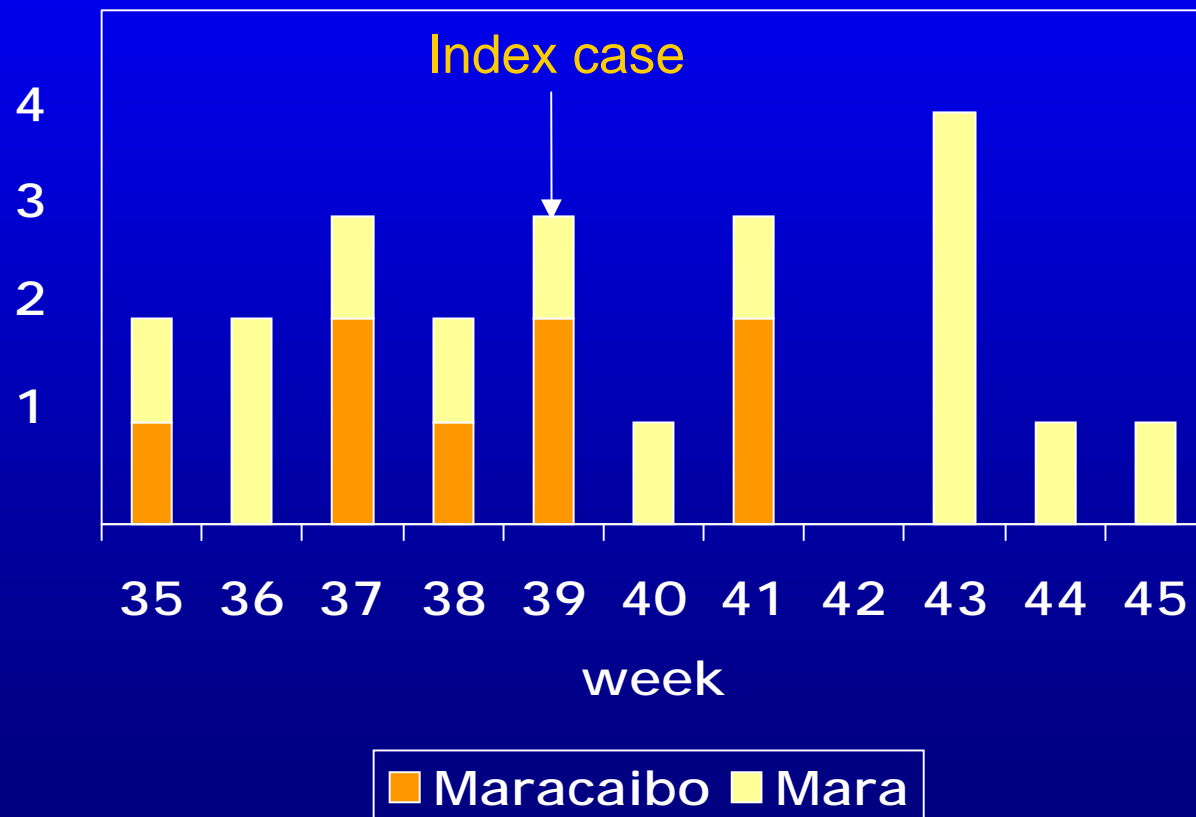


Measles Surveillance Indicators Venezuela, 1997-2000

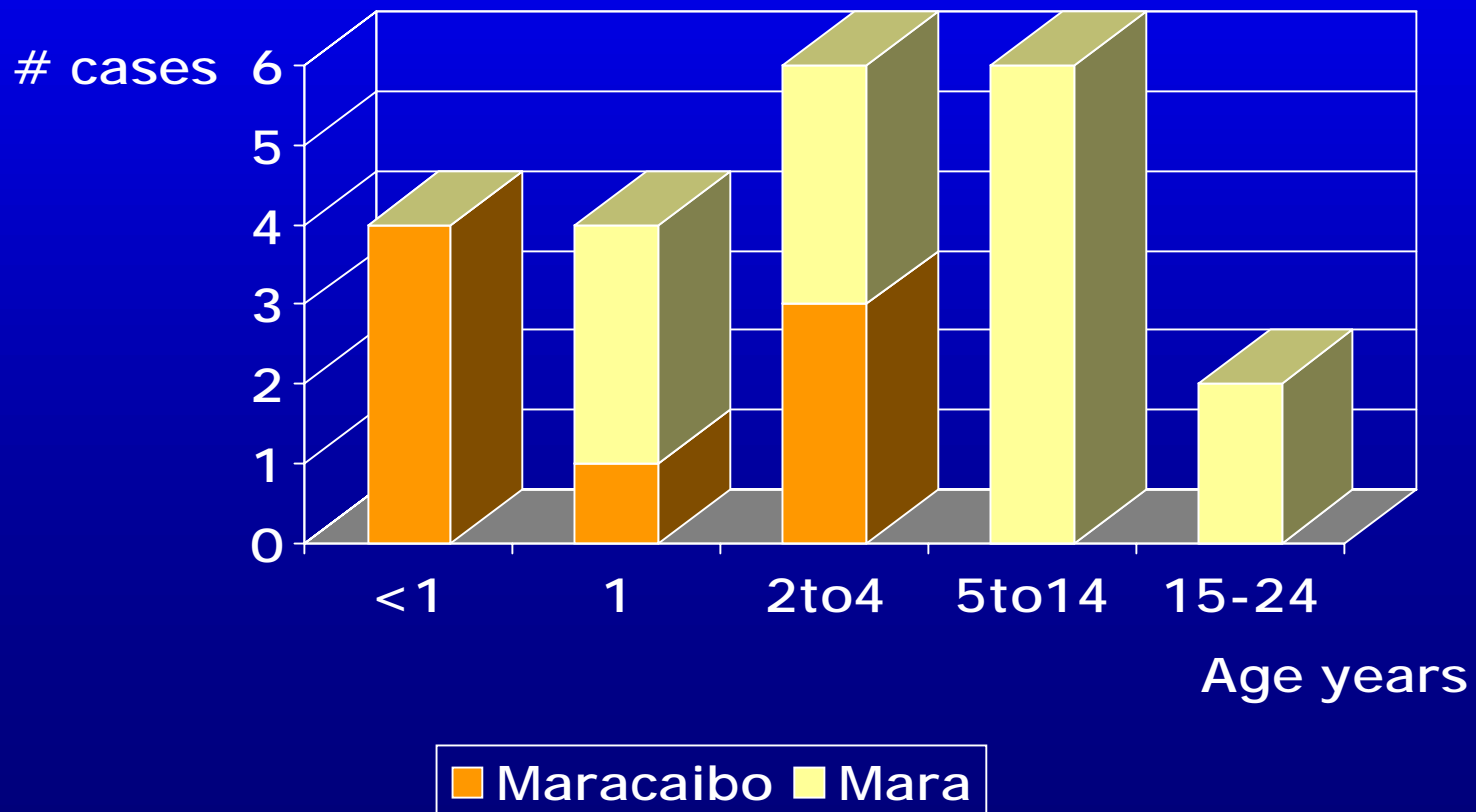


Measles Cases, Mara and Maracaibo Municipalities, Zulia State, Venezuela 2000

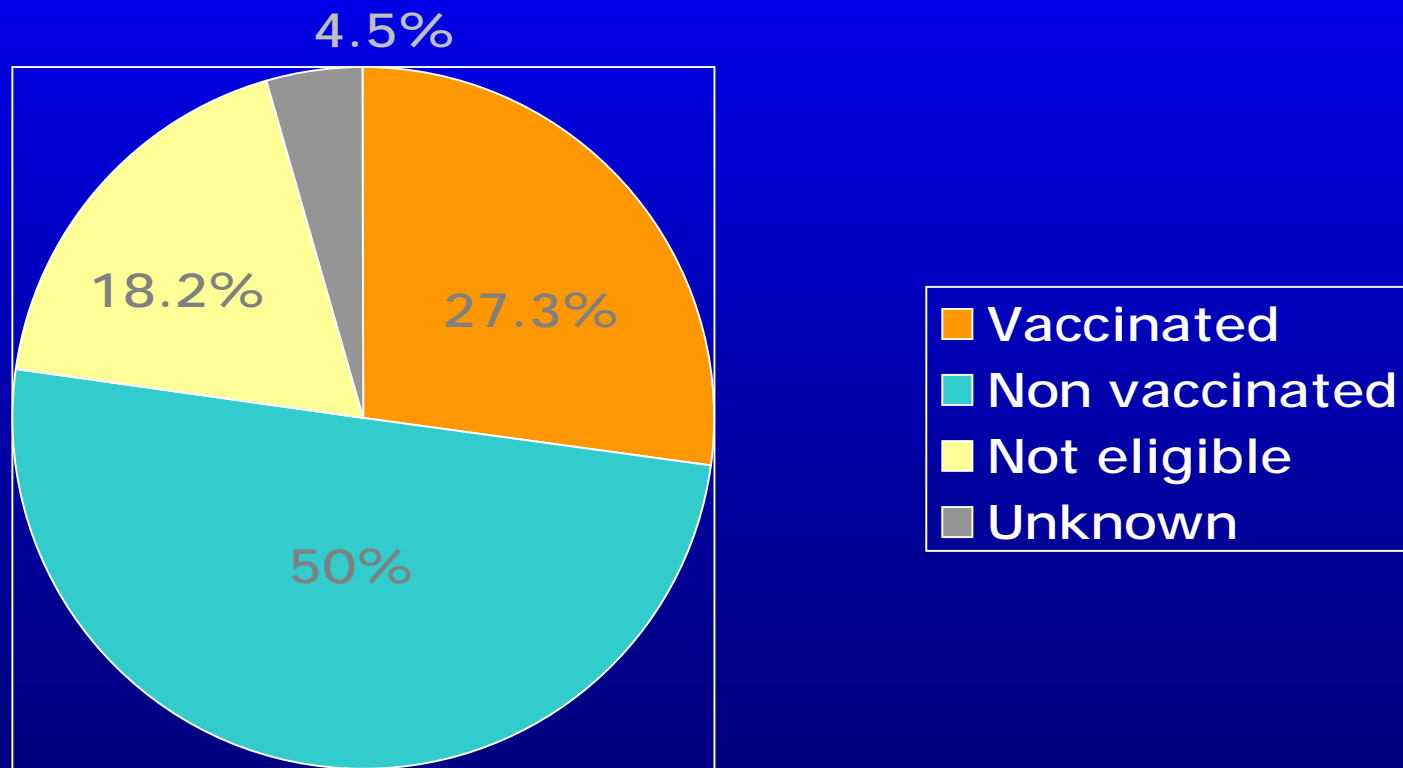
#cases



Age Distribution of Cases Maracaibo and Mara August-November 2000



Vaccination Status of Cases Maracaibo and Mara August-November 2000



Response Plan: Zulia - Venezuela

- Vaccination MMR
 - Maracaibo: 4 parishes
 - Mara: All parishes
 - 1-4 years
- Active search – Surveillance
 - Community: Affected parishes
 - Health institutions: Zulia state

Vaccination Coverage Maracaibo 10/00-1/01

Parish	#Visited Houses	Target Population	#Doses given	Coverage %
Cacique Mara	12,695	7,032*	7,032	100
Manuel Dagnino	9,127	8,128	4,867	59.88**
Raul Leoni	4,020	3,729	3,570	95.84
Venancio Pulgar	2,822	5,622	3,981	70.81**
Total	28,934	23,851	19,450	81.55

* Adjusted population

**still ongoing

Vaccination Coverage Mara 10/00-1/01

Parish	Target population	Coverage %
Luis de Vicente	1,548	60*
Las Parcelas	925	75*
San Rafael	5,426	50*
Tamare	903	55*
Ricuarte	6,016	100
La Sierrita	602	100
Mons. Marcos Sergio Godoy	533	100

*still ongoing

Measles and Rubella Suspected Cases before and after Zulia Outbreak - August 2000

State **Reported cases** **Reported cases**
 weeks 1-35 **weeks 36-52**

Zulia	75	364 
Guarico	21	75
Rest	669	374 

Rash/Fever Surveillance Venezuela

- Rubella surveillance integrated June 2000
- Negative rubella lab results are tested for measles
- 13,783 reported cases of rubella in 2000
- 407 tested
- 116 positive

Conclusions

- Zulia state
 - Last case 11/00 state, no viral circulation afterwards
 - Coverage <95% in some parishes
- Rest of the country
 - Incomplete investigation of rubella cases
 - No significant increase in reported cases after the outbreak
 - Limited circulation: good baseline coverage (“catch-up”= 99% “follow up”= 97) routine 80%

Recommendations

- Intensify MMR vaccination to achieve 95% coverage in all parishes
- Move back “follow-up” campaign to 2001-May
- Insure adequate vaccine supply
- Active search in all the states 3-6/01
- Insure adequate measles/rubella reagents
IgM kits



Riohacha
Cartagena

Mara
Maracaibo

★
Caracas

VENEZUELA

GUYANA

★
Bogota

COLOMBIA

★
Quito
ECUADOR

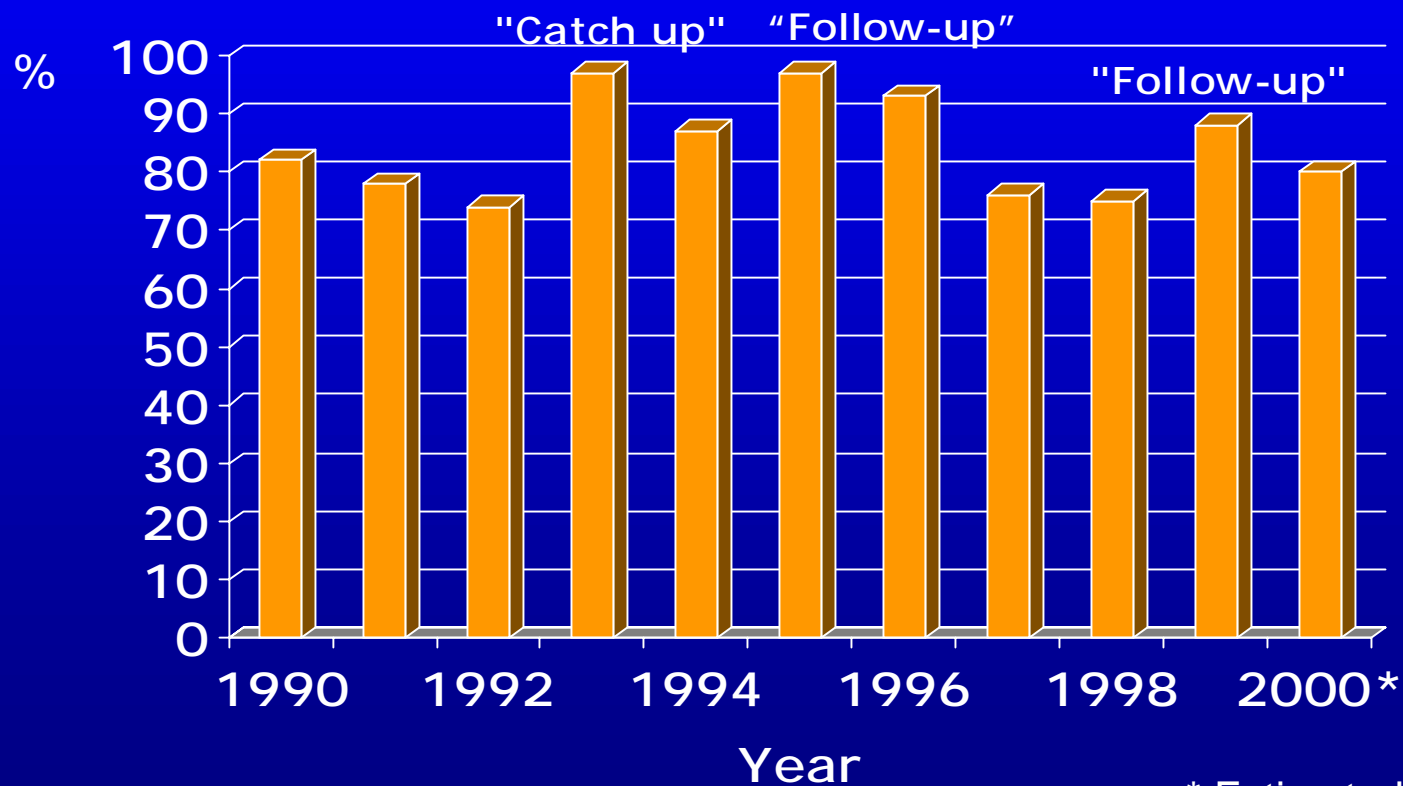
PERU

BRAZIL

Colombia - Measles Vaccination

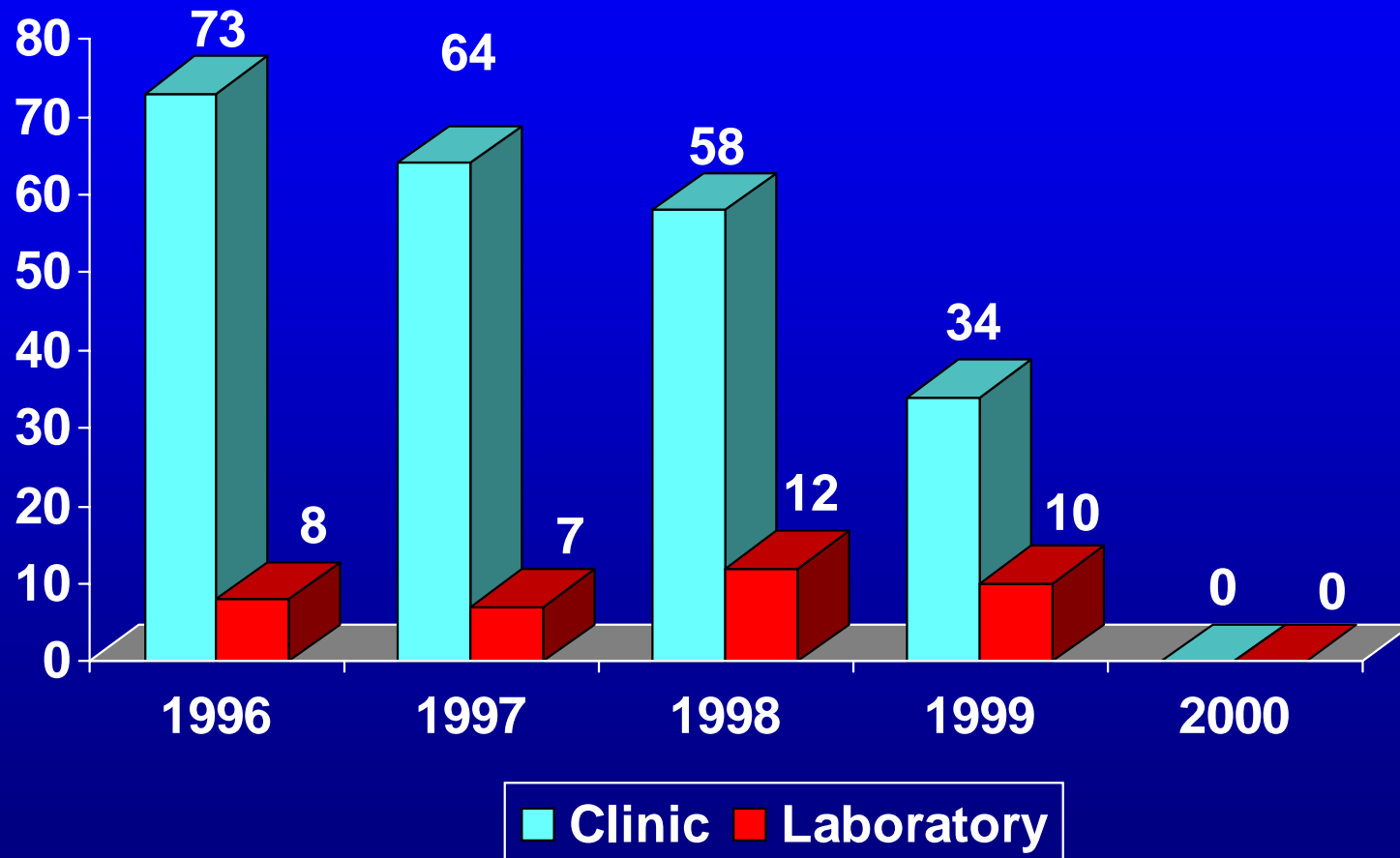
- 1993: “Catch-up” campaign (9 months to 15 years old): 97%
- “Keep up” vaccination (1 year old)
- 1995: First “Follow-up” campaign (1-3 years old): 97%
- 1999: Second “Follow-up” campaign (1-4 years old): 88.6%
- Schedule:
 - 1995 MMR 1 dose 12 months old
 - 1997 MMR 2nd dose 10 years old

Measles Vaccine Coverage Rates Colombia 1990-2000

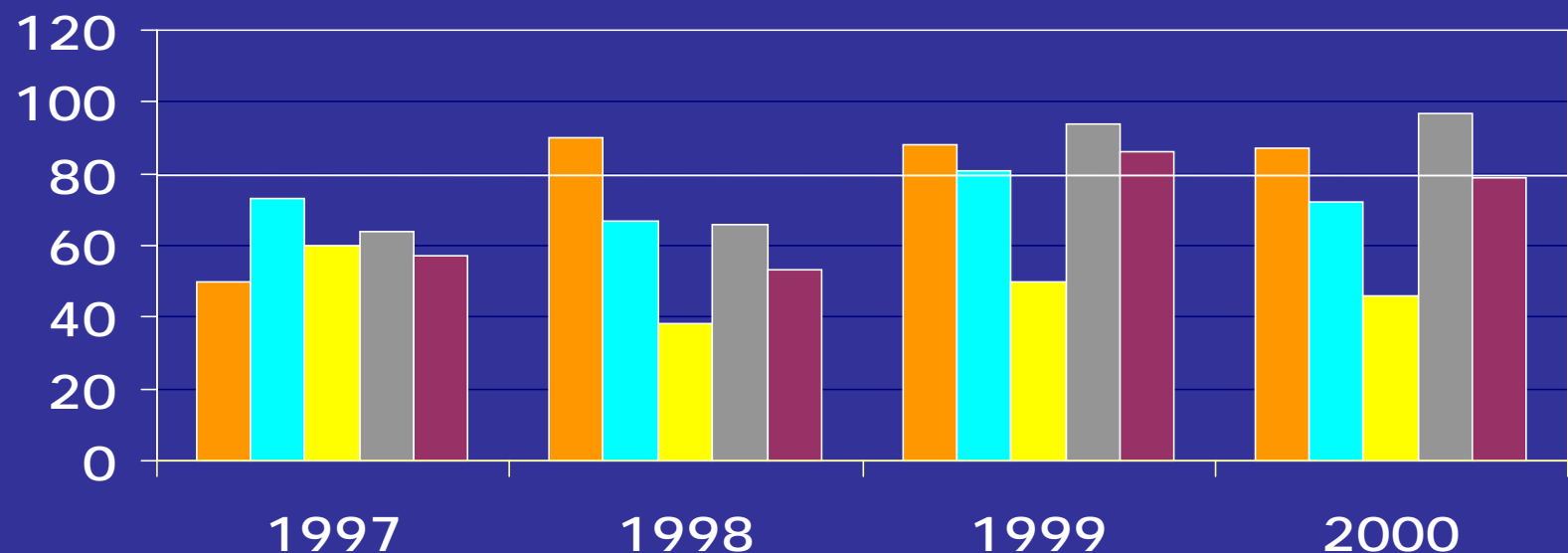


* Estimated 2000

Measles Confirmed Cases Colombia, 1996-2000



Measles Surveillance Indicators Colombia, 1997-2000



■ % sites reporting

■ % lab recvd <= 5 days

■ % cases adeq. invest

■ % cases adequate sample

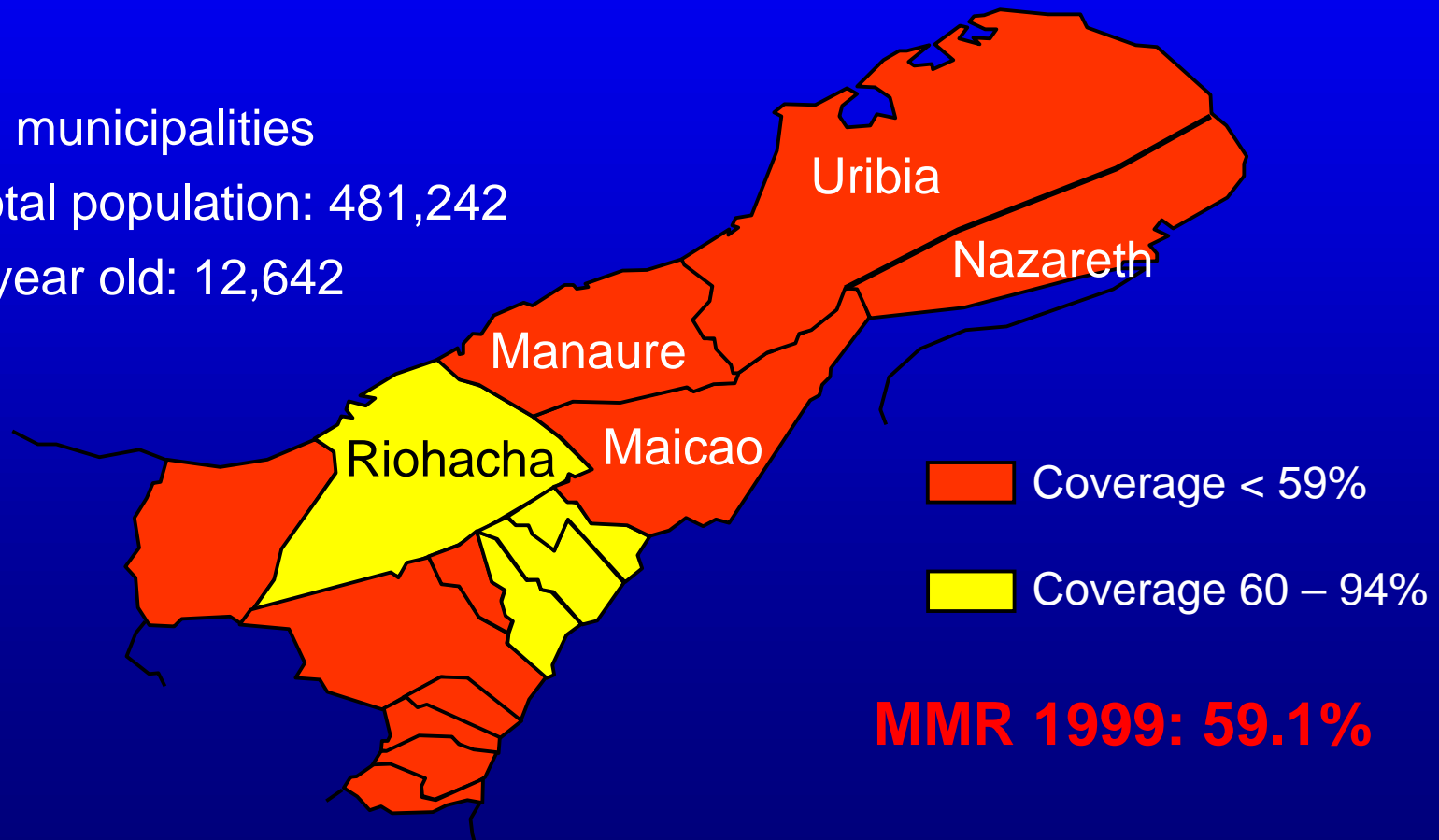
■ % lab result <= 4 days

Vaccination Coverage All Vaccines by Municipalities La Guajira Department 1999

15 municipalities

Total population: 481,242

1 year old: 12,642



La Guajira Response Plan

- Vaccination Measles/MMR
 - 6 months-4 years: indiscriminately
 - 5-30 years: susceptible people
 - >30 years: risk groups
- Coverage monitoring 6 months-4years (after vaccination)
- Active search
 - Community
 - Institutional (Aug. 2000)
- Intensification of surveillance
 - Talks hospitals, radio, TV, newspapers

House-to-House Coverage Monitoring La Guajira 11-12/00

6 months to 4 year-old children
Post-campaign

- Riohacha: 70 – 93 %
- Maicao: 63 – 83 %
- Manaure: 52 – 82 %
- Uribia: 48 – 93%



La Guajira Vaccination Coverage Campaign January 2001 by Age

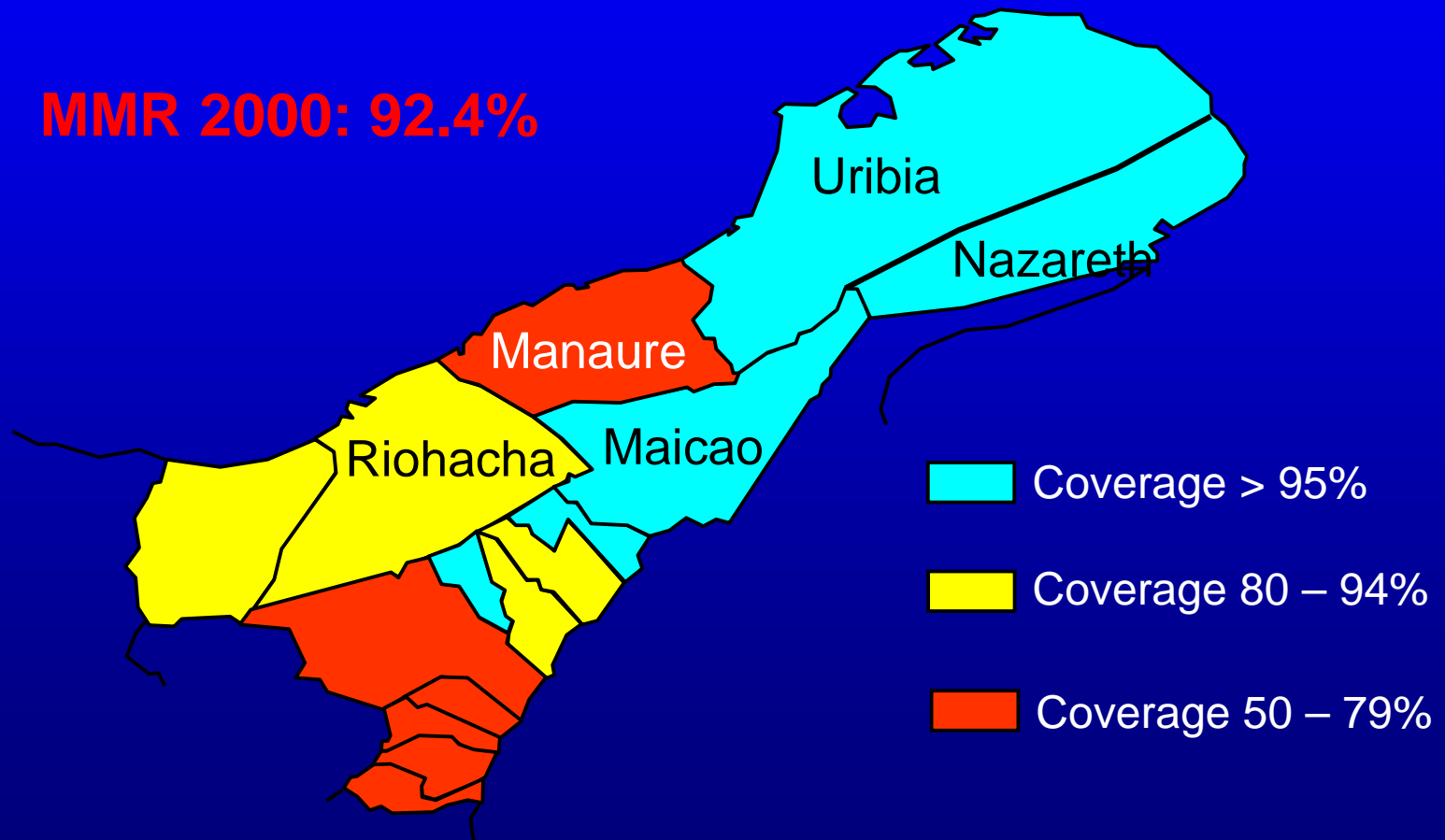
Munici.	6-11 months (%)	1 year MMR (%)	2-4 years (%)	5-9 years (%)	10 years MMR (%)	11-19 years (%)	20-29 years (%)
Riohacha	69.3	54.8	98.8	100*	100*	32.4	49.1
Maicao	64	100*	90.0	100*	82.4	89.6	68.3
Manaure	NR	41.7	100*	44.4	22.2	100*	NR
Uribia	11.2	100*	100*	37.5	27.4	21.2	30.8
Nazareth	NR	100*	23.5	100*	80	74.9	14.9

Coverage 1-4 years old: 89.3%

* Adjusted population

Vaccination Coverage MMR 1 year old La Guajira Department 2000

MMR 2000: 92.4%



Active Search La Guajira 11-12/2000

Munici.	# Houses (# people)	# Schools	# HCF (# patients)	Suspected cases
Riohacha	5,455 (29,304)	26	3 (25,025)	6
Maicao	5,247	11	3 (22,753)	11
Manaure	2,087	-	2 (2,253)	0
Uribia	9	-	1 (2,940)	1
Nazareth	210 (1,446)	-	1 (7,902)	0

Conclusions

- No confirmed measles cases
- Municipalities with < 95% coverage
- Insufficient vaccination coverage after vaccination campaign

Recommendations

- Revaccinate areas with low vaccination coverage to achieve 95%
- Contact Indian community leaders - Vaccination house-to-house
- Insure adequate vaccine supply
- Incorporate monthly institutional active search to the routine surveillance system, including other diseases like AFP

Thank you.

Cartagena city

Caribbean Sea

Las Marias

La Esperanza

La Candelaria

Manga

Nelson Mandela



House-to-House Coverage Monitoring Cartagena 11-12/2000

Neighborhood	# houses visited	# 1-5 yrs vaccinated children	# 1-5 yrs children not vaccinated	Coverage
La Candelaria	69	79	16	84-85%
La Esperanza	174	158	21	87-89%
Nelson Mandela	51	89	14	86.4%
Las Marias	45	24	2	92.3%
Manga	27	35	2	94.6%

Active Search Cartagena 11-12/00

■ **Community:**

- House-to-house: 869 houses = 4,248 people, 22 suspected cases
- Schools: 7 = 1,928 persons, 10 suspected cases
- Day care facilities: 16 = 365 children, 6 suspected cases

■ **Institutional:**

- Hospital 15,665 patients (8 dengue, 1 scarlet fever cases)
- HCC 6,562 patients (3 roseola cases)

Conclusions

- No confirmed measles cases in Cartagena city
- Neighborhoods with $< 95\%$ coverage rates

Laboratory Support Venezuela 2000

- State public health laboratories
- 1 National laboratory of reference: Instituto Nacional de Higiene “Rafael Rangel”, Caracas
- Measles/rubella (Dengue)
- Central level: Positive and 10% negative samples
- State/National level: IgM EIA (Behring)

Laboratory Support Colombia 2000

- 13 Departmental public health laboratories
- 1 National laboratory of reference: Laboratorio de Virologia Instituto Nacional de Salud, Bogota
- Measles/rubella (Dengue)
- Departmental level: IgM EIA (Behring)
- National level: IgM Capture (CDC)

House-to-House Coverage Monitoring Venezuela

- 3 neighborhoods Manuel Dagnino Parish
- Total # houses: 83
- Total # children 1-4 years old: 124
- Vaccinated children with vaccination card: 92
Coverage 74%
- Vaccinated children with+without card: 113
Coverage 91%

La Guajira Costs of Response Plan

US\$

Vaccines/supplies	48,763
Transportation	44,537
Advertising	4,230
Technical assistance	15,640
Sample dispatch	120
Total	113,290