

Measles Outbreak in Otodogbame Community, Eti-Osa LGA, Lagos State, Nigeria, December 2015 - February 2016

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Burden of measles

- Vaccine preventable disease
 - one of leading causes of child mortality and morbidity
- Annual global estimate of 227,121 cases in 2015*
- In Nigeria, 15,989 cases, 185 deaths recorded in 2015**
- Measles vaccination
 - 9 months (1st dose) and
 - supplemental immunization (2nd dose)
 - major impact in death reduction

* WHO 2015

** FMOH 2015

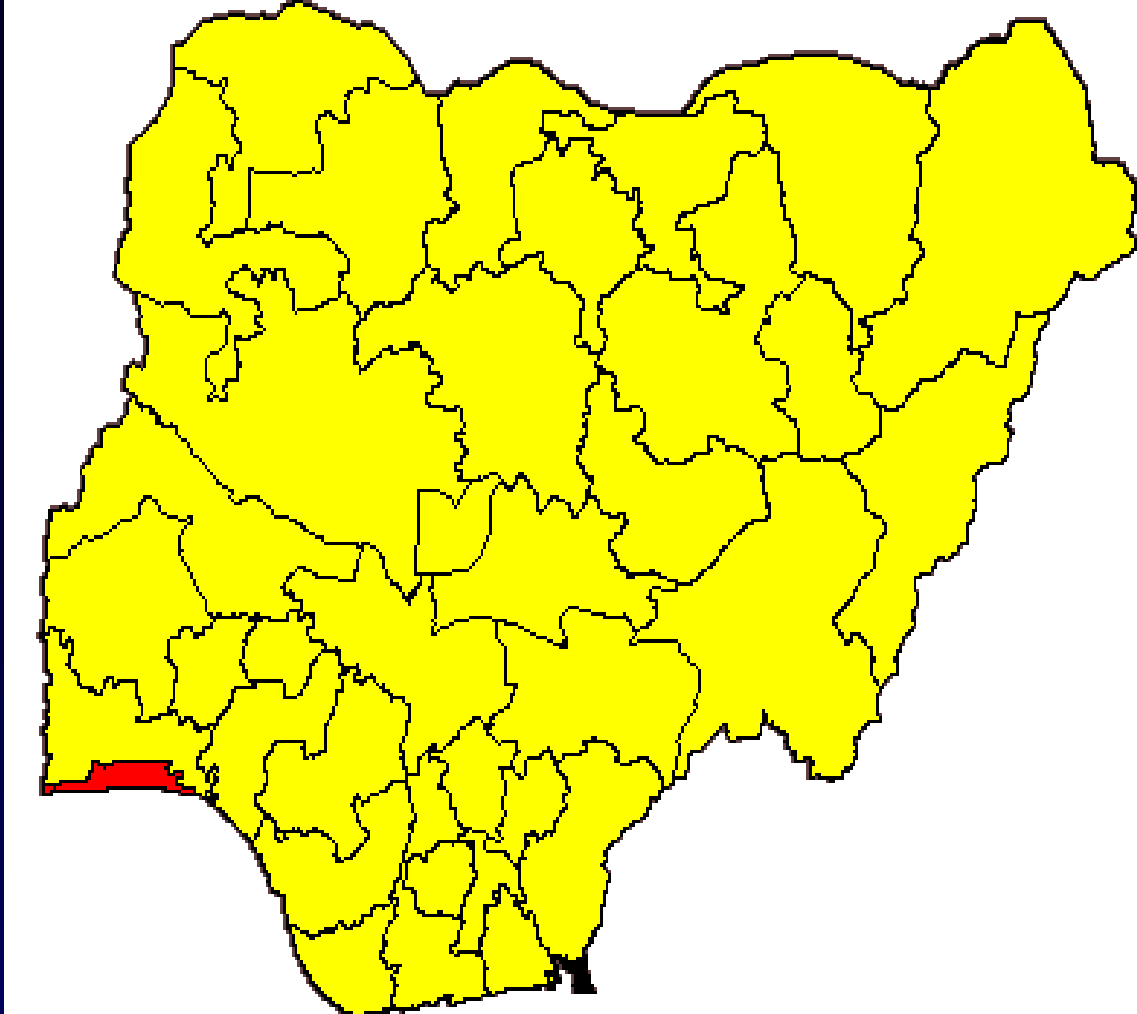
Outbreak notification

- Suspected measles outbreak was reported in Otodogbame community in Lagos state on the 10th February, 2016
- Epidemic response team commenced investigation on the 11th February, 2016

Objectives

- To confirm the existence of an outbreak
- To characterize the outbreak in terms of time, place and person
- To identify factors associated with the outbreak
- To institute control measures

Study setting



Methods

- Descriptive study
 - Active case search
 - Line listing of cases
- Analytic study
 - Unmatched case control study (1:3)
- Laboratory analysis
 - 20 blood samples collected for measles serologic testing for IgM.

Key Informant Interview

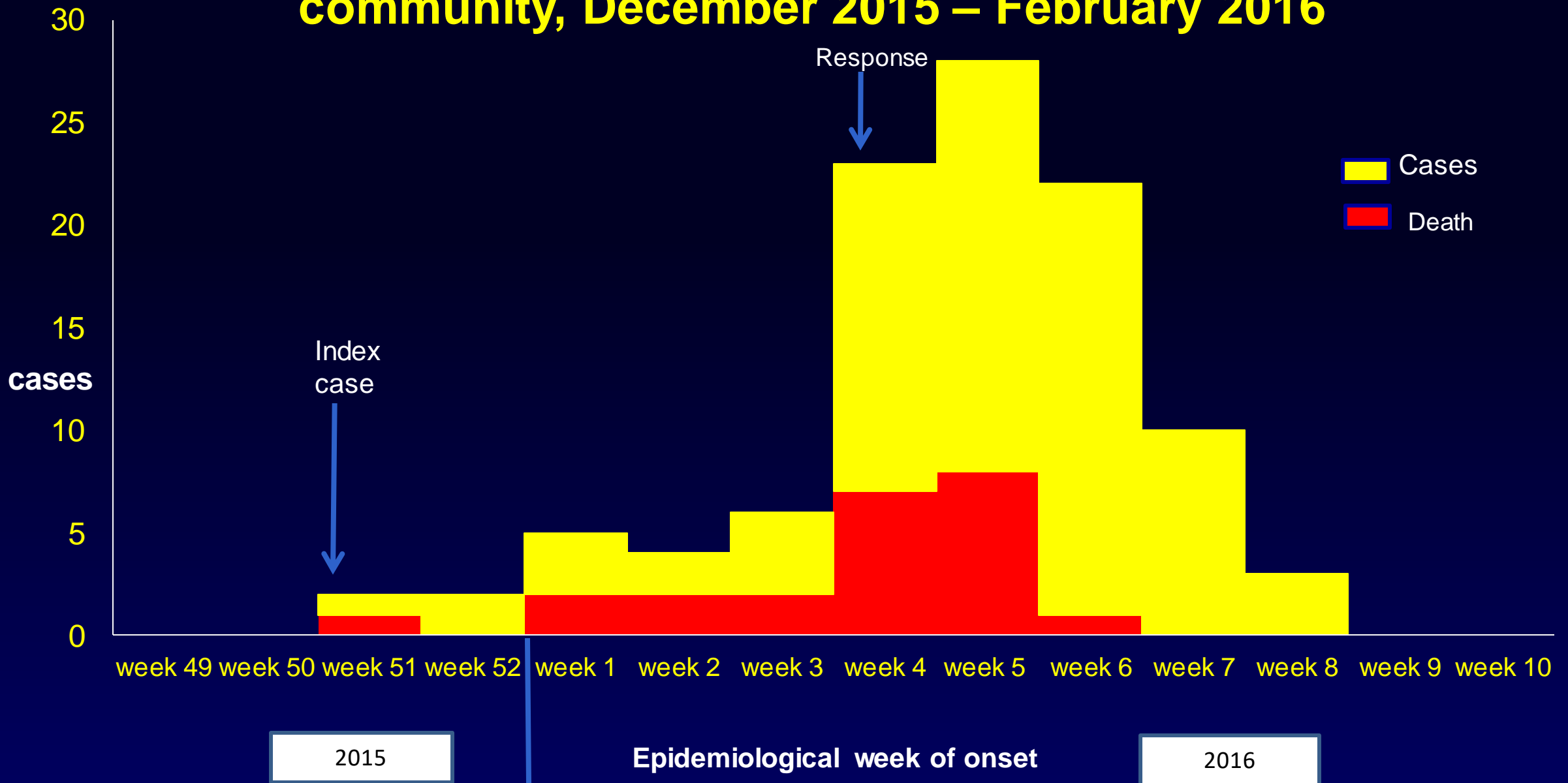
- We interviewed the following:
 - Community leaders
 - Religious leaders
 - Heads of each family
 - Executive chairman of the LGA
 - Medical Officer of Health of the affected community to know their view of the likely cause of the outbreak
- Using Key Informant Interview guide

Results

Magnitude of the outbreak

- 82 cases
- Attack rate – 43/100,000 population
 - Age - specific AR
 - 134/100,000 population for <5yrs
 - 15/100,000 population for 5 yrs and above
- Case fatality rate (CFR) : 30%
- All 8 samples positive for measles IgM

Epidemic curve of measles outbreak in Otodogbame community, December 2015 – February 2016



Socio-demographic variables of respondents in Otodogbame community, December 2015 – January 2016

Characteristics	Case n=82 (%)	Control n=246 (%)	p value
Age (Months)			
0-11	8 (9.8)	42 (17.1)	
12-59	68 (82.9)	159 (64.6)	<0.01
> 59	6 (7.3)	45 (18.3)	
Sex			
Male	48 (58.5)	148 (60.2)	0.06
Female	34 (41.5)	98 (39.8)	

Median age for cases 36 months (range 9 – 108 months)

Median age for controls 42 months (range 10 – 156 months)

Vaccination status of the respondents in Otodogbame community, December 2015 – February 2016

Characteristics	Case n=82 (%)	Control n=246 (%)	p value
Measles vaccination status			
Yes	12 (14.6)	102 (41.5)	<0.01
No	70 (85.4)	144 (58.5)	
Proxy for dropout - DPT3			
Yes	10 (12.20)	44 (17.9)	<0.01
No	72 (87.80)	202 (82.1)	
Health seeking behaviour			
Traditional	75 (91.5)	226 (91.9)	0.07
Orthodox	7 (8.5)	24 (9.1)	

Factors associated with measles outbreak in Otodogbame, December 2015 – February 2016

Variables	OR (95% CI)	p - value
Age in months ≤ 59 (ref: > 59)	2.84 (1.16 - 6.91)	<0.001
Sex Male (ref: Female)	0.93 (0.56 - 1.55)	<0.001
Measles vaccination status Yes (ref: No)	0.24 (0.12 - 0.47)	<0.001

Factors associated with measles outbreak in Otodogbame, December 2015 –January 2016

Risk factors	AOR (95% CI)	P-Value
Unvaccinated for measles	2.3 (1.4 - 3.7)	<0.001
Proxy for drop – out (DPT-3)	2.3 (1.4 - 3.7)	<0.001
Health seeking behavior	1.9 (1.5 - 3.1)	<0.001
Caregivers age ≤ to 30 years	2.6 (1.0 - 6.8)	0.07
Spending > \$2 per vaccination visit	2.3 (1.3 - 4.1)	<0.001
Family income < \$50/month	2.1 (1.3 - 3.2)	<0.001

Public health actions

- Immunization of children in the community
- Case management through instituted health post
- Community dialogue
- Community health education and sensitization
 - measles transmission
 - preventive measures

Conclusion

- Outbreak of measles was confirmed in Otodogbame community
- Case fatality rate was high
- Children less than 2 yrs were mostly affected
- Outbreak was largely due to:
 - low measles vaccination coverage
 - low utilization of routine immunization services
 - financial constraints in the family

Lesson learnt

- Rejection of immunization services
 - community dialogue
 - introduction of pluses
- Hard to reach community
 - use of canoe to conduct house - to - house case search

Recommendations

- Lagos State
 - ensure effective sensitization and delivery of routine immunization to hard - to - reach communities
- Eti - osa local government area
 - medical team should improve routine health education of the communities
 - engage community leaders in immunization activities as agent of change

Acknowledgements

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- Lagos State Ministry of Health
- Medical Officer of Health, Eti-Osa LGA

Otodogbame community Eti-Osa LGA



NFELTP TEAM DURING COMMUNITY CASE SEARCH

