AFRICA CHILD SURVIVAL INITIATIVE (ACSI)

COMBATTING CHILDHOOD COMMUNICABLE DISEASES (CCCD)

NIGERIA EPIDEMIOLOGIST PRESENTATION

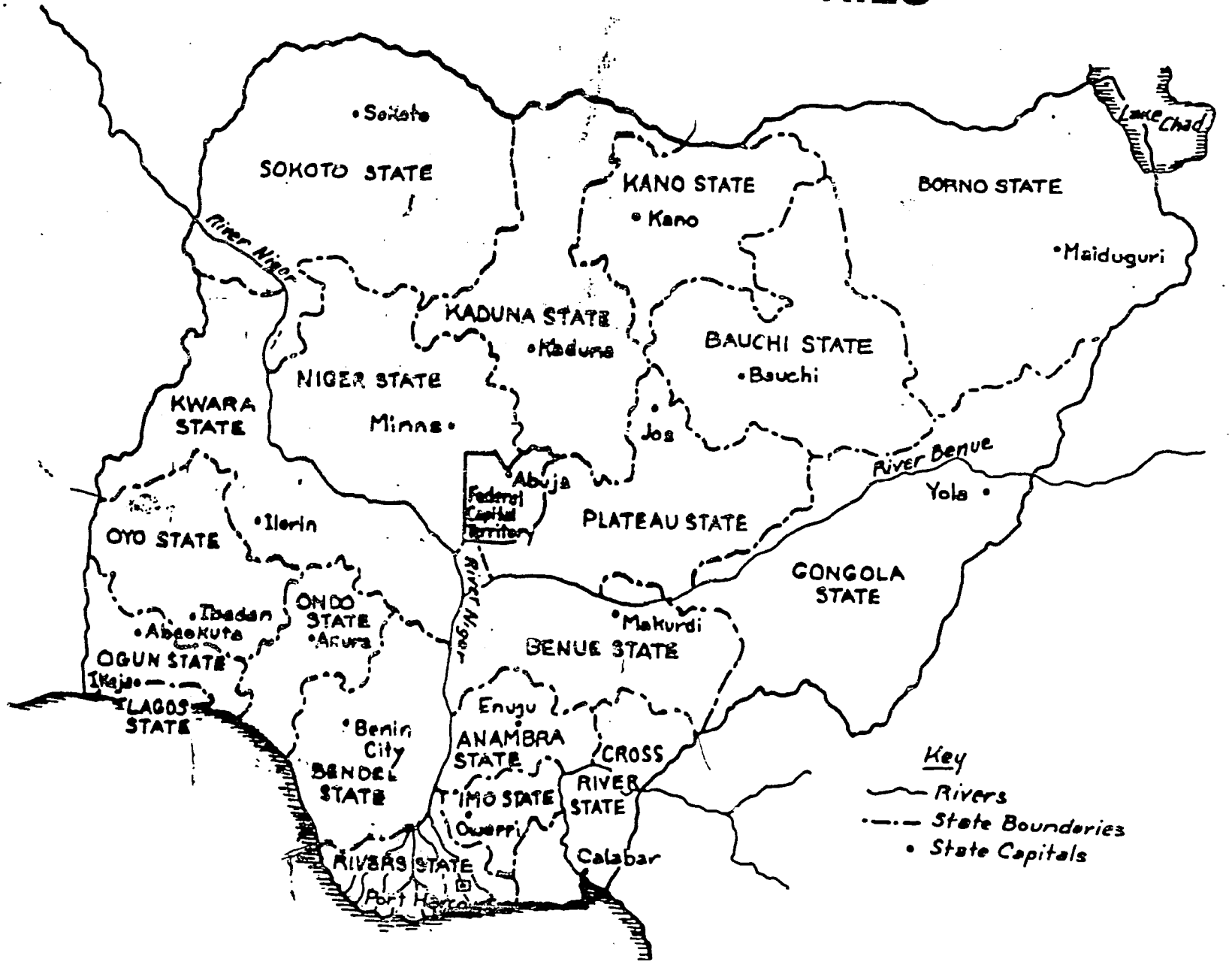
FEBRUARY - MARCH 1987

CDC STAFF MEETING

UNICOI, GEORGIA, U.S.A.

MARCH 30 - APRIL 3, 1987

MAP OF NIGERIA WITH 20 STATE BOUNDRIES



NIGERIA BACKGROUND INFORMATION

1986 Estimated Population:	99,162,500
2000 Projected Population:	165 million
2015 Projected Population:	280 million
Crude Birth Rate:	46 Births/1000 Population
Natural Population Increase:	3.3% Per Year
Average Number of Children/Woman:	6.5 Children
Crude Death Rate:	16 Deaths/1000 Population
Infant Mortality Rate:	85 Deaths/1000 Live Births
Life Expectancy At Birth:	50 Years
% Rural Population:	75%
Rural - Urban Migration:	Significant

Source: National Policy on Population and Development, August 1985

NIGERIA NATIONAL TARGETS
NATIONAL POLICY ON POPULATION
AND DEVELOPMENT, 1985

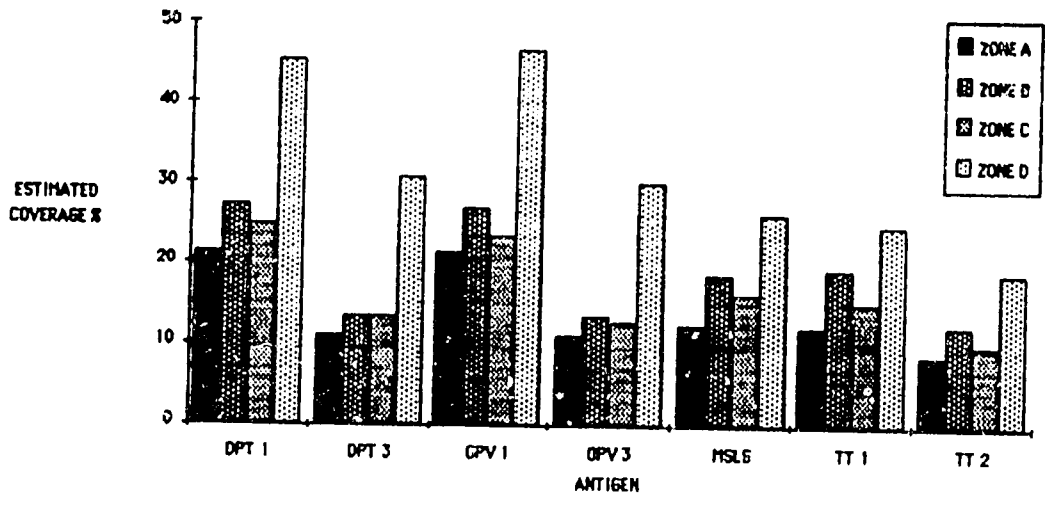
- Reduce proportion of women who marry before age 18 by 50% by 1995 and by 80% by 2000
- Reduce pregnancies to mothers) 35 years old by 50% by 1995 and by 80% by 2000
- Extend FP coverage to 50% of child-bearing age women by 50% by 1995 and by 80% by 2000
- Reduce rate of population growth to 2.5% by 1995 and to 2.0% by 2000
- Reduce infant mortality to 50 per 1000 LBs by 1990 and to 20 per 1000 LBs by 2000
- Reduce crude death rate to 15 per 1000 population by 1990 and by 12 per 1000 population by 2000
- Make family life education available to all adolescents by 1995
- Provide social services to 50% of rural communities by 1990 and 75% by 2000

ESTIMATED COVERAGE, BY ZONE, EPI/NIGERIA, 1986

ZONE	DPT 1	DPT 3	OPV 1	OPV 3	MSLS	TT 1	TT 2
A	21.5%	10.9%	21.2%	11.0%	12.4%	12.1%	8.4%
B	27.2%	13.5%	27.0%	13.4%	18.5%	19.4%	12.2%
C	24.7%	13.3%	23.5%	12.6%	16.3%	15.0%	10.1%
D	45.1%	30.6%	46.6%	30.0%	26.3%	24.9%	18.8%
NAT'L	30.0%	17.0%	29.6%	16.7%	18.3%	17.9%	12.4%

SOURCE: DIVISION OF EPIDEMIOLOGY, FMOH

ESTIMATED COVERAGE, BY ANTIGEN, BY ZONE,
NIGERIA, 1986



SUMMARY DATA,BY ZONE,EPI/NIGERIA,1986

Z	STATE	POP 0-11	POP PREG	DPT 1	DPT 3	OPV 1	OPV 3	MSLS	TT 1	TT 2
A	ANAMBRA	253,384	316,730	62,327	38,303	58,976	38,190	35,998	44,501	33,282
	BENUE	170,984	213,730	39,435	18,269	39,079	17,666	21,744	35,996	29,055
	CROSS RIV	245,040	306,300	31,075	13,321	32,679	15,011	18,710	23,993	13,501
	IMO	258,744	323,430	60,220	28,838	59,665	28,741	34,317	31,892	21,053
	RIVERS	121,172	151,465	32,576	15,633	32,085	15,776	19,323	22,736	13,389
Total for A:		1,049,324	1,311,655	225,633	114,364	222,484	115,384	130,092	159,118	110,280
B	BAUCHI	171,288	214,110	69,401	35,524	66,869	36,768	49,985	57,616	41,661
	BORNO	211,180	263,975	44,828	23,351	44,041	23,387	25,012	46,583	27,685
	GONGOLA	183,544	229,430	45,973	18,975	44,884	15,187	32,301	45,895	24,171
	KANO	406,840	508,550	53,808	26,102	57,924	26,101	26,365	54,816	32,799
	PLATEAU	142,780	178,475	89,718	46,750	87,544	48,042	72,279	65,660	43,998
Total for B:		1,115,632	1,394,540	303,728	150,702	301,262	149,485	205,942	270,570	170,314
C	ABUJA	7,568	9,460	1,728	1,169	1,814	1,345	1,013	3,344	2,357
	KADUNA	288,712	360,890	72,786	43,875	73,414	43,999	48,937	64,328	43,481
	KWARA	120,788	150,985	31,780	24,007	32,141	23,549	18,558	26,201	19,040
	NIGER	84,156	105,195	50,473	28,759	43,261	22,431	37,872	38,881	27,904
	SOKOTO	319,760	399,700	45,888	11,701	42,587	12,233	27,379	20,943	10,457
Total for C:		820,984	1,026,230	202,655	109,511	193,217	103,557	133,759	153,697	103,239
D	BENDEL	173,376	216,720	65,847	34,942	65,760	35,348	41,507	44,970	30,699
	LAGOS	138,640	173,300	180,203	136,314	201,734	131,625	102,632	107,405	93,250
	OGUN	109,264	136,580	52,507	28,241	45,696	28,339	21,193	39,233	26,670
	ONDO	192,308	240,385	54,524	42,269	54,850	42,295	39,570	42,959	28,332
	OYO	366,972	458,715	88,860	56,545	89,344	57,351	52,783	70,530	51,777
Total for D:		980,560	1,225,700	441,941	300,311	457,384	294,958	257,685	305,097	230,728
	Total:	3,966,500	4,958,125	1,173,957	674,888	1,174,347	663,384	727,478	888,482	614,561

MALARIA COMPONENT

ACTIVITY	TIMING
Situational Analysis NMVCD University of Ibadan Ahmadu Bello University Sokoto State Kaduna State	February 1987
Planning Visits University of Maiduguri University of Calabar Akampka Comprehensive Health Center University of Ibadan Igbo Ora Rural Health Center NMVCD National Malaria Technical Committee	March 1987
National Malaria Control Committee	April 1987
Planning Visits University of Maiduguri University of Calabar Ahmadu Bello University University of Ibadan	April - May 1987
Preparations for In Vivo/In Vitro Training Course	May - June 1987
Malaria Therapy Efficacy Surveillance Training Course	July 6 - August 6, 1987
Assist with Research Protocol Design	July 1987 - Continuing
Review Initial Research Proposals	October 1987
Initiate National Surveillance Network	September - October 1987
National Malaria Technical Committee and National Control Committee	November 23-27, 1987
Maintain National Malaria Efficacy Surveillance Network	1988 - 1989

HEALTH INFORMATION SYSTEMS
NIGERIA

INTEGRATION OF NATIONAL PHC REPORTING

February 1987 Workshop
March 1987 Review of Revised Forms
April - June 1987 Field Test
Follow-Up: REACH Consultant

IMPACT DATA COLLECTION

Capital LGA EPI/CDD Survey: September 1986
Westinghouse Survey: Ogun, December 1986 - March 1987
Proposed National Surveys: Late 1987 - Early 1988
Proposed FHI Baseline Surveys: 1988 - 1989

DIVISION OF EPIDEMIOLOGY

Assessment of Present Systems
Plans for Sentinel Surveillance
Support for EPI Monitor
Analysis of 1986 EPI/CDD Survey Data
Standardization of Coverage Surveys: Brenner Consultancy
Computerization Plans: Brenner Consultancy
Special Studies: Neonatal Tetanus, Measles, Malaria

ZONAL ACTIVITIES

Assessments of State HIS Needs
Support of Field Test of Revised Systems
Assist with Epidemiologic Activities and Outbreak Investigations
Pursue Potential for Upgrading State Epidemiological Capabilities
Assist Development of Sentinel Surveillance Activities
Planning, Training, Implementation of Automated HIS Systems

REPORTED MORBIDITY AND MORTALITY,
SELECTED DISEASES,
SOKOTO, NIGER AND KADUNA STATES

	SOKOTO		NIGER		KADUNA	
Est. 1986 Pop (M)	4.5		2.1		4.1	
Last Yr Data Compiled	1983		1986		1985	
DISEASE/CONDITION	CASES	DEATHS	CASES	DEATHS	CASES	DEATHS
Malaria	47,780	71	30,760	41	140,906	117
Dysentery	21,022	12	2,936	0	10,151	67
Pneumonia	9,351	105	2,661	31	5,852	112
Measles	10,609	58	2,667	117	17,417	342
Pertussis	6,825	11	510	0	8,360	15
Tuberculosis	1,299	18	156	0	404	40
Diphtheria	1	0	24	0	462	5
Poliomyelitis	18	0	3	0	89	3
CSM	48	12	15	4	128	17
Yaws	1	0	17	0	23	0

REPORTED INCIDENCE RATES/100,000
POPULATION, SELECTED DISEASES,
SOKOTO, NIGER AND KADUNA STATES

DISEASE/CONDITION	SOKOTO (1983)	NIGER (1986)	KADUNA (1985)
Malaria	1062	1465	3437
Dysentery	467	140	443
Pneumonia	208	127	143
Measles	236	59	425
Pertussis	152	24	204
Tuberculosis	29	7	10
Diphtheria	-	1	11
Poliomyelitis	0.4	0.1	2
CSM	1.1	0.7	3
Yaws	-	0.8	0.6

OPERATIONAL RESEARCH PLANS
NIGERIA

Proposal to FMOH	March 1987
Solicit Nominations to Research Review Committee	April 1987
Print OR Guidelines	May 1987
Appoint Research Review Committee Members	July 1987
Conduct First Research Review Committee Meeting	July 1987
Distribute OR Guidelines Assist with Protocol Development	June - September 1987
Conduct Second Research Review Committee Meeting	October 1987
Fund Initial OR Studies	November 1987
Achieve CDC IRB Status for Research Review Committee	December 1987
Conduct Third Research Review Committee Meeting	January 1988

STUDENT THESES,
DEPARTMENT OF COMMUNITY MEDICINE,
UNIVERSITY OF MAIDUGURI
1985

E P I

Role of Environment, Socio-Economic and Cultural Factors Related to the Incidence of Measles, Maiduguri
Eye Complications of Measles, Maiduguri
Measles and Child Mortality, Maiduguri General Hospital
Study of Causes of Blindness, Maiduguri
Neonatal Tetanus, Maiduguri General Hospital
Incidence of Pulmonary Tuberculosis, Maiduguri General Hospital

C D D

Solid Waste Disposal, Maiduguri
Water Supply, Bama
Nutritional Practices and Associated Disorders, 0-2 Year Olds, Maiduguri
Protein Energy Malnutrition on the Pediatrics Ward, UMTH, January 1984-March 1985
Health Hazards in the Market, Maiduguri

M A L A R I A

Epidemiology and Control of Malaria, Maiduguri
Epidemiology and Control of Malaria, Borno State

OTHER RELEVANT STUDIES

Pediatric In-Patients, Maiduguri General Hospital, 1983
Review of Low Birth Weight, UMTH, July 1983-June 1984
Review of the Incidence of Meningitis, 1979-1983
Family Planning Attitudes, Bama

Others

Road Accidents, Maiduguri Town
Incidence of Cataract, Maiduguri
Incidence of Trachoma, Dalori
Incidence of Trachoma, Maiduguri
Prevalence of Hypertension in the Army
Schistosomiasis Among In-Patients, UMTH
Osteomyelitis in Five Hospitals, 1984
Incidence and Prevalence of Leprosy
Assisted Deliveries, Maiduguri
Assisted Deliveries, Kanuri
Obstructed Labor, Maiduguri General Hospital

NEONATAL TETANUS,

MAIDUGURI GENERAL HOSPITAL

1984

Male: 19 cases
Female: 20 cases

21% with past history of NNT

AGE AT ONSET	%
2 - 6 days	17.9
7 - 13 days	79.5
14 - 28 days	2.6

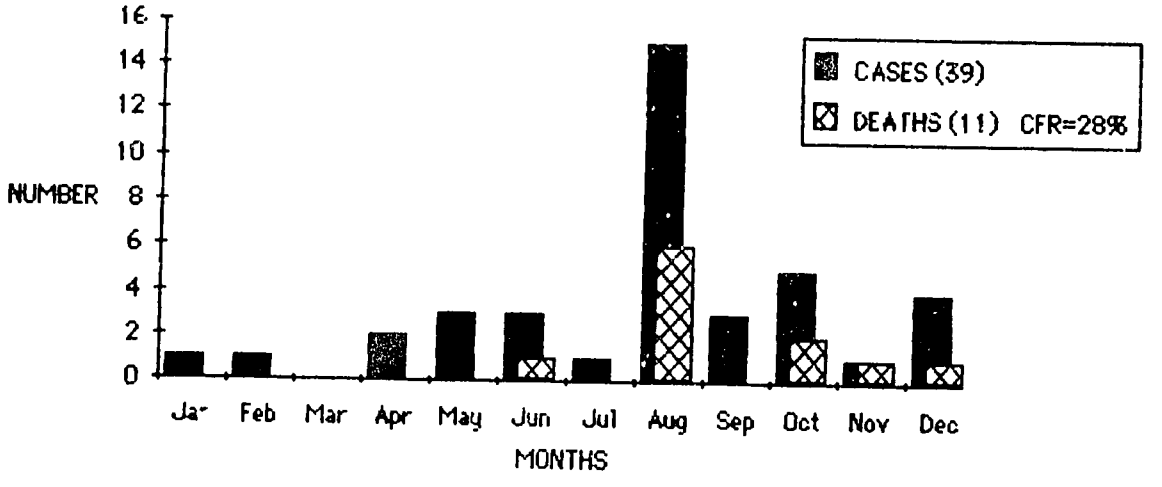
DELIVERY INSTRUMENT	%
Kitchen Knife	23
New Razor/Blade	67

22% with no antenatal care
78% with) one antenatal visit

98.7% responded that age of expected marriage is 12-15 years of age

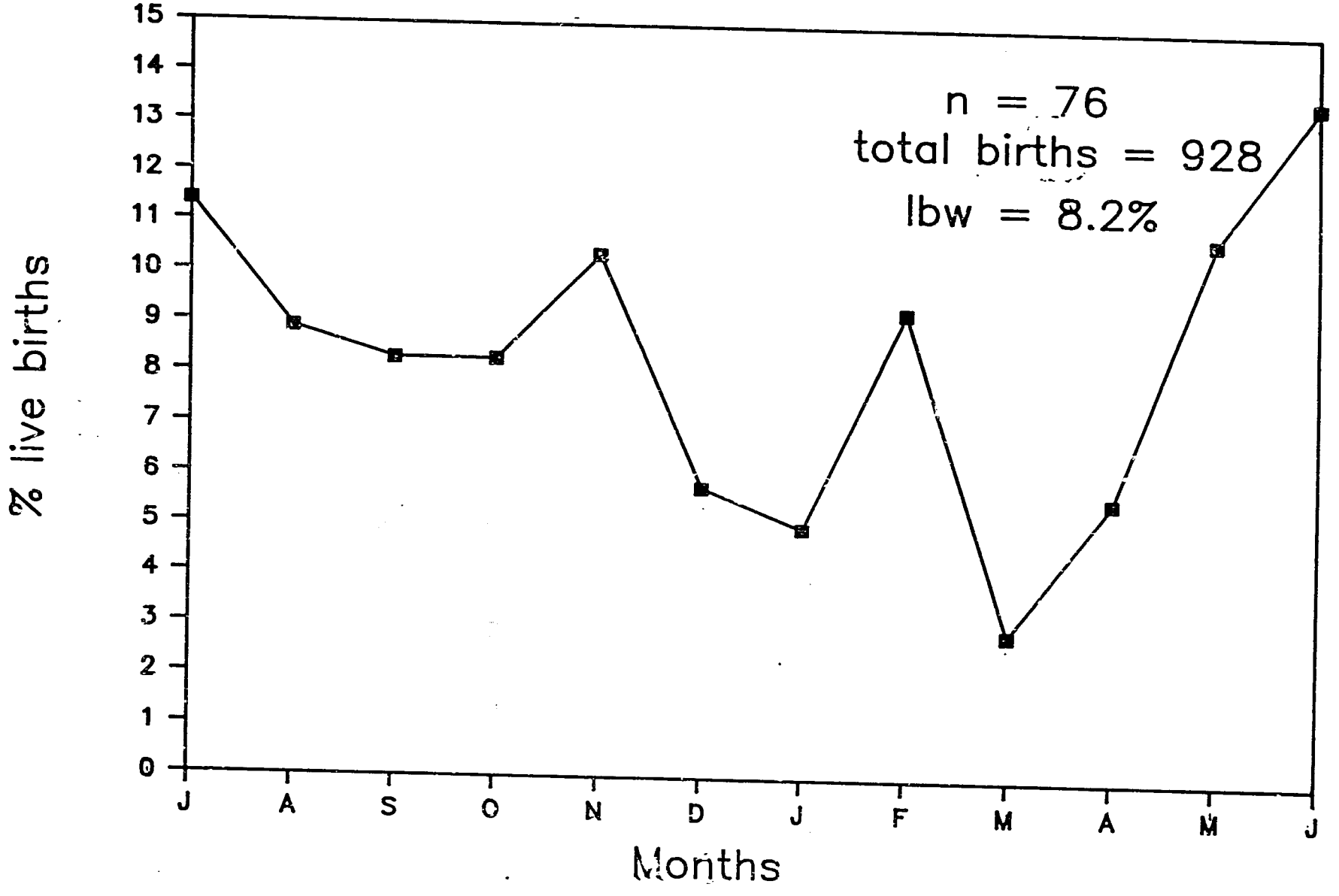
First child expected to be delivered at husband's home

NEONATAL TETANUS, MAIDUGURI GENERAL HOSPITAL, 1984



Review of Low Birth Weight, UMTH

July 1983 – June 1984



REVIEW OF LOW BIRTH WEIGHT,
UMTH, JULY 1983 - JUNE 1984

MATERNAL AGE (YRS)	#	% OF TOTAL
13-15	7	9.2
16-18	9	11.8
19-21	27	35.5
22-24	12	15.8
25-27	7	9.2
28-30	4	5.3
31-33	3	4.0
34-36	6	7.9
37-39	1	1.3
TOTAL	76	8.2

REVIEW OF LOW BIRTH WEIGHT,
UMTH, JULY 1983 - JUNE 1984

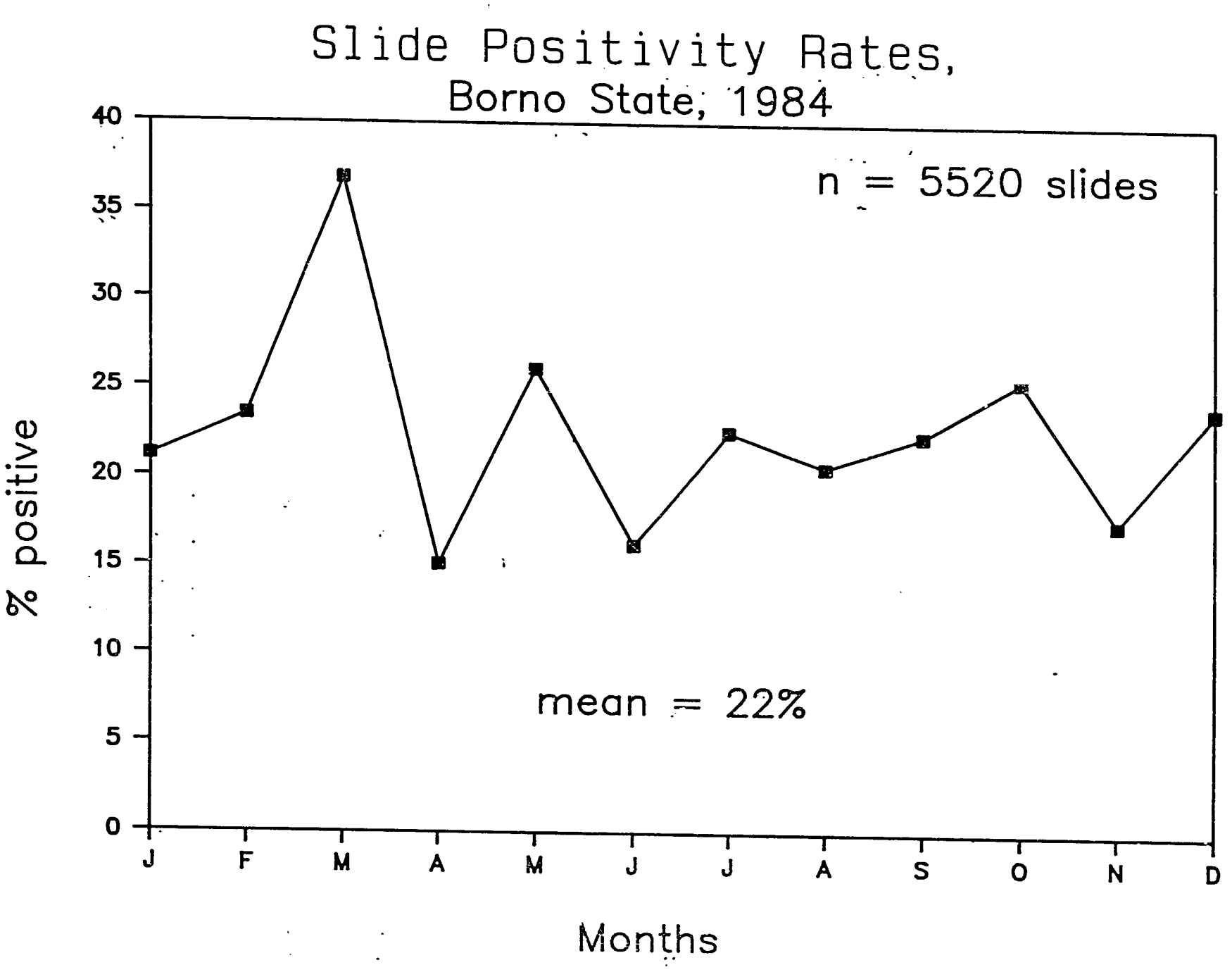
BIRTH WEIGHT (KGS)	#	%
0.8 - 1.0	2	2.6
1.1 - 1.3	2	2.6
1.4 - 1.6	6	7.9
1.7 - 1.9	5	6.6
2.0 - 2.2	16	21.1
2.3 - 2.49	45	59.2
TOTAL	76	100.0

Mean = 2.19 KG
Male: 38%
Female: 62%

REVIEW OF LOW BIRTH WEIGHT,

UMTH, JULY 1983 - JUNE 1984

PARITY	#	%
0	26	34.2
1	13	17.1
2	12	15.8
3	7	9.2
4	7	9.2
5	4	5.3
6	5	6.6
8	1	1.3
9	1	1.3
TOTAL	76	100.0


Slide Positivity Rates,
Borno State, 1984
n = 5520 slides
mean = 22%
% positive
Months
0
5
10
15
20
25
30
35
40
J
F
M
A
M
J
J
A
S
O
N
D

REPORTED CASES AND DEATHS,
MALARIA, MEASLES AND PERTUSSIS, BORNO STATE
1979 - 1983

YEAR	MALARIA		MEASLES		PERTUSSIS	
	C	D	C	D	C	D
1979	76,476	126	9,724	153	1,449	0
1980	71,041	111	27,636	196	1,059	12
1981	72,598	1	4,599	4	495	0
1982	51,294	56	3,835	76	791	3
1983	42,774	6	3,411	17	1,286	6
Mean	62,837	60	9,841	89	1,016	4

1984 Population = 5.87M

PEDIATRIC ADMISSIONS, MAIDUGURI GENERAL HOSPITAL
1984

PRIMARY DIAGNOSIS	# ADMISSIONS	(%)	#DEATHS	(%)	CFR (%)
Bronchopneumonia	622	(19.3)	79	(16.5)	12.7
Measles	600	(18.7)	109	(22.7)	18.2
Gastroenteritis	433	(13.5)	80	(16.7)	18.5
Meningitis	80	(2.5)	16	(33.3)	20.0
Tuberculosis	41	(1.3)	4	(0.8)	9.8
Pertussis	13	(0.4)	1	(0.2)	7.7
Tetanus	6	(0.2)	0	(-)	-
Poliomyelitis	5	(0.2)	0	(-)	-
Diphtheria	2	(0.1)	0	(-)	-
Chickenpox	2	(0.1)	0	(-)	-
Other	1413	(43.9)	191	(39.8)	13.5
TOTAL	3217		480		14.9

MEASLES AT MAIDUGURI GENERAL HOSPITAL
1984

MONTH	ADMISSIONS #	ADMISSIONS % OF TOTAL	DEATHS #	DEATHS % OF TOTAL	CFR (%) MSLS	CFR (%) OVERALL
Jan	43	18.8	6	20.0	14.0	13.1
Feb	111	28.8	17	44.7	15.3	9.8
Mar	171	38.3	30	46.2	17.5	14.6
Apr	143	36.0	23	33.3	16.1	17.4
May	95	24.7	23	30.7	24.2	19.3
June	24	9.2	7	14.6	29.2	18.5
July	4	2.1	1	2.4	25.0	21.2
Aug	4	2.1	1	3.8	25.0	13.5
Sept	2	1.2	1	4.3	50.0	13.3
Oct	1	0.5	-	-	-	10.9
Nov	1	0.6	-	-	-	13.6
Dec	1	0.5	-	-	-	10.8
TOTAL	600	18.7	109	22.7	18.2	14.9

MEASLES AT MAIDUGURI GENERAL HOSPITAL,
1984

AGE GROUP	# ADMISSIONS	(%)	#DEATHS	(%)	CFR (%)
0-11 M	94	(15.7)	16	(14.7)	17.0
1-2 Y	182	(30.3)	37	(33.9)	20.3
2-3 Y	94	(15.7)	18	(16.5)	19.1
3-4 Y	42	(7.0)	11	(10.1)	26.2
4-5 Y	8	(1.3)	1	(0.9)	12.5
6-8 Y	12	(2.0)	5	(4.6)	41.7
9-14 Y	1	(0.2)	0	(0.0)	-
UNK	167	(27.8)	21	(19.3)	12.6
TOTAL	600		109		18.2

SUSTAINABILITY

Identify and Develop Appropriate Counterparts:

- State MOHs x 5
- Zonal
- Federal

Collaborate with Universities, Schools of Health Technology and Other Institutions

Carefully Plan and Implement Appropriate Epidemiology Training Program

Field Test and Implement Revised HIS Including Maintenance and Local Use of Data

Coordinate Development of National Research Review Mechanism

Assist with Health Financing Studies

PRIORITIES FOR 1987

Define Position and Priorities

Establish Kaduna CCCD Office

Initiate National Malaria Therapy Efficacy Surveillance Network

Coordinate Development of National Research Review Committee

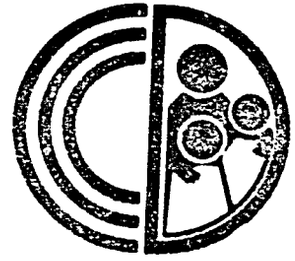
Assist with Planning of Epidemiology Training Program

Support Relevant Consultant Activities

- Operational Research
- Epidemiologic Investigations
- Health Information Systems
- Health Financing Studies

Develop Protocol for Special Study

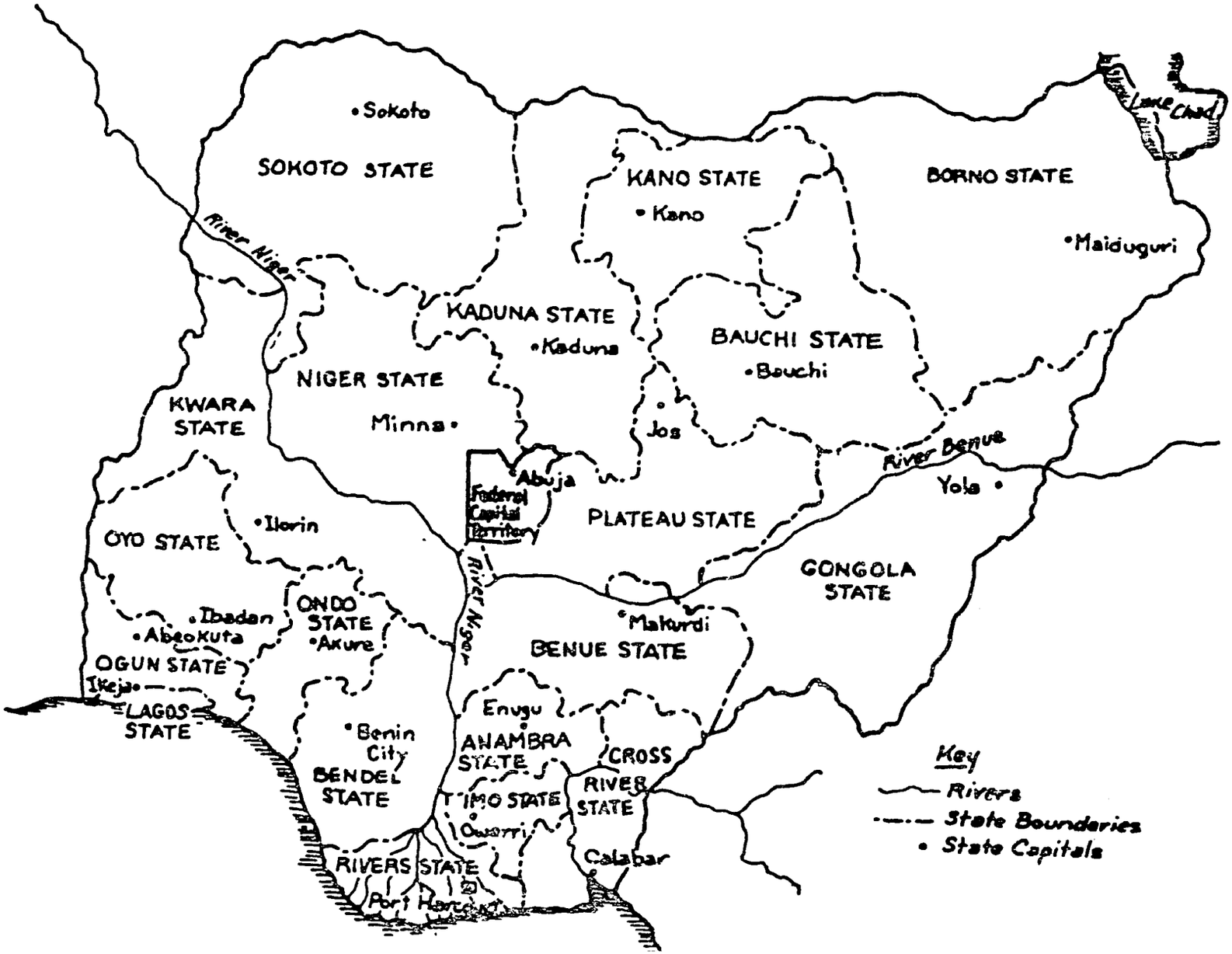
CCCD NIGERIA



UNICOI MEETING

MARCH/APRIL 1987

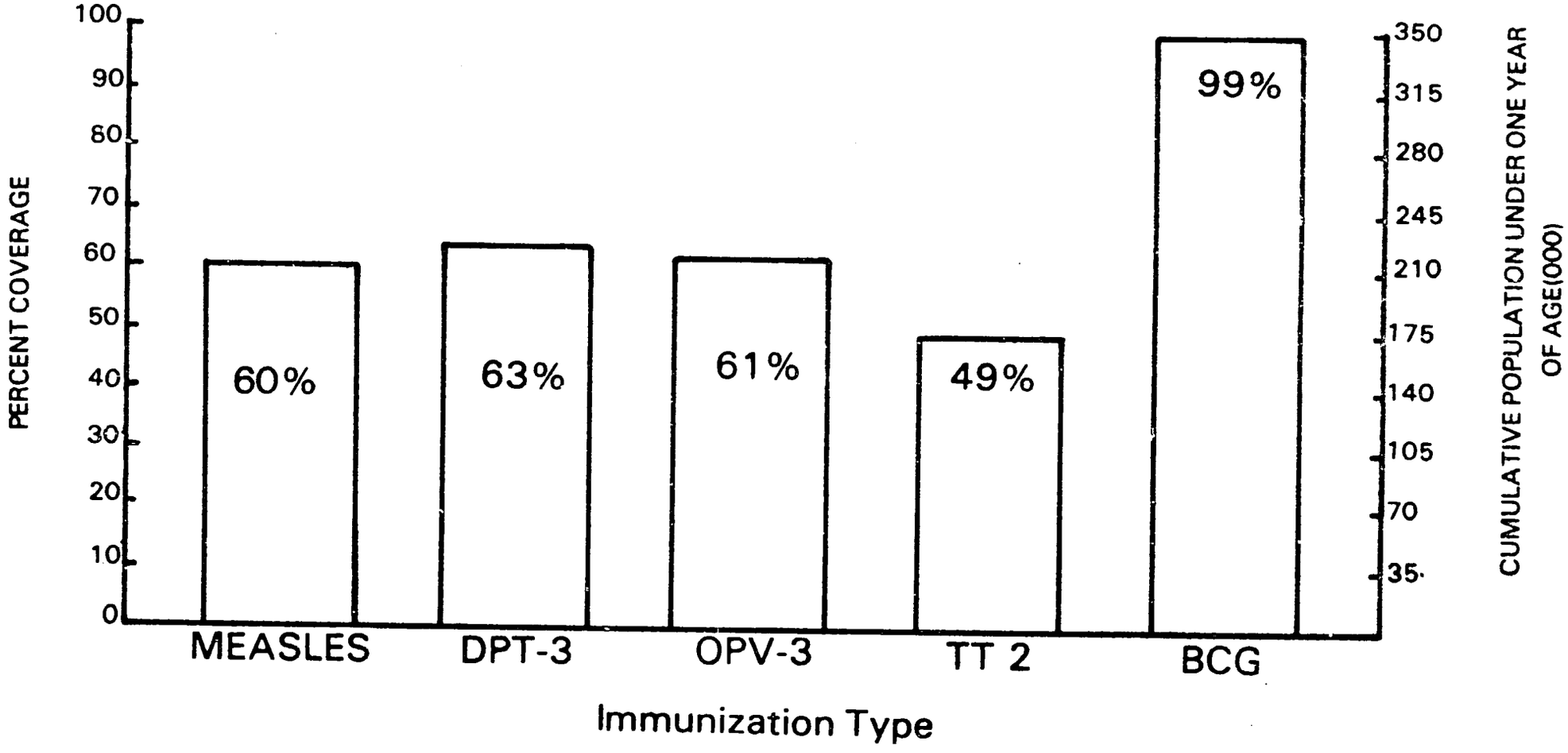
MAP OF NIGERIA WITH 20 STATE BOUNDRIES



MEASLES
NIGERIA, 1980—1985

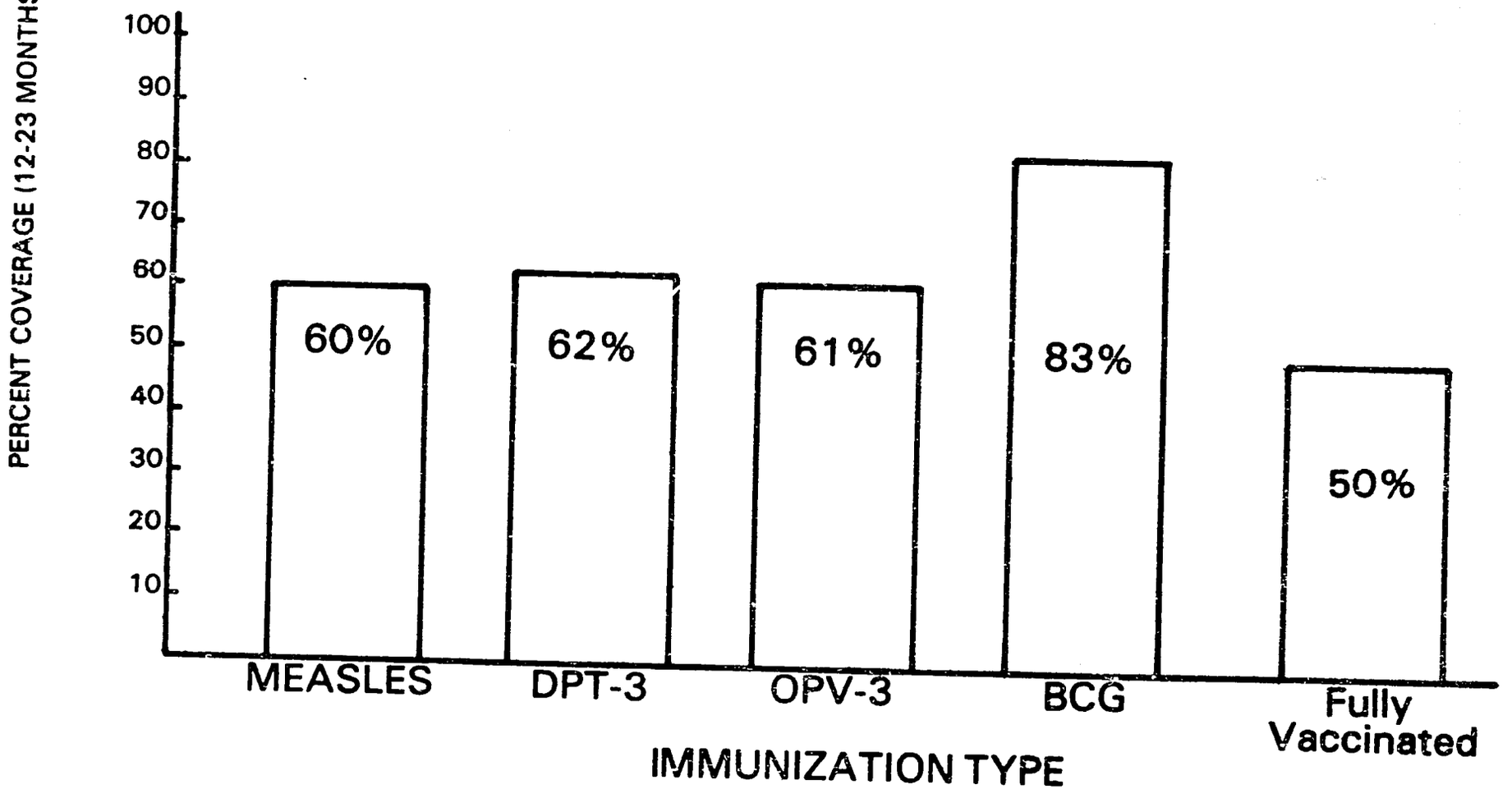
Year	Cases	Case Rate Per 100,000	Deaths	Case Fatality Rate (%
1980	142,106	167.1	1,212	0.85
1981	129,671	148.6	1,002	0.77
1982	139,785	155,2	985	0.70
1983	136,778	148.9	983	0.72
1984	182,591	193.8	1,431	0.78
1985	161,768	167.4	1,721	1.06

IMMUNIZATION COVERAGE BY VACCINATIONS REPORTED COMPARED TO ESTIMATED TARGET POPULATION CAPITAL LGA'S, NIGERIA, OCTOBER, 1985—AUGUST, 1986



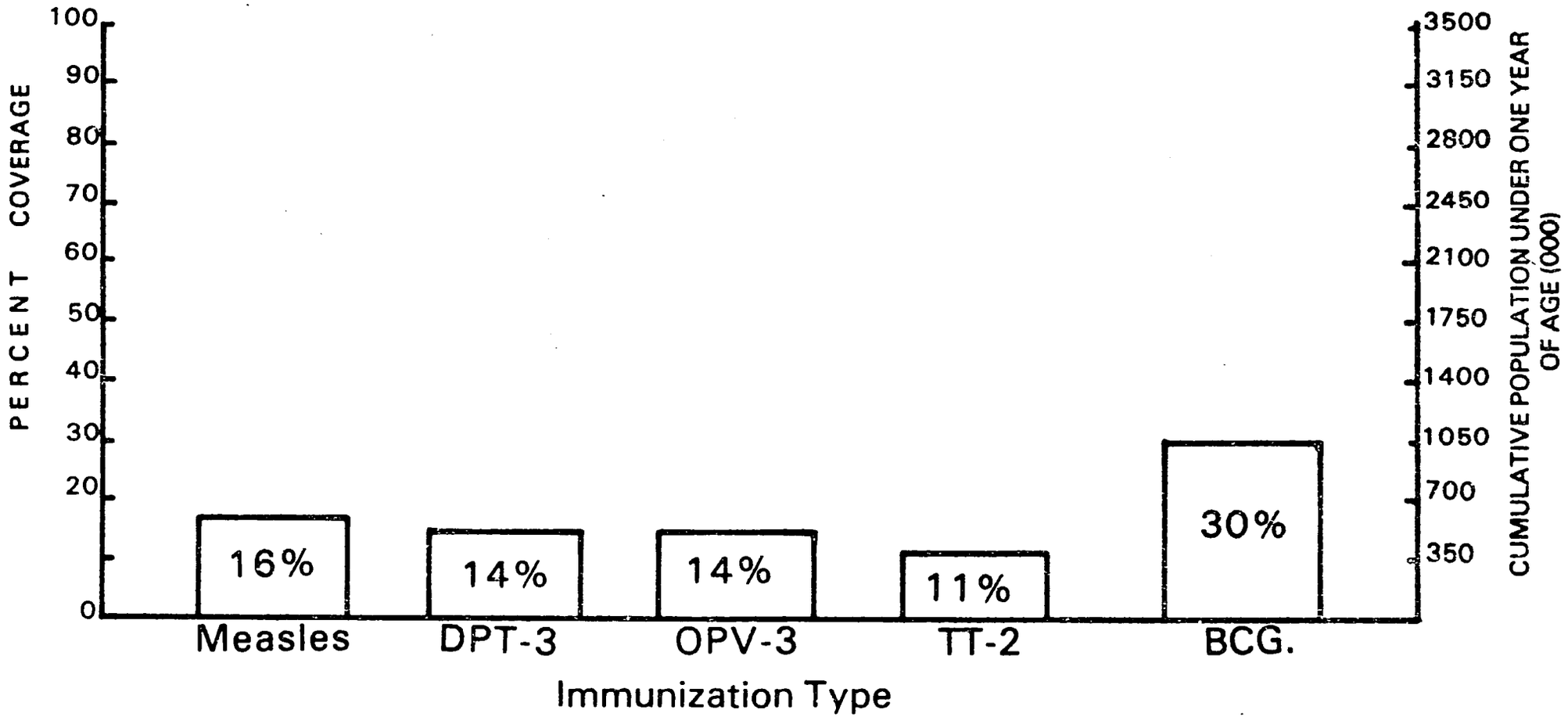
Source- EPI Unit, FMOH. Nigeria 1986.

IMMUNIZATION COVERAGE
BY 30 CLUSTER SURVEY PROCEDURE
CAPITAL LGA'S, NIGERIA, SEPTEMBER, 1986.

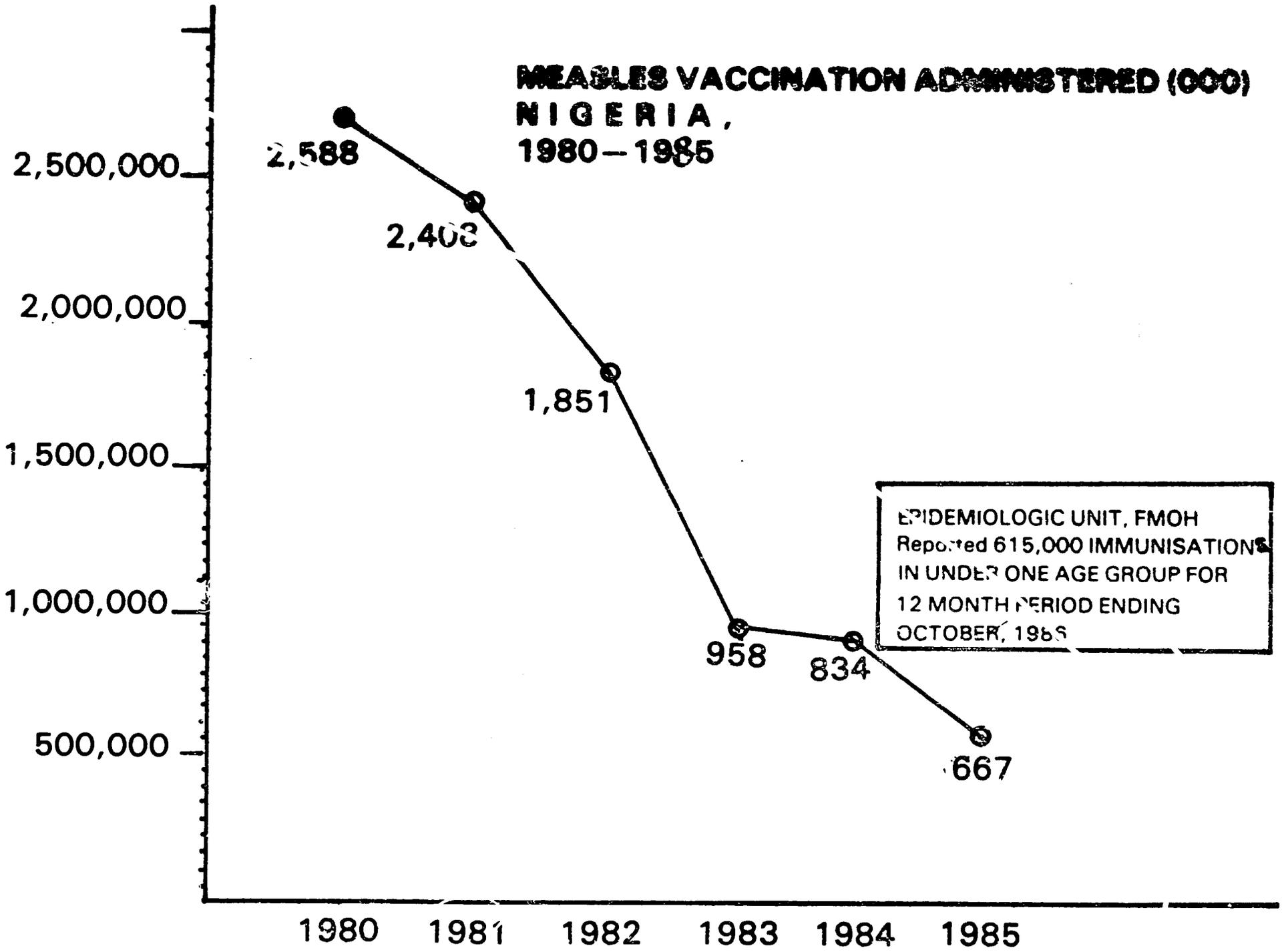


SOURCE: EPI UNIT, FMOH. NIGERIA 1986.

IMMUNIZATON COVERAGE BY VACCINATIONS REPORTED COMPARED TO ESTIMATED TARGET POPULATION NIGERIA, OCTOBER, 1985-AUGUST 1986



Source-EPI Unit, FMOH, Nigeria 1986



SOURCE: MEDICAL STATISTIC UNIT, FMOH, 1986

CCCD NIGERIA

MAJOR IMPLEMENTATION PROBLEMS

- ABSENCE OF MANAGEMENT/SUPERVISORY SKILLS AT THE STATE AND LGA LEVEL.

- MISUSE AND UNDERUTILIZATION OF FIELD VEHICLES AND EQUIPMENT.

- LACK OF TECHNICAL SKILLS AT THE PERIPHERAL LEVEL.

- WAVERING SENSE OF COMMITTMENT BY STATE AND LGA GOVERNMENTS

- UNDISCIPLINED APPROACH TO COMMUNITY EDUCATION AND MOBILIZATION

CCCD PRIORITIES
NIGERIA, 1987

—IMPROVE MANAGEMENT AND SUPERVISION AT THE STATE (19) AND L.G.A. LEVEL (304)

—IMPLEMENT INTERVENTION/SUPPORT STRATEGIES IN THE CCCD TARGET STATES (4—6)

—ENSURE "SURVIVAL" INTO 1988 BY ESTABLISHING APPROPRIATE MANAGEMENT AND COORDINATION PROCEDURES BETWEEN THE NIGERIAN CCCD PROJECT AND CDC, AID/W, UNICEF, WHO, PRITECH, HEALTHCOM, AAO, FMOH, STATE MOH'S AND THE LGA'S