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COUNTRY SUMMARY

Country Swaziland Annual Report 1986 Calendar Year

Population 700,000 (est)

Estimated Number of Live Births 33,600 (est)

Ratio about 6/10^s pop.

Dates

Project Agreement 28 June, 1984
 End of Project 30 April, 1988
 First Project Review June 1985
 First Evaluation June 1986
 Second Project Review June 1987
 Second Evaluation April 1988

% OPV < 26% interval,

Annual and Cumulative Funding by Source

Source	Current Annual Funding	Cumulative Funding To Date
National Government	\$988,200	\$600,000 (est)
USAID	\$703,000	\$703,000

National CCCD Program Manager None
 National EPI Director Sr. Huda Maluli
 Diarrheal Disease Director (if different) Sr. Gladys Matsebula
 Malaria Director (if different) Mr. Clifford Thulani Mamba
 Technical Officer None

Estimated Number of Live Births Derived from the
Population and Birth Rate, SWAZILAND

Year	Population	Birth Rate per 1000	Number of Live Births
1980			
1981			
1982			
1983			
1984			
1985			
1986	700,000	48.0	33,600
1987			
1988			
1989			
1990			

Doses of Diphtheria-Pertussis-Tetanus (DPT) Vaccine
Administered by Year, SWAZILAND

Year	First Doses (all ages)	Third Doses (all ages)	Total Doses (all ages)	First Doses (12 mo.)	Total Doses (12 mo.)
1980					
1981					
1982					
1983				21,211	46,395
1984				20,558	49,293
1985	26,899	24,042	76,954	24,086	67,218
1986					
1987					
1988					
1989					
1990					

SWAZILAND
ANNUAL COUNTRY REPORT - 1986

prepared by
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with assistance from
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1. COUNTRY SUMMARY: Attached with country map

2. CALENDAR YEAR ACHIEVEMENTS:
 - (a) Administrative: .
 - Nomination and fielding of proposed CCCD Technical Officer, M. Wernette in June 1986. Subsequent withdrawal of her nomination in late August 1986, and Wernette departure in early September 1986. .
 - Swaziland MOH denial of alternative T.O. nominee following Wernette departure.
 - GOS construction of CCCD T.O. office space (November 1986).
 - Leasing of CCCD T.O. house (July 1986) and receipt of furniture and appliances (September 1986).

 - (b) Expanded Programme Immunization (EPI):
 - Campaign days in each of 4 regions (March - July 1986) with CCCD funding for 3 regions and UNICEF funding of 4th region.
 - Preparation of EPI poster.
 - Pilot school-based EPI educational programme developed and conducted (8 weeks October - November 1986). Pre- and post test conducted to measure students knowledge level. Interviews with parents scheduled in mid-1987.

 - (c) Control of Diarrheal Disease (CDD):
 - National ORT Demonstration Unit established at Mbabane Government Hospital complete with CCCD funded equipment/supplies and assessment forms.

(d) Malaria:

- Development of malaria poster and radio messages for malaria communications activity to be launched in 1987.

(e) Training:

- more than 130 health personnel attended 6 separate training sessions on EPI, malaria, tuberculosis, or primary health care.
- two nurses sponsored to go on a study tour to Lesotho to view the ORT Demonstration Unit at Queen Elizabeth II Hospital.
- September 1986 consultancy by Sandy Buffington (CCCD/Lesotho) to discuss - decentralized training model; implemented in Lesotho..

(f) Operations Research:

- No major activity funded by the CCCD project.

3. MAJOR PROBLEMS AND ACTIONS TO BE TAKEN:

- (a) Absence of a full-time Technical Officer and withdrawal of Maseru T.O. in support of Swaziland CCCD activities since March 1986, has seriously impeded project progress.
- (b) Limited absorptive capacity within MOH to utilize project resources (short term TA, research funds, etc.) in the absence of a full time Technical Officer.

4. MAJOR GOALS AND OBJECTIVES FOR 1987

- (a) Technical Officer (T.O.) assigned and working.
- (b) Decentralized training planned and preparation for 1988 implementation.
- (c) Integration of CCCD interventions into overall Primary Health Care (PHC) service delivery system.
- (d) Training of health workers in CCCD/PHC.
- (e) 5 year plans for each CCCD intervention developed and implementation initiated.

- (f) Revision of training modules and treatment manuals for each CCCD intervention
- (g) Recruitment of USAID-based Administrative Assistant
- (h) Extension of MOH-based Technical Assistant to September 1987
- (i) No-cost extension of project for 1 year to April 1989.

5. IMMUNIZATION SUMMARY:

The Swaziland EPI program (SEPI) stalled between May, 1984 and April 1985, primarily for two reasons: (1) absence of a national EPI Unit Coordinator; and (2) commitment of scarce Ministry of Health resources to the implementation of the Mass Media Practices (MMHP) Project. Following the completion of the MMHP intervention phase, an EPI Task Force was formed in May 1985. Since that time, SEPI has gained momentum and shifted into high gear in September 1985 with the initiation of EPI workshops for nurses and nursing assistants.

Four major components of the EPI strategy were investigated in 1985 and these results were used to reinforce existing immunization activities and to provide information required for future planning. These four areas were:

- KAP of Clinic Nurses
- KAP of Mothers and Community
- Cold Chain Inventory and Logistics Review
- Vaccine Ordering and Distribution System Review.

The findings of these surveys have been used to improve the IEC component of the EPI, to expedite the handling of vaccine, to develop in-service training materials and to improve the cold chain. It is anticipated that these actions will lead to a continuous annual 10 percent increase in comprehensive immunization coverage over the next five years.

EPI TABLES

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Estimated number of live births and pregnancies	31709	32689	33696

DPT Vaccinations

First dose given to:			
-children under 1 year	21211	20558	24086
-all children	N/A	N/A	26899

Third Dose given to:			
-children under 1 year	15465	16431	20201
-all children	N/A	N/A	24042

Total Doses given to:			
-children under 1 year	46395	49293	67218
-all children	N/A	N/A	76954

Measles Vaccinations

Total Doses given to:			
-children under 1 year	12916	14092	16335
-all children	N/A	N/A	23096

Tetanus Toxoid Vaccinations

First Dose given to pregnant women	N/A	N/A	17903
Total Doses given to pregnant women	N/A	N/A	28159

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>No. of Measles Cases reported¹</u>	6100	4050	14900	4794
(No. of Reporting Units) N =	87	92	115	130
<u>No. of Polio Cases reported¹</u>	70	45	30	13
N =	87	92	115	130
<u>No. of Pertussis Cases reported¹</u>	870	1350	550	673
N =	87	92	115	130

No. of Neonatal Tetanus and Tetanus cases reported¹

Neonatal Tetanus:	N/A	N/A	N/A	N/A
Tetanus:	400	340	250	210 ✓
N =	87	92	115	130

¹ Due to the absence of a Technical Officer for the Swaziland CCCD project, raw data for EPI tables is available for 1985 only. Data for years 1982 - 1984 are extrapolated from graphs presented in the Briefing Paper for the 1986 CCCD mid-project evaluation.

DIARRHEA SUMMARY:

Diarrheal diseases in Swaziland are recognized as an important cause of morbidity and mortality in the under five age group.

The promotion of oral rehydration began in 1976 when radio messages recommended fluids containing two teaspoons of salt and a pinch of sugar to a pint of water. Beginning in 1976, oral rehydration salts (ORS) packets were issued to health centers and new directions were provided for mixing the homemade SSS. Diarrhea and the resulting dehydration were brought to the forefront of public and political awareness in Swaziland during the 1981-1982 cholera outbreak when 707 cases and 32 deaths were reported.

Ministry of Health CDD activities presently include: (1) a strong health education component with emphasis on mass communications; (2) training of clinic personnel, traditional healers, rural health motivators and extension workers in ORT procedures; (3) laboratory services that involve practical routine examination of stools for cholera, typhoid, shigellosis and amoebiasis on request; (4) promotion of safe water and pit latrines (20 percent of the total rural population has access to safe water); and, (5) provision of ORS packets to health facilities.

Many problems remain in implementing this powerful intervention. ORT must compete with a variety of traditional remedies and beliefs, overcome serious supply and distribution problems, and be used correctly, often by illiterate mothers in unsupervised settings, if it is to achieve its potential for reducing childhood mortality.

	<u>1983</u>	<u>1984</u>	<u>1985²</u>	<u>1986</u>
a) Number of ORS packets:				
- Imported	0	430,000	0	135,000
- Produced locally	0	0	0	0
b) Percentage of Hospitals and Health Facilities Using ORS/ORT:				
- Hospitals (N)	N/A	N/A	12	N/A
(%)	N/A	50 ³	100	N/A
-Facilities (N)	N/A	N/A	140	N/A
(%)	25	60 ³	100	N/A

² Because Swaziland over-estimated the need for ORS packets in 1984, additional supplies were not required in 1985.

³ Data extrapolated from Briefing Paper Graph. Actual number of facilities and hospitals unknown.

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c) Number of Cases and Deaths due to Diarrhea in Hospitalized children under 5 years:

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
- Cases	2000	2750	1600	1447	1394
- Deaths	85	60	48	45	40
- N =	N/A	N/A	N/A	12	12

7. MALARIA

The malaria problem is confined mainly to the lowveld region of the country where the population at risk is under 285,000. Malaria in Swaziland returns in epidemic form regularly every five to six years and this return correlates strongly with the amount of rainfall in the lowveld. Malaria transmission takes place between October (onset of the rainy season) and May (onset of the cool season). Most of the malaria in Swaziland is Plasmodium falciparum. The greatest constraint to malaria control in the Kingdom is the uncontrolled influx of carriers from Mozambique. Chloroquine resistant malaria has been found in lowveld residents.

Malaria control activities are coordinated through the Manzini Public Health Office. Malaria surveillance is implemented by 26 field workers, most of whom are poorly educated and insufficiently trained. The present control strategy relies on two basic activities: (1) residual DDT spraying in households within the zones risk zones; and, (2) weekly chloroquine prophylaxis of individuals residing within risk zones. During the last few transmission seasons, approximately five percent of all malaria positive blood films processed by the Manzini laboratory fell within the under 5 year age category.

- a) Percentage of Hospitals implementing National Malaria Policy:
 - No Malaria Policy in Swaziland
- b) Percentage of OPDs implementing National Malaria Policy:
 - No Malaria Policy in Swaziland

Percentage of Hospitals Using Oral Rehydration Salts and
Outpatient Facilities Using Oral Rehydration Therapy for
Treating Diarrhea, SWAZILAND

Year	Number Outpatient Facilities Sampled	Number Hospitals Sampled	Number Outpatient Facilities Using ORT	Number Hospitals Using ORS	Percent Outpatient Facilities Using ORT	Percent Hospitals Using ORS
1980					ERR	ERR
1981					ERR	ERR
1982					ERR	ERR
1983					ERR	ERR
1984					ERR	ERR
1985	140	12	140	12	100	100
1986					ERR	ERR
1987					ERR	ERR
1988					ERR	ERR
1989					ERR	ERR
1990					ERR	ERR

Cases and Deaths Due to Diarrhea in Hospitalized
Children under Five Years of Age, SWAZILAND

Year	Number Hospitals Reporting	Cases of Diarrhea (< 5 yrs)	Deaths due to Diarrhea (< 5 yrs)
1980			
1981		2000	85
1982		2750	60
1983		1600	48
1984	12	1447	45
1985	12	1394	40
1986			
1987			
1988			
1989			
1990			

Percentage of Hospitals Using National Malaria Policy and
Outpatient Facilities Using Malaria Policy, SWAZILAND

Year	Number Outpatient Facilities Sampled	Number Hospitals Sampled	Number Outp. Faci. Providing Treatment	Number Outp. Faci. Providing Prophylaxis	Number Hospitals Providing Treatment	Number Hospitals Providing Prophylaxis
1980						
1981						
1982						
1983						
1984						
1985						
1986						
1987						
1988						
1989						
1990						

Cases and Deaths Due to Malaria in Hospitalized
Children under Five Years of Age, SWAZILAND

Year	Number Hospitals Reporting	Cases of Malaria (< 5 yrs)	Deaths due to Malaria (< 5 yrs)
1980			
1981			
1982			
1983			
1984			
1985			
1986			
1987			
1988			
1989			
1990			

Doses of Measles Vaccine Administered by Year,
SWAZILAND

Year	Total Doses	Doses (12 mo.)
1980		
1981		
1982		
1983		12,916
1984		14,092
1985	23,096	16,335
1986		
1987		
1988		
1989		
1990		

Doses of Tetanus Toxoid Administered by Year,
SWAZILAND

Year	First Doses	Total Doses	Cumulative First Doses
1980			
1981			
1982			
1983			
1984			
1985	17,903	28159	17903
1986			17903
1987			17903
1988			17903
1989			17903
1990			17903

Surveillance for Vaccine-Preventable Disease
 Number of Reported Cases of Measles, Polio, Pertussis and Tetanus,
 SWAZILAND

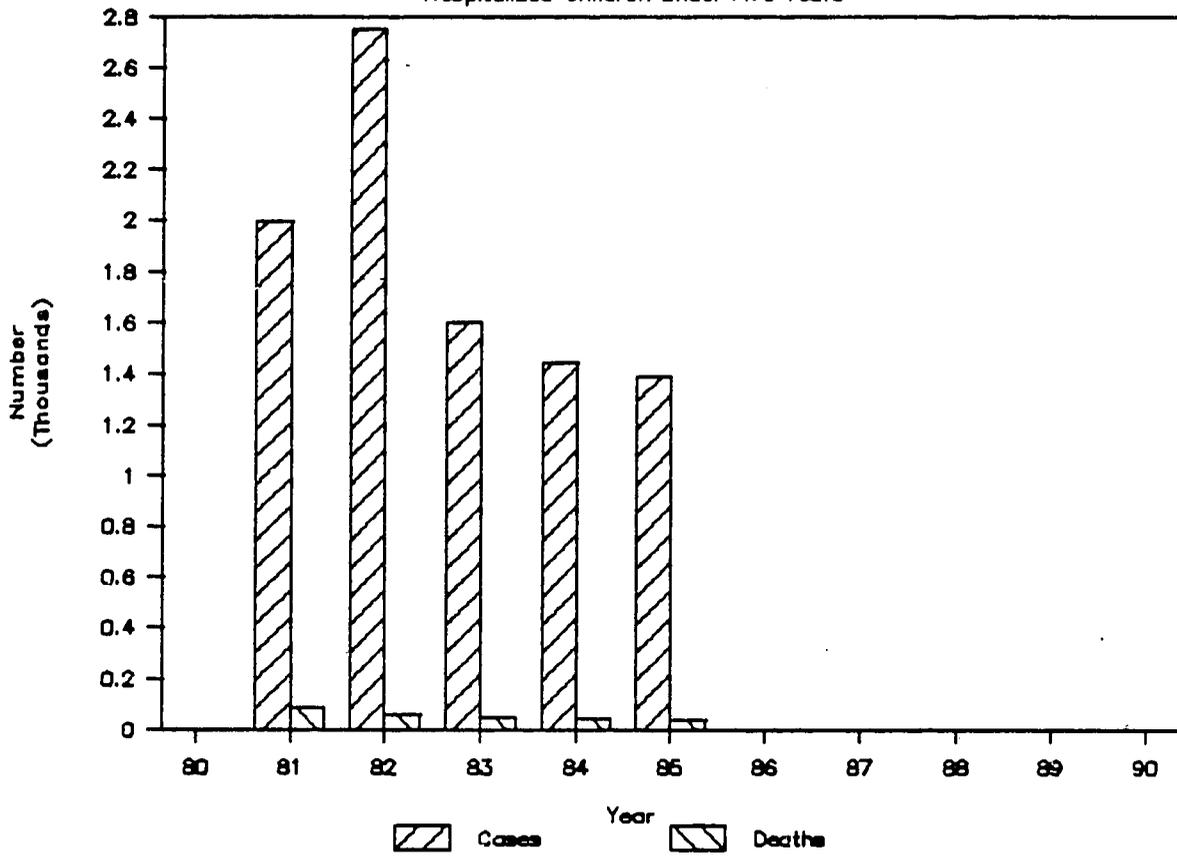
Year	Number of Reporting Units	Cases of Measles	Cases of Polio	Cases of Pertussis	Cases of Neonatal Tetanus	Total Cases of Tetanus
1980						
1981						
1982	87	6,100	70	870		400
1983	92	4,050	45	1,350		340
1984	115	14,900	30	550		250
1985	130	4,794	13	673		210
1986						
1987						
1988						
1989						
1990						

Packets of Oral Rehydration Salts Imported and Produced Locally,
 SWAZILAND

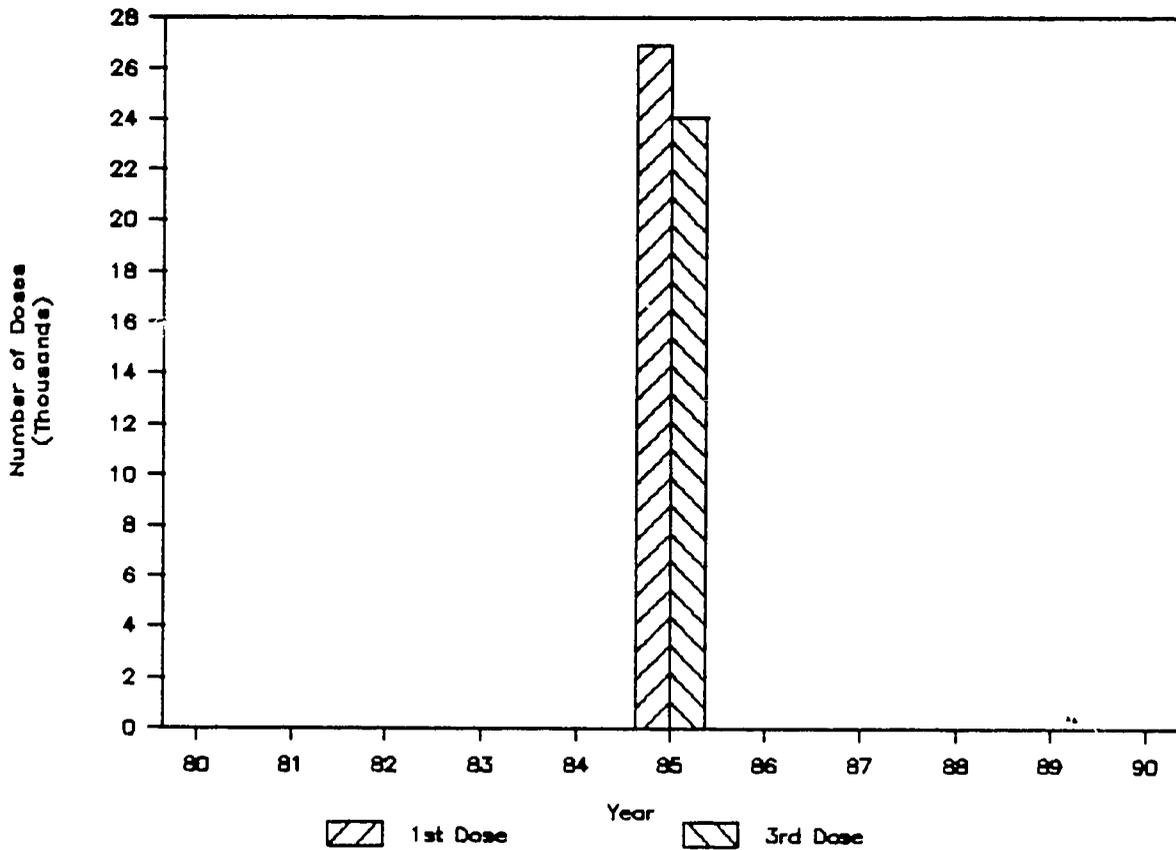
Year	Packets Produced Locally	Packets Imported	Total Packets
1980			
1981			
1982			
1983			
1984		430000	430000
1985			
1986		135000	135000
1987			
1988			
1989			
1990			

Diarrhea: Cases and Deaths

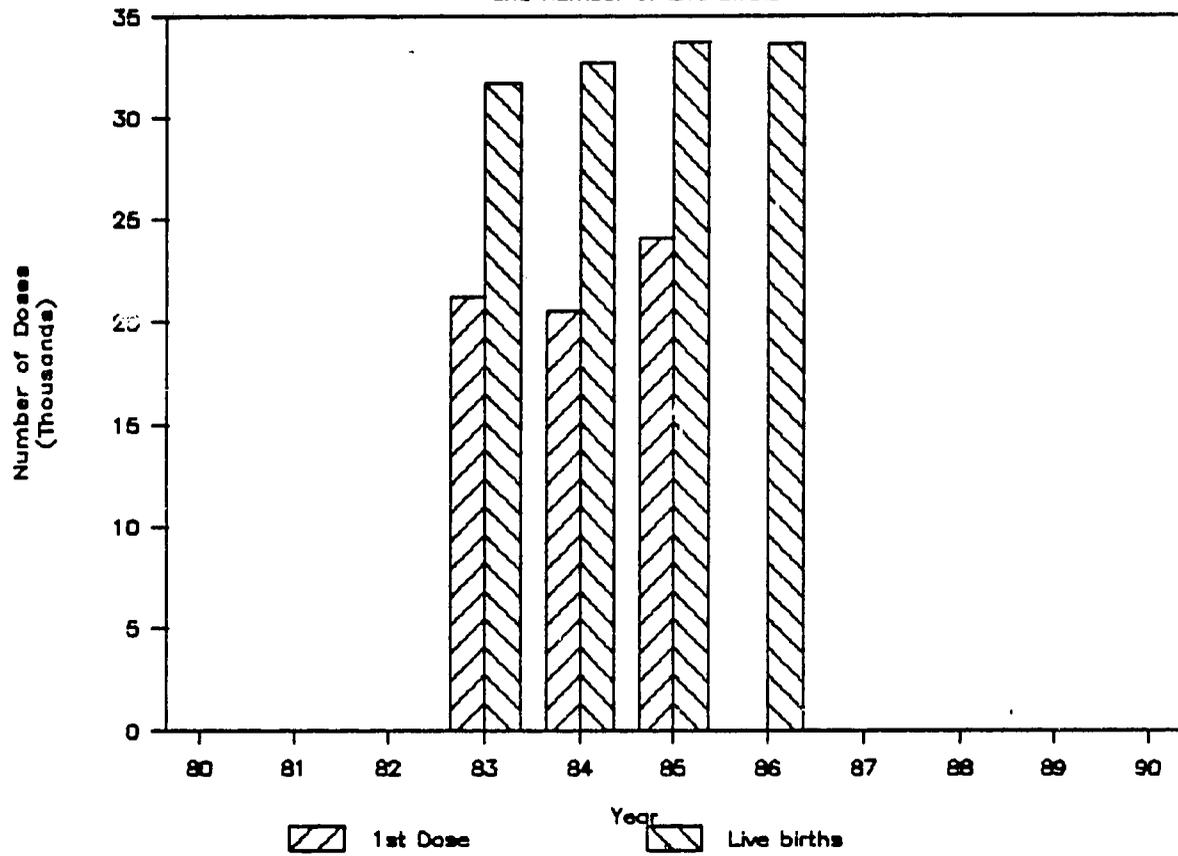
Hospitalized Children under Five Years



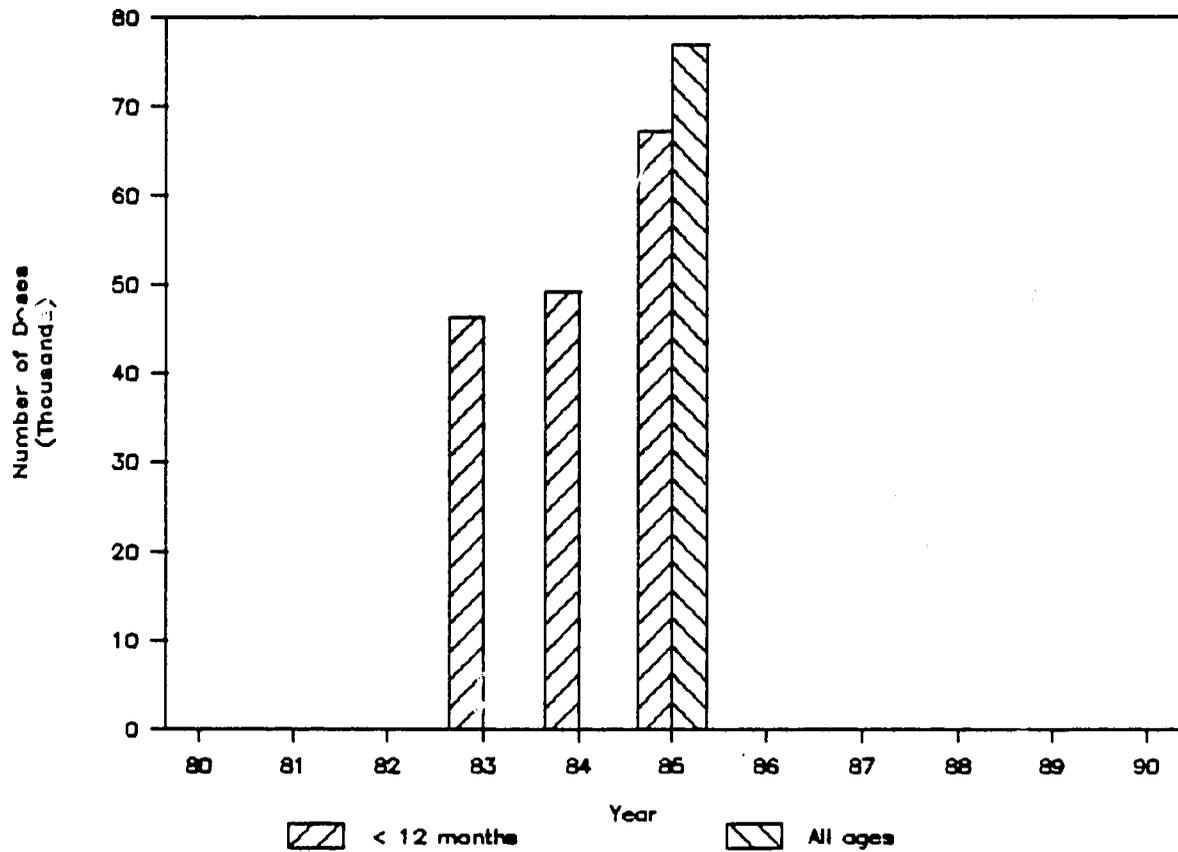
DPT: First and Third Doses, All Ages



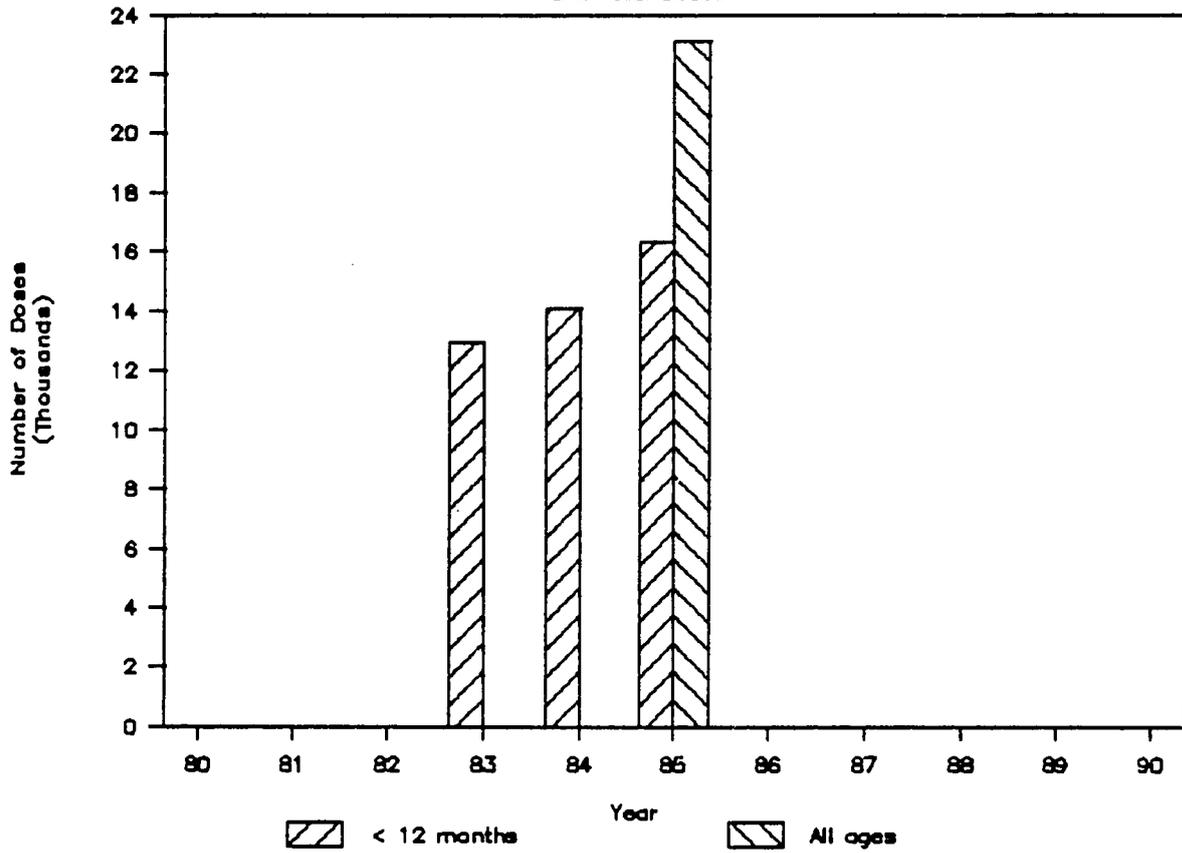
DPT: First Doses <12 Months and Number of Live Births



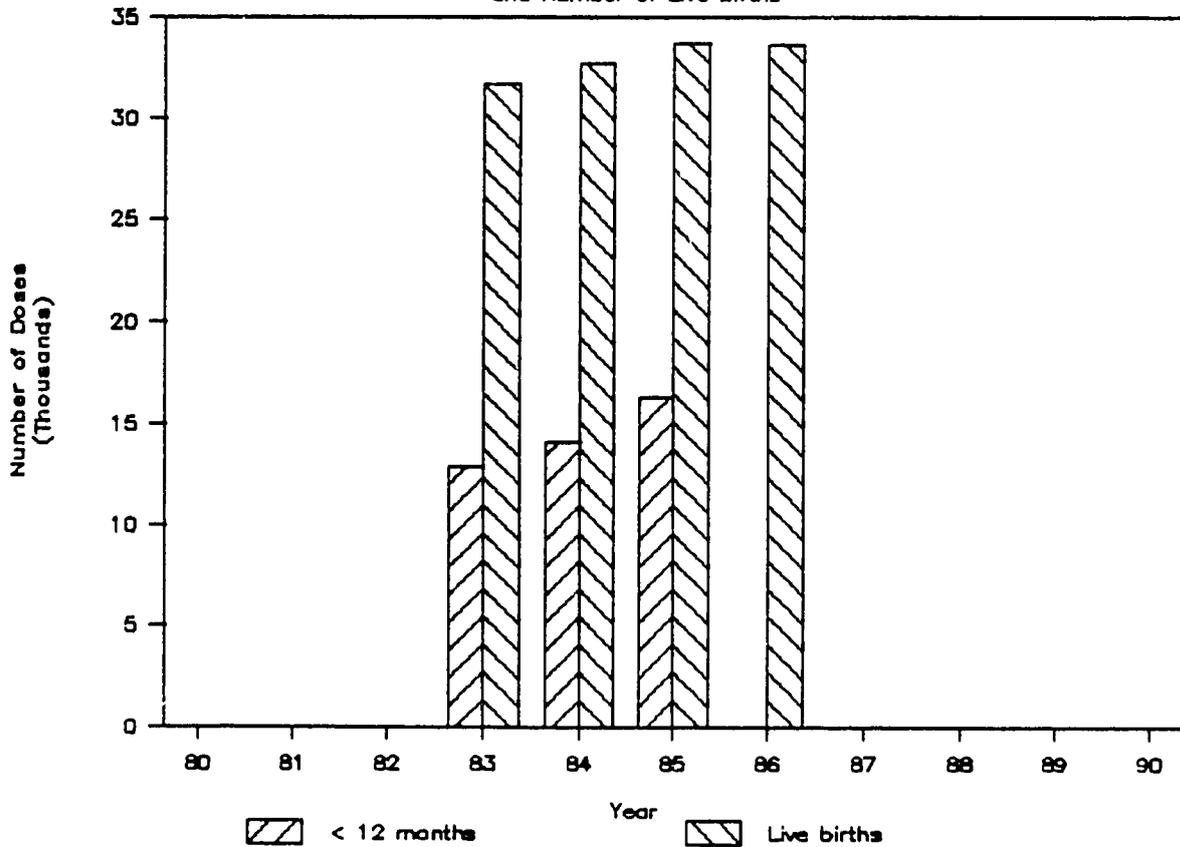
DPT: Doses < 12 Months and Total Doses



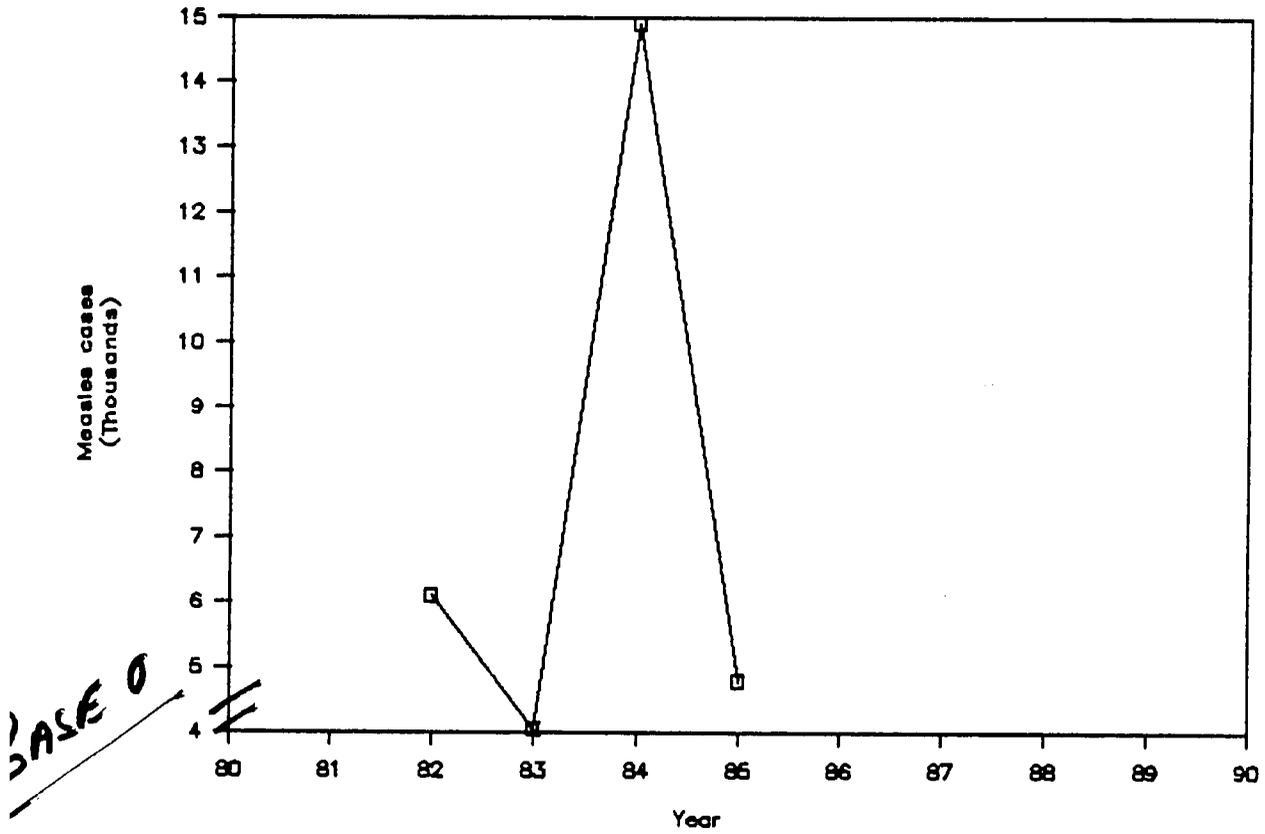
Measles Vaccinations: Doses < 12 Months
and Total Doses



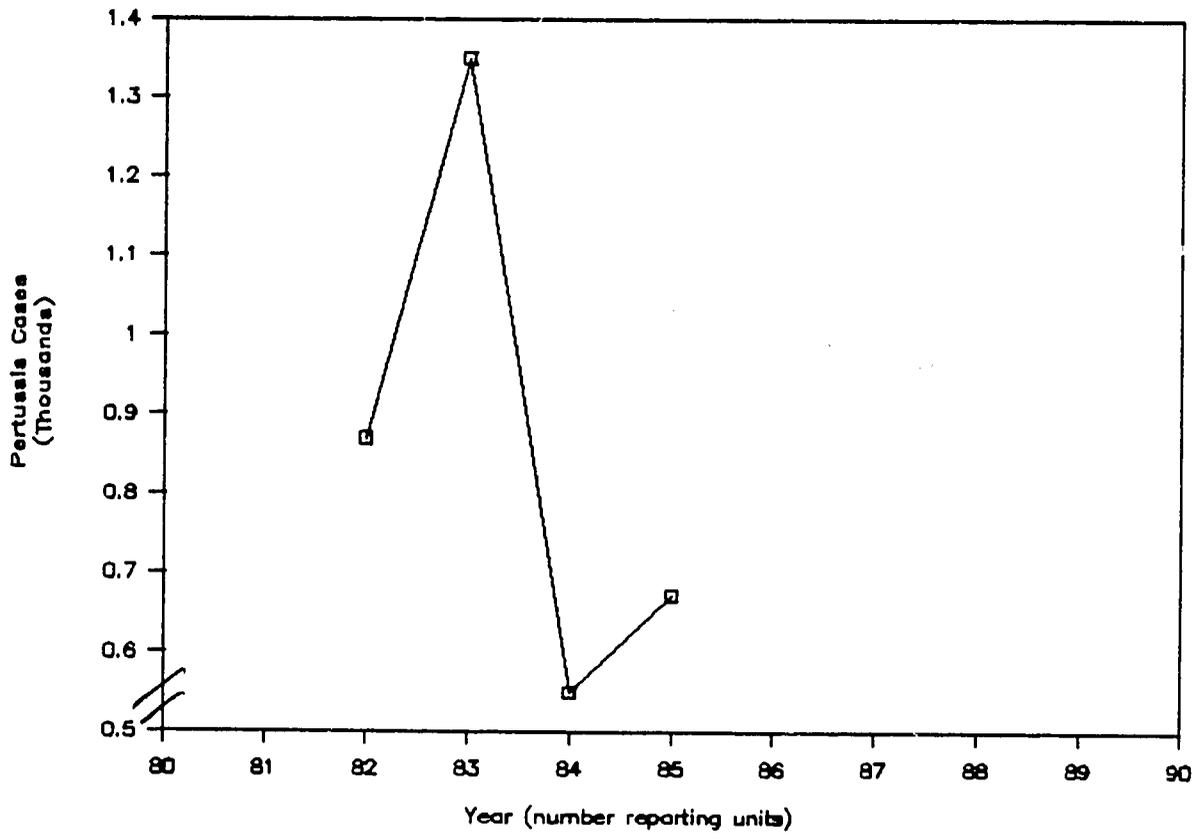
Measles Vaccinations: Doses < 12 Months
and Number of Live Births



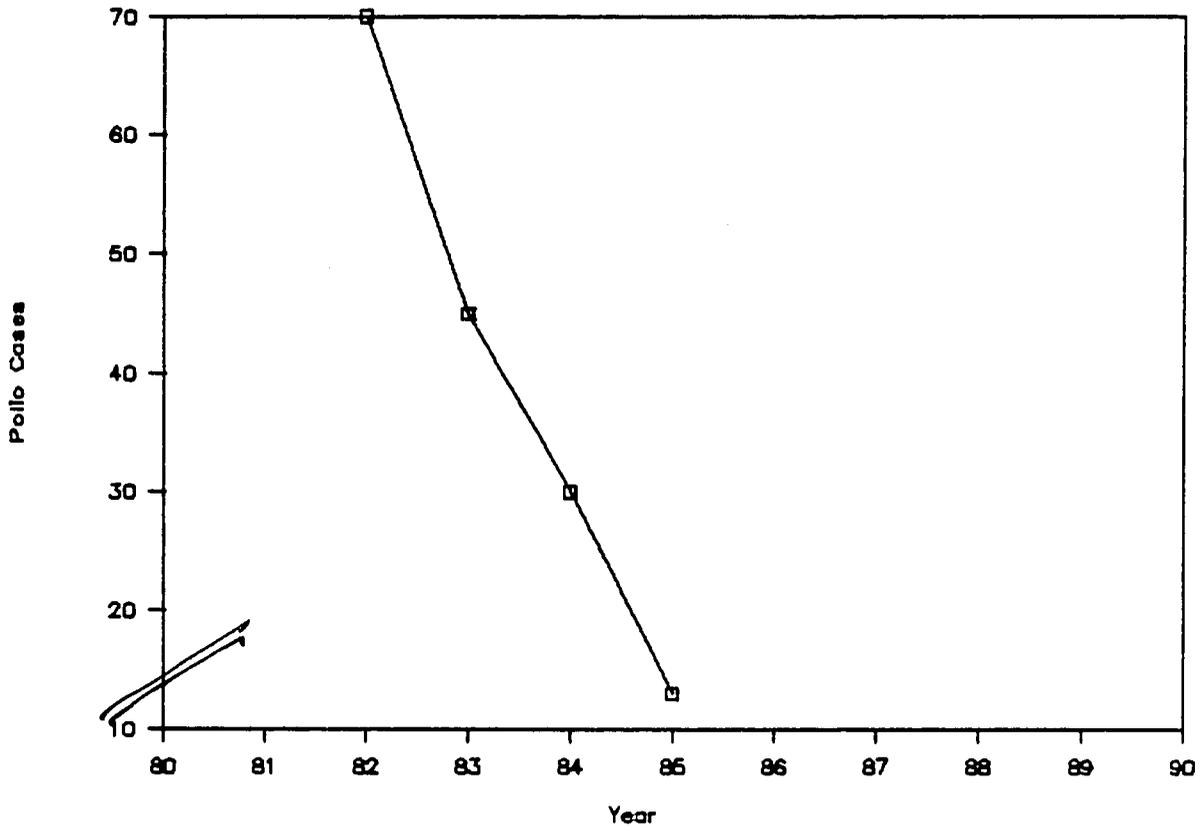
Measles Cases Reported by Year



Pertussis Cases Reported by Year

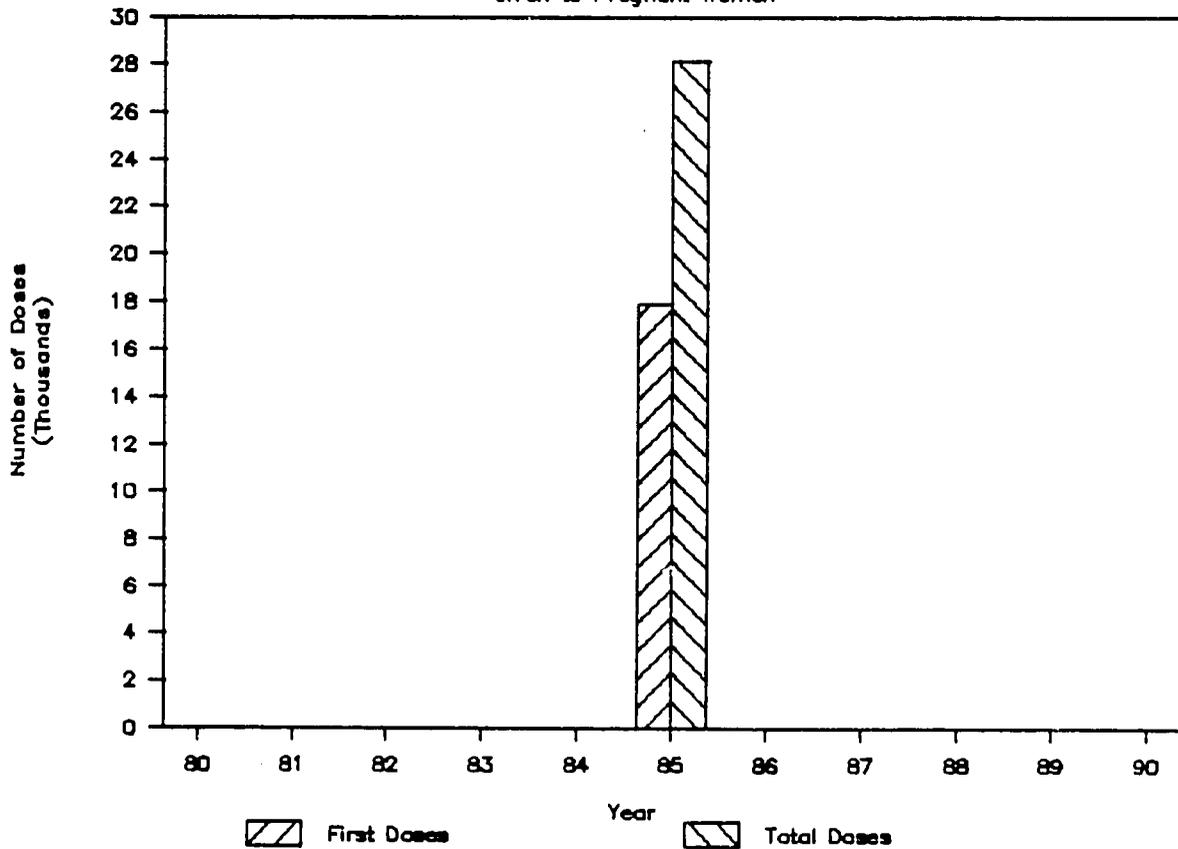


Polio Cases Reported by Year

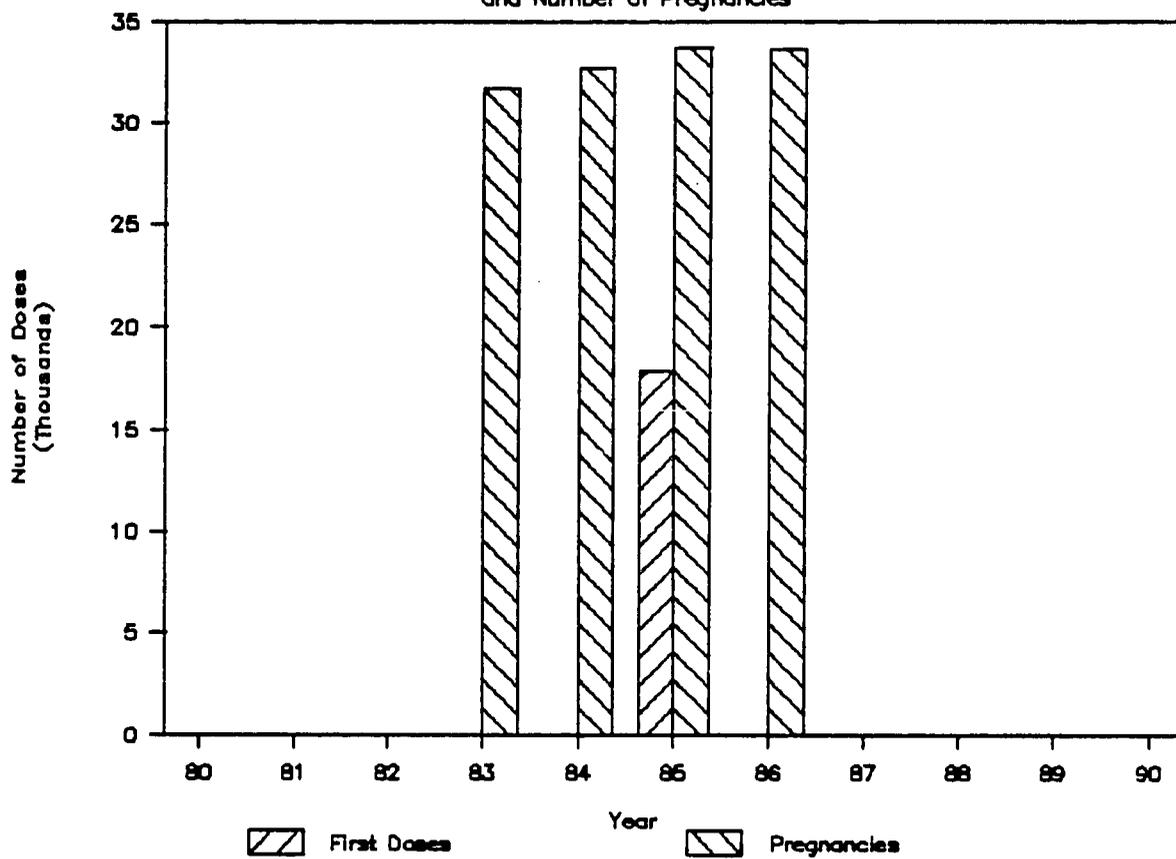


Tetanus Toxoid: First and Total Doses

Given to Pregnant Women



Tetanus Toxoid: First Doses and Number of Pregnancies



Coverage Surveys: Immunizations

Dates	Children		Percent Coverage of Children											Number of Women	% Coverage of Women During Last Pregnancy			Area
	Age (Months)	Number	CARD	BCG	DPT1	DPT2	DPT3	POL1	POL2	POL3	MEAS	FULLY	CARD		TT1	TT2		
02	82	14-16	210	69	82	71	60	40	72	60	34	40	28	0	0	0	0	NATIONAL
	84		0	0	72	66	59	43	66	58	42	37	24	0	0	0	0	NATIONAL
11	85		0	91	89	74	67	57	74	66	57	42	38	0	0	0	0	NATIONAL

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Outbreak Investigation

Dates	Disease Investigated	Area	Date 1st Case	Date Invest Started	Total Number Cases	Total Number Deaths	Remarks/Results
85	POLIO	LOWVELD	09/02/85	09/06/85	3	0	MINI-EPI CAMPAIGN LAUNCHED IN RESPONSE 2499 CHILDREN VACCINATED AGAINST POLIO
85	MEASLES	LOWVELD	06/01/85	09/06/85	33	2	SAME AS ABOVE 2422 IMMUNIZED AGAINST MEASLES
86	MALARIA	LOWVELD	01/01/86	04/01/86	1115	15	2 CHILDREN LESS THAN 5 YEARS DIED; REMAI NDER WERE OVER 18 YEARS OF AGE AND WERE PRINCIPALLY FROM THE HIGHVELD WHERE MALA RIA IS UNCOMMON.

Listing of Training Courses

Date	Course Title	Personnel	Number of Participants	Course length Days
86	CCCD/WHO PHC EPI/CDD WKSH	PERIPHERAL HEALTH STAFF	0	1
86	ORT TRAINING	PERIPHERAL HEALTH STAFF	2	20
03 86	EPI WORKSHOP	PERIPHERAL HEALTH STAFF	44	3
04 86	PHASE II EPI RADIO WORKSHOP	PERIPHERAL HEALTH STAFF	9	14
06 86	TUBERCULOSIS MANAGERS WKSH	PERIPHERAL HEALTH STAFF	55	2
09-10 86	MALARIA REFRESHER COURSE	PERIPHERAL HEALTH STAFF	61	21
21-02 86	EPI RADIO PRGM PRODUCERS WKSH	PERIPHERAL HEALTH STAFF	0	3

Health Information System

Date	Activities
84/85	MOH HEALTH STATISTICS UNIT PROVIDED WIT IBM AT, IBM XT, AND VARIOUS EQUIPMENT AND SUPPLIES
85/86	PROVIDED HSU WITH ADDITIONAL COMPUTER SOFTWARE

Health Education

Type of Activity	Dates	Target Type	Population	CCCD Inputs	Remarks/Results
AUDIO/VIS DEVL	85	MOTHERS, NURSES	0	PRINTING COSTS	MATERIALS DISSEMINATED TO CLINICS, RHMS, HOMES (POSTERS, FLYERS); RADIO MESSAGES BROADCAST
AUDIO/VIS DEVL	86	MOTHERS, NURSES	0	FUNDING	MATERIALS DISSEMINATED TO CLINICS, RADIO MESSAGES DEVELOPED FOR BROADCAST IN 1987.

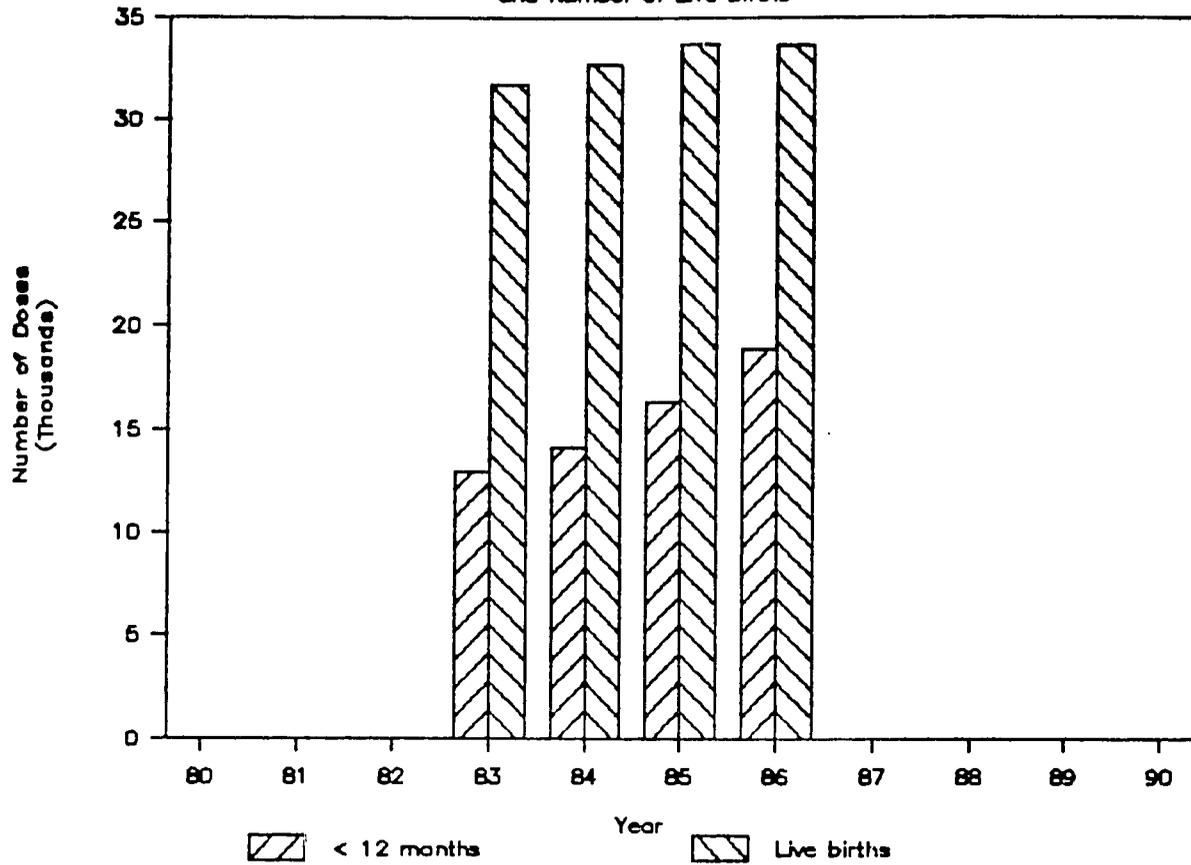
Special Studies

Date	Area	Title of Survey	Age Assessed	Method	Sample Size	Remarks/Results
85	NATIONAL	KAP STUDY OF MOTHERS AND EPI			0	
85	NATIONAL	COST ANALYSIS OF C CCD INTERVENTIONS		INTERVIEWS	0	RESULTS OF SURVEY INDICATE THAT COST OF PROVIDING CCD INTERVENTIONS ARE MORE EXPENSIVE THAN MOST OTHER COUNTRIES
86	NATIONAL	ASSESSMENT OF EPI MESSAGE EFFECTIVE	MOTHERS OF (2	SURVEY	100	REDUCTION IN FEAR OF SIDE EFFECTS 42% TO 8.5% FOLLOWING EPI CAMPAIGN; HEALTH ED MATERIALS APPEAR EFFECTIVE IN EDUCATING AND MOTIVATING MOTHERS TO SEEK EPI SERVICES.
86	NATIONAL	EPI CLINIC NURSES	NURSES IN MCH CLINS	SURVEY	0	NURSES STILL NOT PRACTICING WHAT THEY HAD BEEN TAUGHT RE EPI. POSSIBLE FACTORS INCLUDE LACK OF ADEQUATE SUPERVISION, NO FOLLOWUP TRAINING
86-87	NATIONAL	CHILD-BASED EPI CA MPAIGN	PRIM SCH G RADES 5-6	SURVEY	2000	PRETEST GIVEN TO SCHOOL CHILDREN PRIOR TO RADIO BASED EPI EDUCATIONAL PROGRAM. POST TEST TO MEASURE INCREASED KNOWLEDGE AND INTERVIEWS WITH PARENTS TO ASSESS CARRY-OVER EFFECT SCHEDULED FOR 1987.

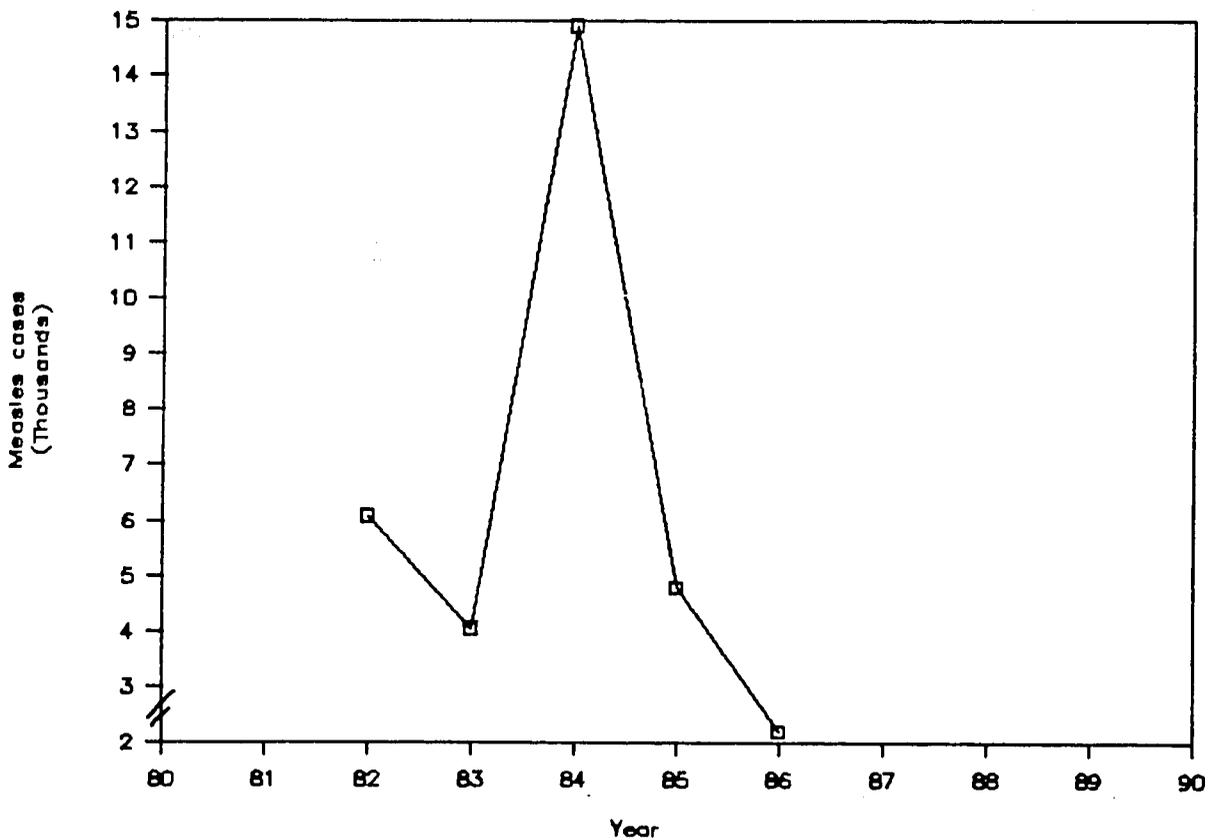
25

Measles Vaccinations: Doses < 12 Months

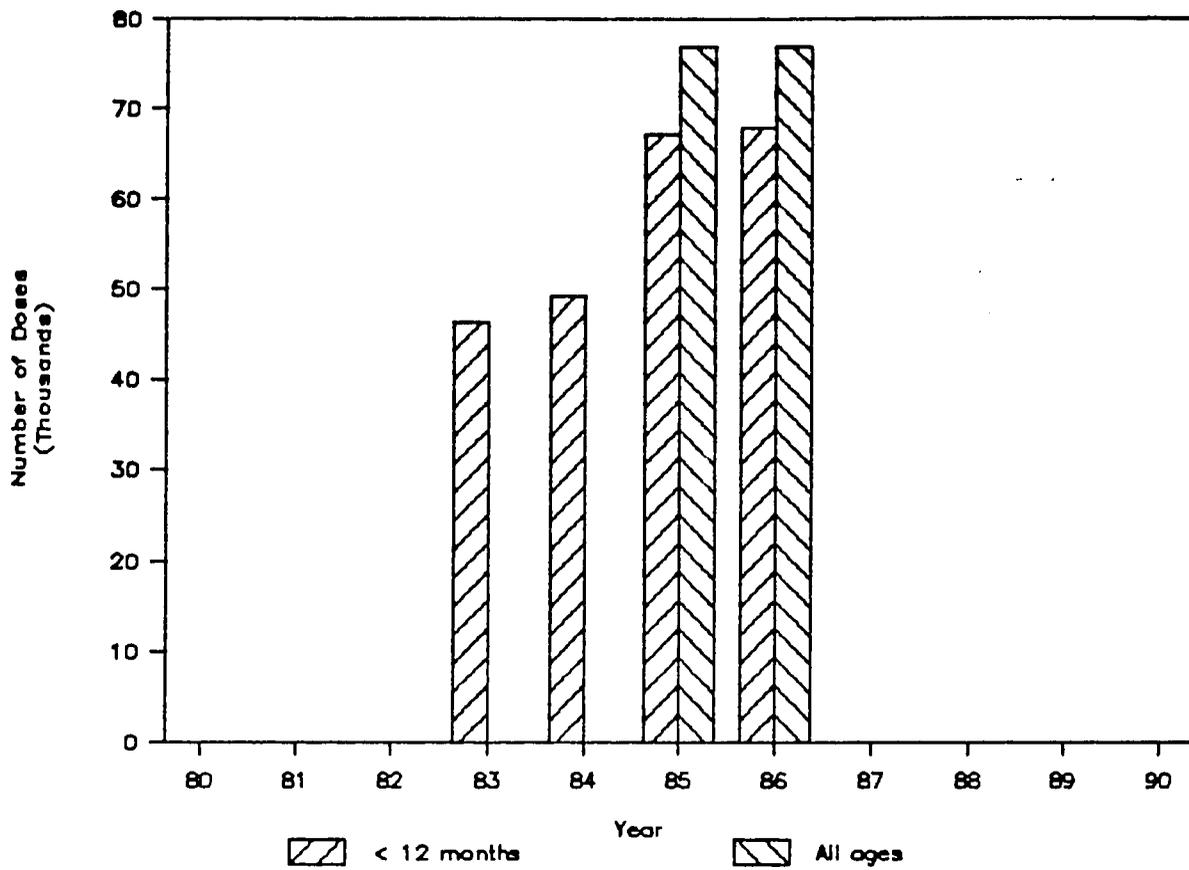
and Number of Live Births



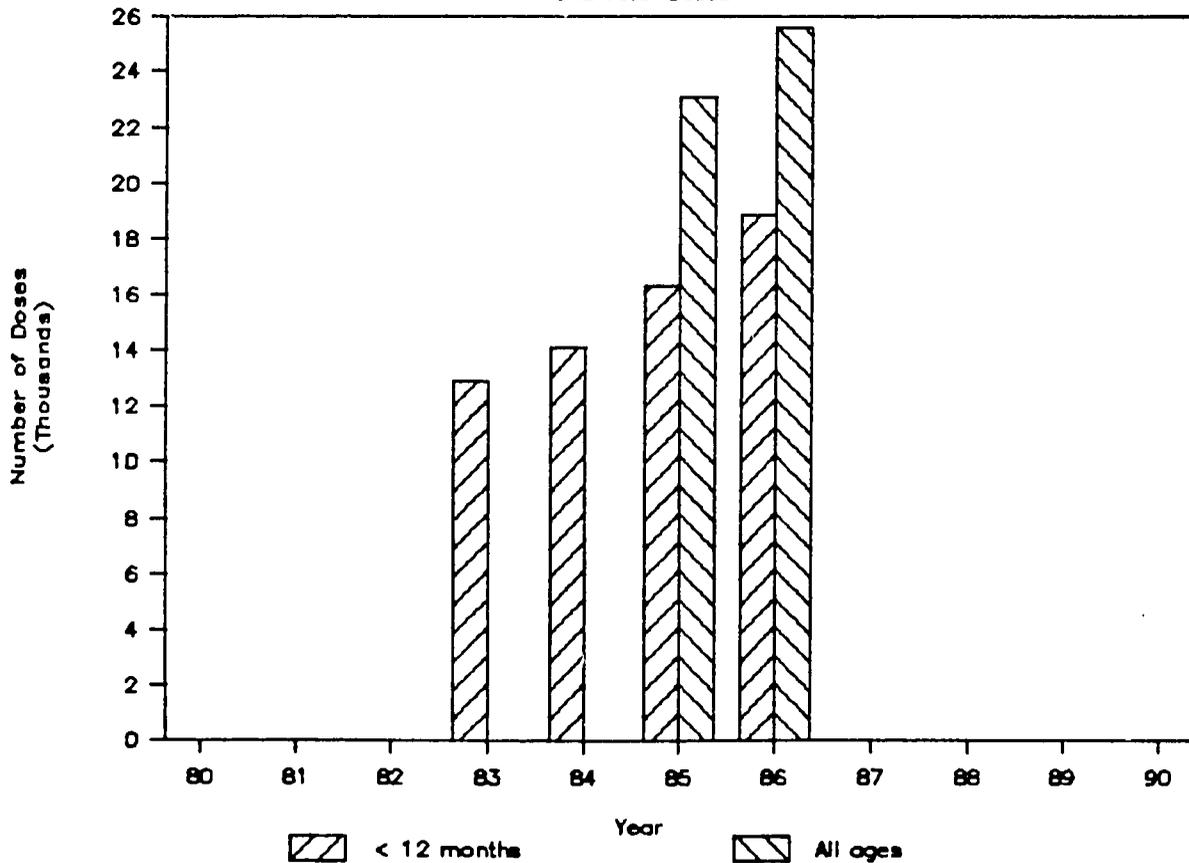
Measles Cases Reported by Year



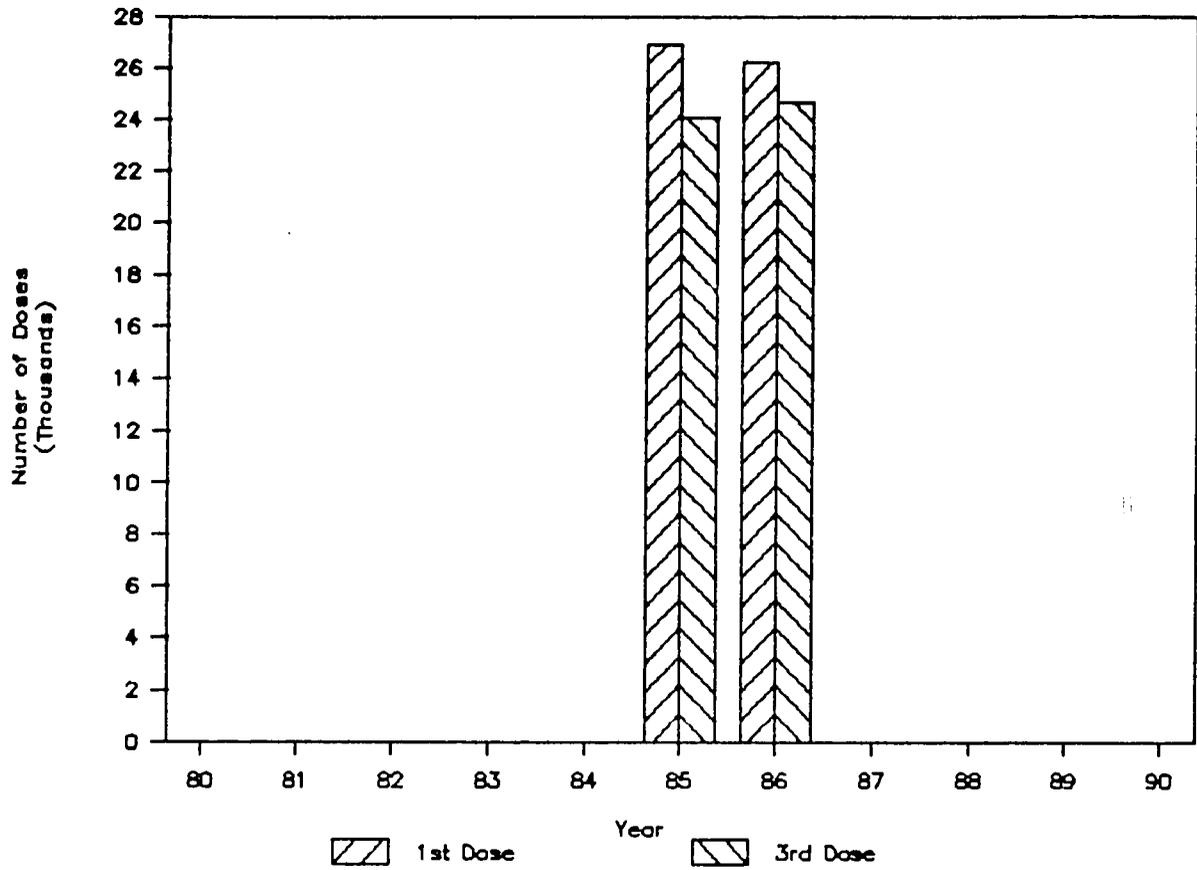
DPT: Doses < 12 Months and Total Doses



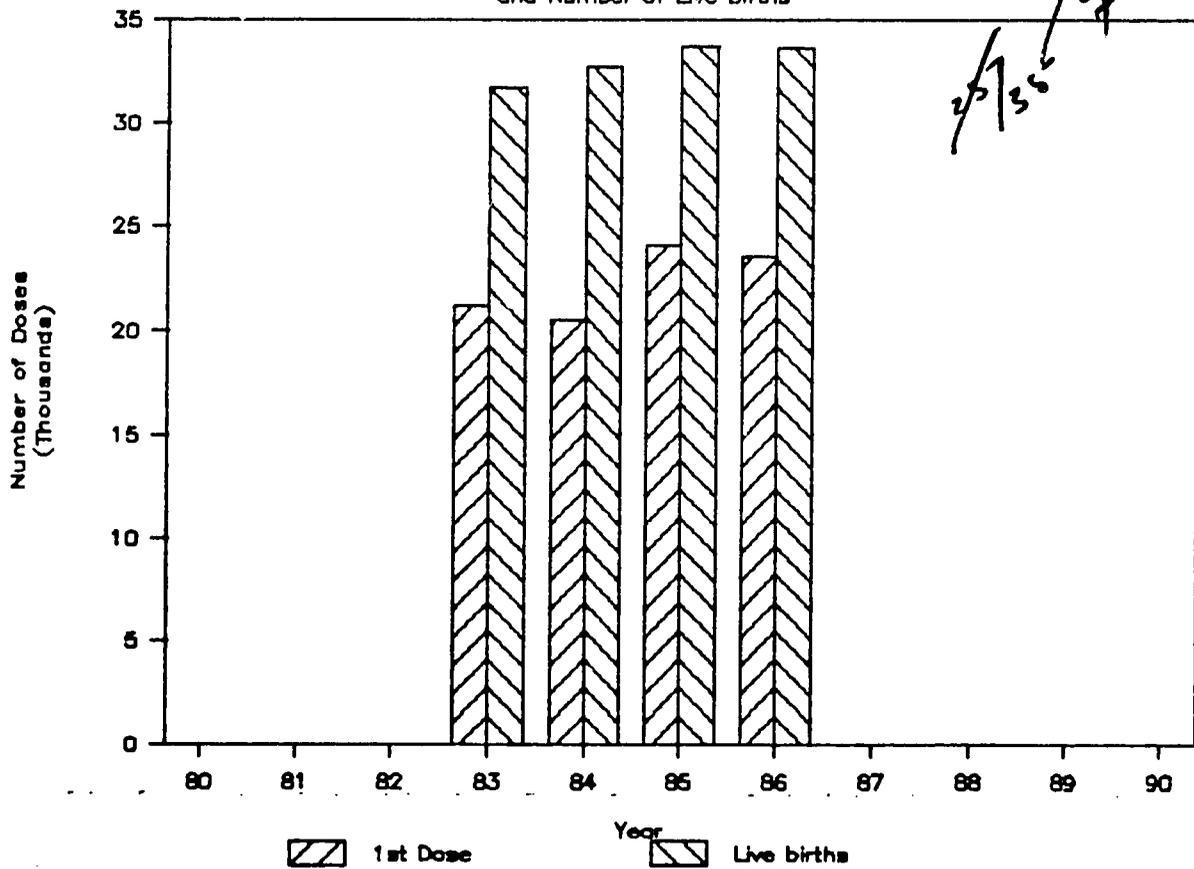
Measles Vaccinations: Doses < 12 Months and Total Doses



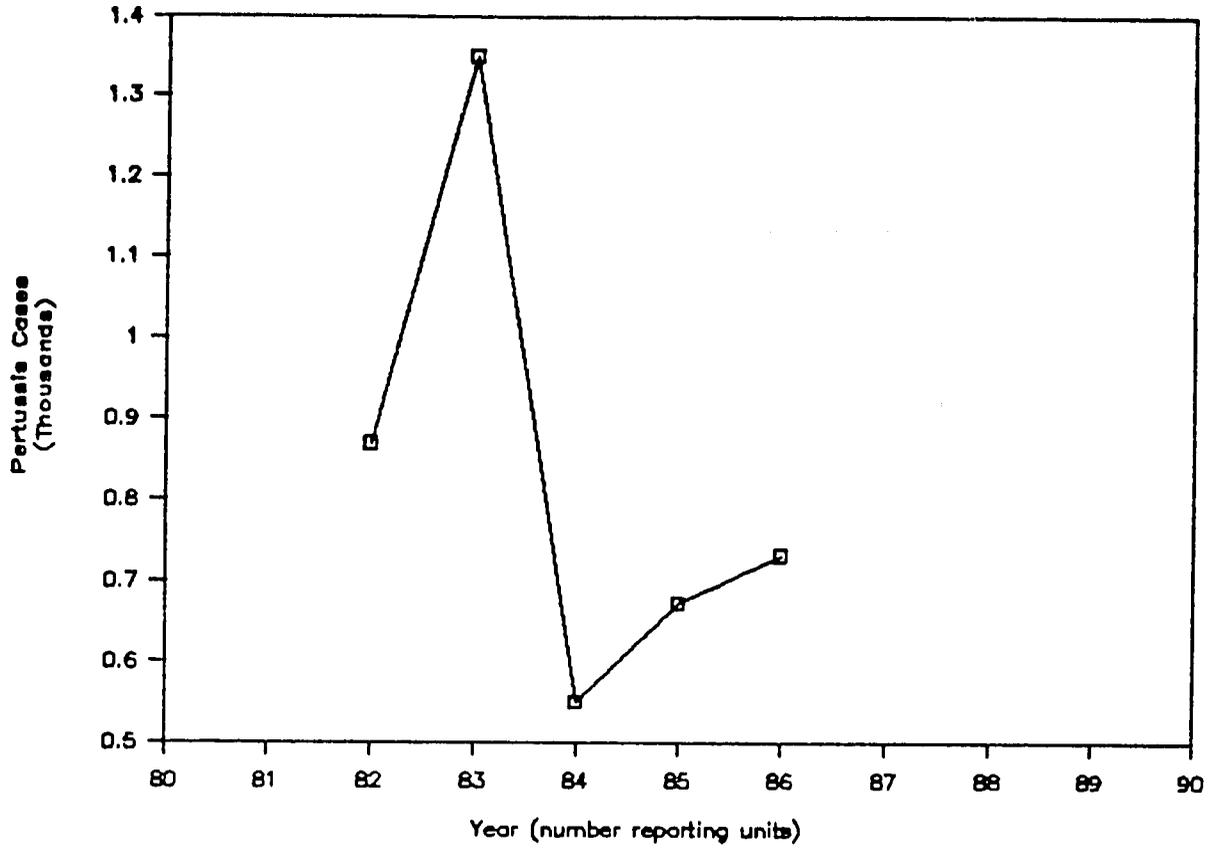
DPT: First and Third Doses, All Ages



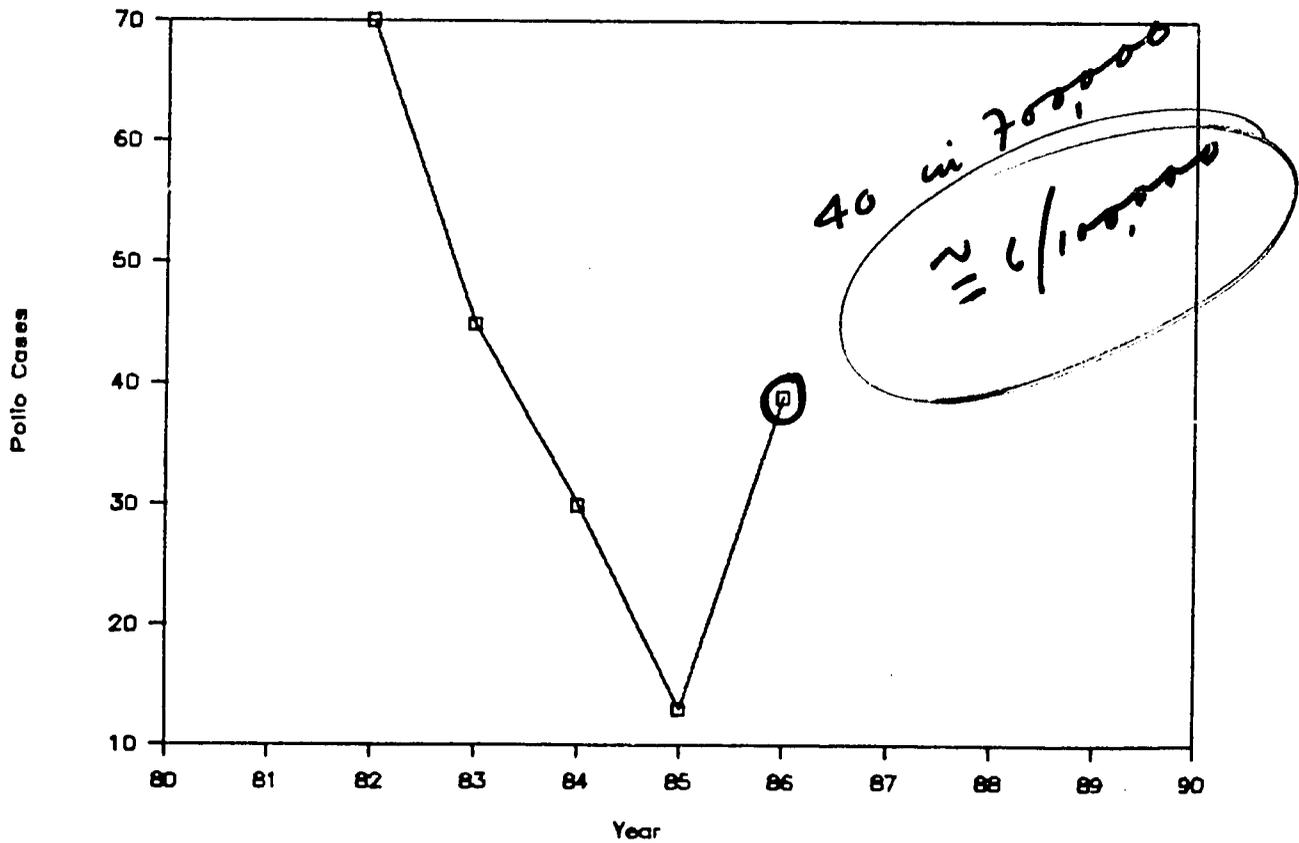
DPT: First Doses <12 Months and Number of Live Births



Pertussis Cases Reported by Year

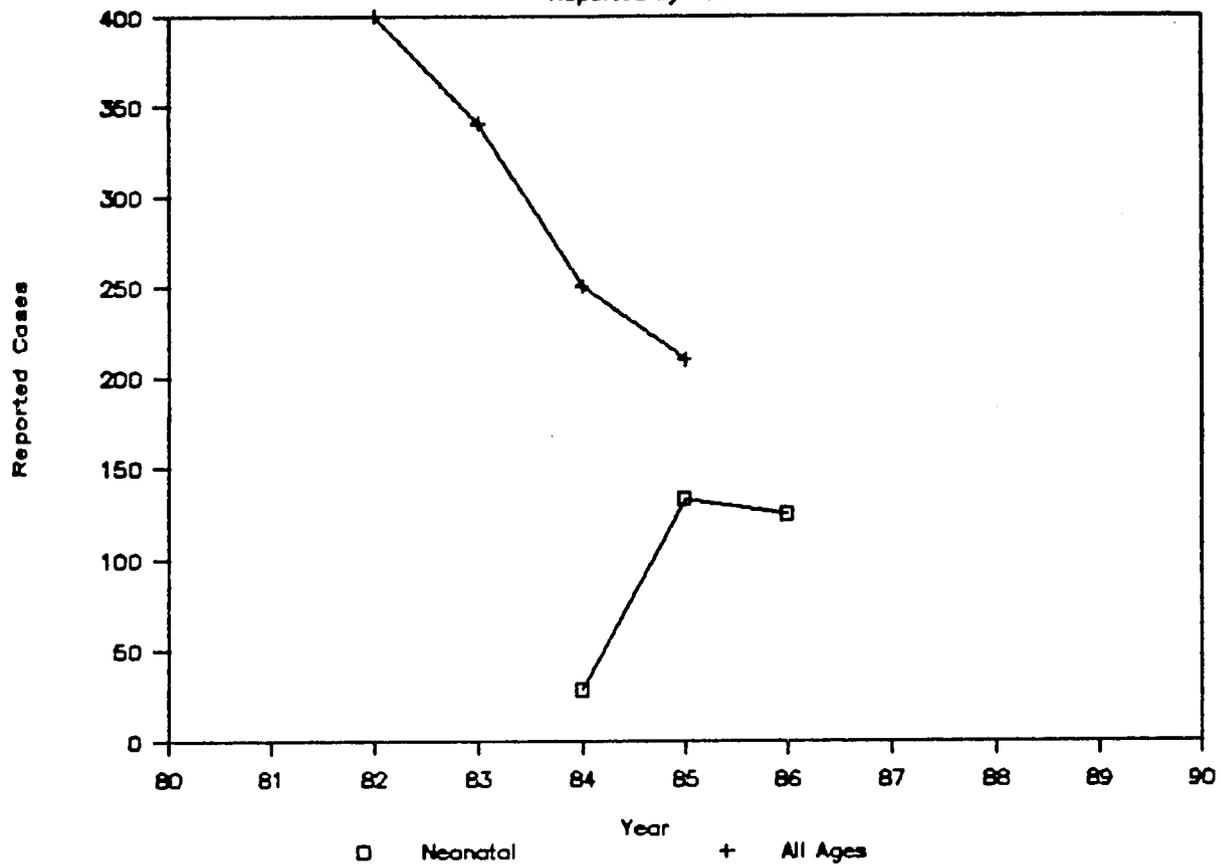


Polio Cases Reported by Year



Neonatal and All Tetanus Cases

Reported by Year



Estimated Number of Live Births Derived from the
Population and Birth Rate

Year	Population	Birth Rate per 1000	Number of Live Births
1980			0
1981			0
1982			0
1983			31,709
1984			32,689
1985			33,696
1986	700,000	48.0	33,600
1987			0
1988			0
1989			0
1990			0

Doses of Diphtheria-Pertussis-Tetanus (DPT) Vaccine
Administered by Year

Year	First Doses (all ages)	Third Doses (all ages)	Total Doses (all ages)	First Doses (12 mo.)	Total Doses (12 mo.)
1980					
1981					
1982					
1983				21,211	46,395
1984				20,558	49,293
1985	26,899	24,042	76,954	24,086	67,218
1986	26,196	24,665	76,903	23,539	67,781
1987					
1988					
1989					
1990					

Doses of Measles Vaccine Administered by Year

Year	Total Doses	Doses (12 mo.)
1980		
1981		
1982		
1983		12,916
1984		14,092
1985	23,096	16,335
1986	25,580	18,852
1987		
1988		
1989		
1990		

Doses of Tetanus Toxoid Administered by Year

Year	First Doses	Total Doses	Cumulative First Doses
1980			0
1981			0
1982			0
1983			0
1984			0
1985	17,903	28159	17903
1986		30572	17903
1987			17903
1988			17903
1989			17903
1990			17903

**Surveillance for Vaccine-Preventable Disease
Number of Reported Cases of Measles, Polio, Pertussis and Tetanus**

Year	Number of Reporting Units	Cases of Measles	Cases of Polio	Cases of Pertussis	Cases of Neonatal Tetanus	Total Cases of Tetanus
1980						
1981						
1982	87	6,100	70	870		400
1983	92	4,050	45	1,350		340
1984	115	14,900	30	550	28	250
1985	130	4,794	13	673	133	210
1986		2,202	39	732	125	
1987						
1988						
1989						
1990						

Packets of Oral Rehydration Salts Imported and Produced Locally

Year	Packets Produced Locally	Packets Imported	Total Packets
1980			0
1981			0
1982			0
1983			0
1984		430000	430000
1985			0
1986		135000	135000
1987			0
1988			0
1989			0
1990			0

Percentage of Hospitals Using National Malaria Policy and
Outpatient Facilities Using Malaria Policy

Year	Number Outpatient Facilities Sampled	Number Hospitals Sampled	Number Outp. Faci. Providing Treatment	Number Outp. Faci. Providing Prophylaxis	Number Hospitals Providing Treatment	Number Hospitals Providing Prophylaxis
1980						
1981						
1982						
1983						
1984						
1985						
1986						
1987						
1988						
1989						
1990						

Cases and Deaths Due to Malaria in Hospitalized
Children under Five Years of Age

Year	Number Hospitals Reporting	Cases of Malaria (< 5 yrs)	Deaths due to Malaria (< 5 yrs)
1980			
1981			
1982			
1983			
1984			
1985			
1986			
1987			
1988			
1989			
1990			

Percentage of Hospitals Using Oral Rehydration Salts and
Outpatient Facilities Using Oral Rehydration Therapy for
Treating Diarrhea

Year	Number Outpatient Facilities Sampled	Number Hospitals Sampled	Number Outpatient Facilities Using ORT	Number Hospitals Using ORS	Percent Outpatient Facilities Using ORT	Percent Hospitals Using ORS
1980					ERR	ERR
1981					ERR	ERR
1982					ERR	ERR
1983					ERR	ERR
1984					ERR	ERR
1985	140	12	140	12	100	100
1986					ERR	ERR
1987					ERR	ERR
1988					ERR	ERR
1989					ERR	ERR
1990					ERR	ERR

Cases and Deaths Due to Diarrhea in Hospitalized
Children under Five Years of Age

Year	Number Hospitals Reporting	Cases of Diarrhea (< 5 yrs)	Deaths due to Diarrhea (< 5 yrs)
1980			
1981		2000	85
1982		2750	60
1983		1600	48
1984	12	1447	45
1985	12	1394	40
1986			
1987			
1988			
1989			
1990			