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POLIOMYELITIS SURVEILLANCE REPORT NO.40 SEPTEMBER 2, 1955

Public Health Service Communicable Disease Center

Poliomyelitis Surveillance Unit 50 Seventh Street, N.E. Atlanta, Georgia

SPECIAL NOTE

The information in this report represents a factual summary of data reported to the Poliomyelitis Surveillance Unit from State Health Departments, Epidemic Intelligence Service Officers, participating laboratories and other pertinent sources. Much of the material is preliminary in nature and is subject to change. The distribution of this report is strictly limited to federal and state officials, to directors of participating laboratories and to other official or non-official persons having responsibility for the control of poliomyelitis in the nation. It is understood that this report will not be quoted in public nor will its contents be released to the press or to unauthorized persons. Any release of this information will be made by the Office of the Surgeon General, U. S. Public Health Service. State Health Officers, of course, are free to reveal any information they may wish concerning data from their state.

All readers should be cautioned regarding the limitations of data presented herein. Current and cumulative data are given concerning reported cases of poliomyelitis in vaccinated persons and among their familial and community contacts. It should be recognized that these data do not constitute a controlled evaluation of poliomyelitis vaccine. For this reason, interpretations and conclusions based on material in these reports must be guarded.

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I. Current Poliomyelitis Morbidity Trends

Poliomyelitis incidence by week for the current year, with similar data for the three preceding years, is presented in the accompanying figure, drawn from data published by the National Office of Vital Statistics. Incidence rose again this week and for the first time surpassed incidence in 1953 and 1954, although it is still lower than comparable incidence in 1952. The increase this week, however, was considerably less than that reported for several weeks.

Poliomyelitis incidence by states for the weeks ending July 23 through August 27 is presented in Table 1, together with a six-week total for this and the three previous years. Large increases were reported this week in New York, Ohio, and Wisconsin, whereas New Hampshire, Massachusetts, Illinois Iowa and Nebraska showed sizeable decreases; the southern and western states remained relatively stable.

II. Age Distribution Analysis

In addition to those states listed in PSU Report No. 38, the following states are now participating in The Age Distribution Analysis:

Arizona Colorado Georgia Idaho Indiana

New Jersey New York State North Dakota

Utah

The first tabulations from this study will appear in the very near future.

III. Special Studies

Dr. Joseph Melnick, Yale University School of Medicine, and Dr. David C. Davis, Epidemic Intelligence Service Officer, have confirmed a previous preliminary report (PSU Report No. 38) that Type I polio virus was the etiological agent responsible for the polio outbreak in a central New Hampshire resort community. In a "Report No. 2", Dr. Davis says:

"Report No. 1, based on complement fixation data, pointed to Type I polio virus as the etiological agent. This has now been confirmed by virus isolations. Type I polio virus has been demonstrated in 9 of 12 polio cases, 9 of 13 contacts, and 2 of 8 suspects and contacts of suspects."

Dr. Milton Feig, Wisconsin State Department of Health, and Dr. Malcolm Robbins, Epidemic Intelligence Service Officer, report that 204 cases of polio have now been investigated in Outagamie County, Wisconsin; (A preliminary report of this outbreak appeared in PSU Report No. 37.) Of these 204 cases, 128 (63%) are paralytic, 62 (30%) are non-paralytic, and 14 (7%) are as yet suspect cases. This county has a population of about 82,000 so that the rate is around 250 per 100,000. Five cases, 1 paralytic and 4 non-paralytic, have occurred among vaccinated children. Five deaths have occurred so far, none among vaccinated children. Investigations of cases in the neighboring counties of Brown and Winnebago are now under way.

The age distribution of these 204 cases, as reported by Dr. Robbins, as follows:

Age 1	Distribut	cion o	f Pol:	iomyelitis	in
Outagamie	County,	Wisco	nsin (Prelimina	ry Data)

Age	Cases	Percent	Paralytic	Non-Paralytic	Suspect
<1	8	2.0	7		7
<u> </u>		3.9		• .	1
2	14	6.8	12	1	÷
2	26	12.7	16	9	1
	13**	6.4	10**	2 3 6	1
4	17	8.3	14	3	
5	13	6.4	7	6	
0	12*	5.9	8*	4	
(6	2.9	2	4	
7 8 9 10	8 7 3 6	3.9	4	3	1
. 9	7	3.4	4 2	3	
10	3	1.5	2	1	
11	6	2.9	4		2
13	4	2.0			1.00
13	4	2.0	4 2	2	
14	4*	2.0	2*	2	1
15	Ó	0.0			
11 12 13 14 15 16 17		2.0	2	2	
17	<u>4</u> 6	2.9	2 3	2 2	1
18	2*	1.0	2*		_
19	2	1.0	2		
20	ĩ	0.5	-	1	
> 20	44	21.5	21	18	5
Total	204	100.0	128	62	14

^{*}Including one fatal case.
**Including two fatal cases.

"We have been keeping close check on the attack rates in vaccinated and unvaccinated children in the 6 and 7 year age groups. Since our mass vaccination program we have had 16 cases of poliomyelitis among 112,115 vaccinates and 13 cases among 33,259 non-vaccinates or rates of 14.3 and 39.1 per 100,000 respectively. Among these are: vaccinates, 2 paralytic and 14 non-paralytic; non-vaccinates, 6 paralytic and 7 non-paralytic. Although statistically significant, the numerators are still quite small and the season quite young. Nevertheless, if such proportions maintain themselves, it may speak well for even a single inoculation of 1 cc. of the Parke Davis lots

A further analysis of the 45 cases in 5-9 year olds (excluding the one suspect case) is considered later.

Dr. L. M. Schuman, Minnesota Department of Health, reports in a recent communication:

which we used (Parke Davis O29126A and Parke Davis O28849A) although the two groups may not be strictly comparable."

The attack rates are tabled below. This data includes cases reported from

Poliomyelitis Attack Rates in 6-7 Year Olds in Minnesota (Preliminary Data)

				Rates (pe	r 100	O00) Paralytic
·	Cases	Population	Total	Paralytic	Non-	Paralytic
Vaccinated	16	112,115	14.3	1.8		12.5
Not Vaccinated	13	33,259	39.1	18.1		21.0
(Adapted from	figures	reported by Dr	. L.M. Sc	chuman.)		3

May 20 through the end of August. The number of non-vaccinated in the 6-7 year age group has been tentatively estimated by subtracting the number vaccinated from the 1st and 2nd grade school enrollment. Dr. Schuman states that this discrepancy in the attack rates between vaccinated and non-vaccinated has consistantly appeared for some weeks.

In Polio Surveillance Release No. 9 of the California State Department of Public Health (for the week ending August 20), the following report appears:

"Since June 15, 32 cases of polio have been reported in vaccinated persons, all in the 5-9 age group. Of these, 7 are paralytic and 25 non-paralytic. During the same period, 78 cases have been reported in non-vaccinated persons, age 5-9, 42 paralytic and 38 non-paralytic. This difference in the paralytic rate between vaccinated and non-vaccinated cases is statistically significant."

Dr. Robert M. Albrecht, New York State Department of Health, reports the data in the table below on poliomyelitis in 6-10 year olds in New York State (excluding New York City) according to vaccination history. All cases reported as of September 2 having onsets after May 20 are included. The data are preliminary as yet, but a thorough follow-up on all cases is in progress, including muscle gradings and laboratory studies. The groups according to vaccination history are (1) vaccinated in 1955 only (almost all having a single inoculation), (2) vaccinated in the 1954 Field Trials only, (3) vaccinated in 1954 with a booster inoculation in 1955, and (4) not vaccinated in either year.

Also included in the table are similar data from Dr. Morris Greenberg, New York City Department of Health, forwarded by Dr. Albrecht. Very few boosters were given in New York City this year, so that group is included under the heading "vaccinated in 1954". This is data reported as of August 26 on 6-7 year olds.

Poliomyelitis in New York by Vaccination History (Preliminary Data)

Vaccination	Population		Case	es*	Rates	* (pe	r 100,00	0)
History	(in 1000's)	P	NP	Total	P	NP	Total	
	POLIO IN 6-10	YEAR	OLDS	IN UPSTA	TE NEW YO	RK		
Vaccimated 1955 Vaccinated 1954		10	45	58	2.8	12.7	16.4	
	20	0	6 3	8 6		7.7 15.0		
vaccinated	280	35	57	108	12.5	20.4	38.6	
TOTAL	731	45	111	180	6.2	15.2	24.6	
1.	POLIO IN 6-7	7 YEAR	OLDS	IN NEW	YORK CITY	-		
accinated 1955 accinated 1954 ot Vaccinated	166	6	5	11	3.6	3.0	6.6	
lot Vaccinated	. 6 . 87	0 7	0 16	0 23	8.0	18.4	26.4	
TOTAL P-paralytic N	259	13	21	34	5.0	8.1	13.1	

Cases with paralytic status as yet unspecified.

These preliminary reports from several states seem to indicate a possible trend, not only for lower attack rates among vaccinated children among unvaccinated comparison groups, but also a "switch" to milder cases occurring among vaccinated children have been non-paralytic suggesting a possible modifying effect. The data are summarized in the following table.

"The Non-Paralytic Switch" (Preliminary Data)

Study		1	Number of	Cases	*	Percent Non-	-Paralytic
Area	Age	Not Va	accinated	Vacc	inated	Not Vacci-	Vacci-
	Group	P	NP	P	NP	nated.	nated
Outagamie Co. (Wisconsin)	5-9	24	16	1	4	40%	80%
Caliesota	6-7	6	7	2	14	54%	88%
New Varnia	5-9	42	38	7	25	49%	78%
New York State (excl.N.Y.C.)	6-10	35	57	10	54	62%	84%
New York City	6-7	7	16	6	5	70%	45%

^{*}p paralytic. NP - non paralytic; unspecified and suspect cases not included.

IV. Routine Poliomyelitis Surveillance

The tabular summary lists in detail the polio cases accepted since August 24 with revisions of previously listed cases. Table 2 summarizes poliomyelitis cases in vaccinated individuals accepted by PSU through August 31. Table 3 presents a comparison of "reported" and "expected" cases among Children who received first inoculations in NFIP Clinics through May 7. The "expected" numbers represent rough estimates of the number of cases that would have occurred in the respective groups of first and second grade children if they had not been vaccinated.

V. Polio-Like Diseases

A laboratory confirmed case of Western Equine Encephalitis in Idaho has been reported to PSU by Dr. Gerald Silverman, Epidemic Intelligence Service Officer. Dr. Silverman Says:

"The patient is a twenty-two month old girl. She lives on a ranch where there are irrigation ditches and horses, and where the mosquito population has been noticeably heavy. She became ill on July 15, 1955, with high fever, sleepiness, and vomiting. For the next few days she had recurrent generalized convulsions and became stuporous and then comatose. On physical examination the most notable findings were: temperature 105, commensurate tachycardia, respiratory rate of 30, normal blood pressure, coma, spasticity (increased resistance to passive motion) of all four extremities, marked hemiparesis on the right, bilateral positive toe stretch, and bilateral extensor plantar responses. She survived the acute episode and became well enough to leave the hospital, but when I saw her at her home on August 17, she showed the tragic residua of severe mental retardation (she has not talked since she emerged from coma) and spastic hemiparesis on the right.

Spinal fluid showed 22 cells, all lymphocytes, and a protein of 60 mgm %. Her acute serum, run at Rocky Mountain Laboratory, was negative for the usual group of neurotropic viruses. Her convalescent serum gave a positive complement fixation response to Western Equine Encephalitis in a dilution of 1:128, the highest dilution that the laboratory runs."

Dr. Roy Feemster, Massachusetts State Department of Health, reports a possible outbreak of encephalitis in several towns in and surrounding Bristol Gounty, Massachusetts, along the Rhode Island border. A preliminary diagnosis of Eastern Equine Encephalitis has been made in 16 horses from nine towns in this area; the CDC Virus and Rickettsial Laboratory in Montgomery, Alabama, is running laboratory tests on specimens submitted. Two unconfirmed cases in humans have been reported, one in Rhode Island and one in Massachusetts (Cape Cod), the later case having a history of recent polio infection within the household. There are also two cases with a diagnosis of polio encephalitis hospitalized in Boston.

(This report was prepared by Dr. Wm. Jackson Hall, Dr. Neal Nathanson, and Dr. Alexander D. Langmuir, with assistance from the Statistics Section, CDO.)

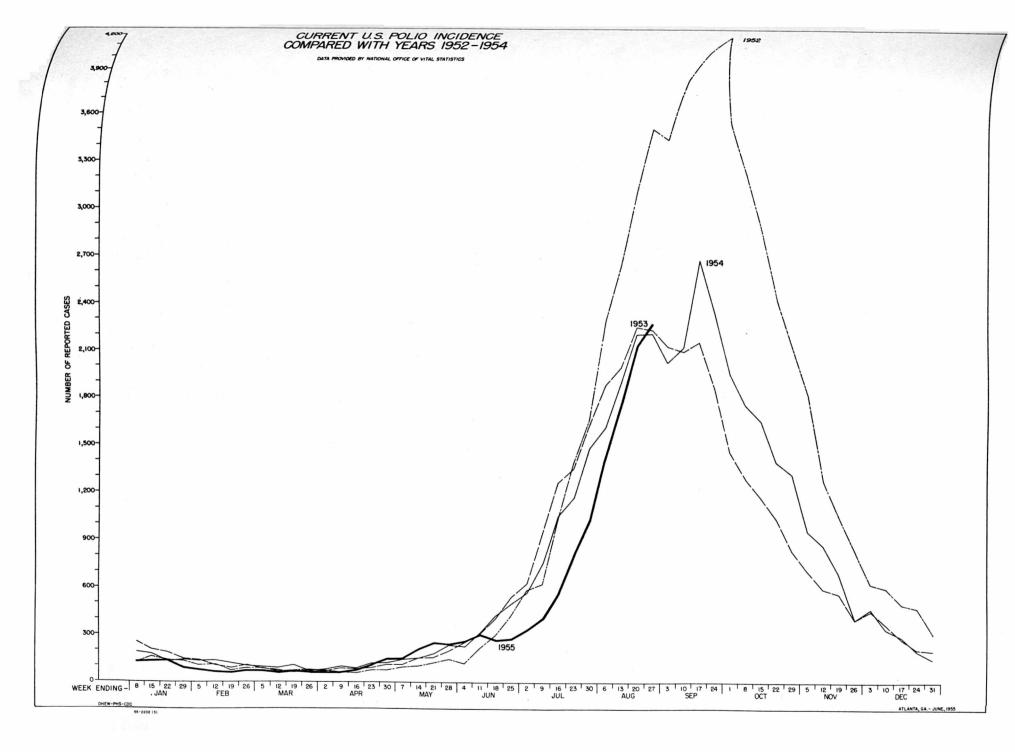


Table 1
TREND OF 1955 POLIOMYELITIS INCIDENCE

State	7/23				to NOV inding: 8/20		6 Week Total	Tot	mparabl cals In 1953 l	ı:
United States	812	1037		1786	2138	2279	9464		11353	
North East Maine New Hampshire	5	2	11	18	13	18	67	43	125	40
Vermont Massachusetts	9 1 146	16 4 204	16 2 309	24 4 411	41 20 448	27 13 355	133 44 1873	27 12 222	26 153	17 5 161
Rhode Island Connecticut	4 20	8 29	19 38	16 50	34 55	36 56	117	23 95	74	12 145
New York New Jersey Pennsylvania	42 12 12	65 11 27	102 21 30	117 39 43	169 55 51	238 59 68	733 197 231	478 202 299	900 268 328	755 222 351
Vorth Central Ohio Indiana Illinois Michigan Wisconsin	35 16 19 36 40	38 22 54 50 56	42 29 68 78 105	94 27 75 92 135	91 26 147 94 160	124 35 111 116 353	424 155 474 466 849	584 234 577 669 150	884 210 819 880 225	963 290 961 1063 494
Minnesota Iowa Missouri North Dakota South Dakota Nebraska Kansas	15 24 10 1 - 16 6	24 27 6 3 1 19	28 45 9 2 8 28 19	73 61 16 4 1 16 12	62 70 13 5 3 23	60 44 18 3 11 11	262 271 72 18 24 113 90	226 463 179 40 27 215 248	871 274 293 76 58 86 176	765 1067 219 50 150 631 395
South			-/							
Delaware Maryland District of Col. Virginia West Virginia North Carolina South Carolina Georgia Florida	1 5 18 4 10 14 6 7	2 9 - 21 4 22 8 5	7 8 5 25 6 23 21 15	3 18 1 23 11 36 23 10 12	4 23 27 9 43 21 4 26	3 25 4 25 14 38 21 14 16	20 88 17 139 48 172 108 54	18 43 30 193 76 307 104 246 336	14 191 23 321 206 379 61 132 124	38 33 52 256 249 112 22 160 130
Kentucky Tennessee Alabama Mississippi	13 7 8 7	17 13 8 8	38 6 4 10	43 8 11 9	36 20 13 10	36 16 NR 6	183 70 44 50	246 207 111 186	120 273 118 101	597 164 87 256
Arkansas Louisiana Oklahoma Texas	6 20 19 89	11 9 27 71	9 14 21 81	16 12 5 79	10 16 22 98	17 11 15 80	69 82 109 498	101 159 203 954	97 115 193 460	104 295 366 1354

Table 1 (Continued)

		Duri	ng We	ek End	NOVS*		6 Week	m-+	nparable als In: 1953 1952	
State	7/23	7/30	8/6	8/13	8/20	8/27	Total	1954	1922	
West					j	• ,			61 61	
Montana	_	1	4	6	9	3	23	31	16 84	
Idaho	7	7	16	9	6	10	55	27	22 21	
Wyoming	3	3	-	1	3	-	10	74		
Colorado	9	9	9	8	18	10	63	123	11 -10	
New Mexico	7	4	6	10	5	10	42	56	20 00	
Arizona	1	2	4	2	10	3	22	61	194 21	
Utah	-	_	í	6	-	4	11	57	22 11	
Nevada	4	1	2	-	1	i	9	52	13 4	
Washington Oregon California	5 9 59	12 17 57	13 10 33	14 12 70	17 14 71	16 18 86	77 80 376	95 75 1405	86 311 62 95 942 541	

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^{*}National Office of Vital Statistics

Table 1
TREND OF 1955 POLIOMYELITIS INCIDENCE

State	7/23	Du 7/30		Veek E 8/13	inding: 8/20		6 Week Total		tals In 1953	
United States	812	1037	1412	1786	2138	2279	9464	10589	11353	1460
North East										
Maine	5	2	11	18	13	18	67	43	125	40
New Hampshire	9	16	16	24	41	27	133	27	45	17
vermont.	í	4	2	4	20	13	44	12	26	5
Massachusetts	146	204	309	411	448	355	1873	222	153	161
mode Island	4	8	19	16	34	36	117	23	74	12
Connecticut	20	29	38	50	55	56	248	95	106	145
New York	42	65	102	117	169	238	733	478	900	755
New Jersey	12	ii	21	39	55	59	197	202	268	222
Pennsylvania	12	27	30	43	51	68	231	299	328	351
North Central										
Ohio	25	26		01	07	101	101	FOI	da	062
Indiana	35	38 22	42	94	91 26	124	424	584	884 210	963
Illinois	16		29 68	27		35 111	155	234	819	290 961
Michigan	19 36	54 50	78	75 92	147 94	116	474 466	577 669	880	
Wisconsin	40	56	105	135	160	353	849	150	225	494
Minnesota							0/0	201	dna	
Iowa	15	24	28	73	62	60	262	226	871	765
Missouri	24	27	45	61	70	44	271	463	274	1067 219
North Dakota	10	6	9 2	16 4	13	18 3	72 18	179 40	293 76	50
South Dakets	1 -	3	8	1	5 3	11	24	27	58	150
" "doraska	16	19	28	16	23	11	113	215	86	631
Kansas	6	12	19	12	20	21	90	248	176	395
South										
Delawane	1	2	7	3	4	3	20	18	14	38
Mary] and	_	9	8	18	23	25	88	43	191	33
Ulstriat as dar	. 5	-	5	10	2	4	17	30	23	52
	18	21	25	23	27	25	139	193	321	256
west Winning	4	4	6	11	9	14	48	76	206	249
	10	22	23	36	43	38	172	307	379	112
	14	8	21	23	21	21	108	104	61	22
-501075	6	5	15	10	4	14	54	246	132	160
rtorida	7	11	12	12	26	16	84	336	124	130
Kentucky	13	17	38	43	36	36	183	246	120	597
- annon-	7	13	6	8	20	16	70	207	273	164
Tabama	8	8	4	11	13	NR	44	111	118	87
^{*113S} issippi	7	8	10	9	10	6	50	186	101	256
Arkenge	6	11	9	16	10	17	69	101	97	104
4001101	20	9	14	12	16	11	82	159	115	295
AIDha	19	27	21	5	22	15	109	203	193	366
Texas	89	71	81	79	98	80	498	954	460	1354

Table 1 (Continued)

State	7/23	Dur	ing We	ek Er		. 6	Week Total	w-T	parable als In: 1953 19	
West			•					03	21	61
Montana	_	1	4	6	9	3	23	31 27	16	84
Idaho	7	7	16	9	6	10	55		20	27
Wyoming	3	3	-	1	3	-	10	74	$\tilde{7}$ 1	166
Colorado	9	9	9	8	18	10	63	123	28 1	158
New Mexico	7	4	6	10	5	10	42	56	194	90
Arizona	1	2	4	2	10	3	22	61		31
Utah	-		1	6	-	4	11	57	7)	14
Nevada	4	1	2	-	1	1	9	52	13	
Washington Oregon California	5 9 59	12 17 57	13 10 33	14 12 70	17 14 71	16 18 86	77 80 376	95 75 1405	62	311 95 541

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^{*}National Office of Vital Statistics

Peliomyelitis Cases in Vaccinated Individuals (PSU Accepted Cases through August 31, 1955)

		С			I.	nufacturer 1	PD	arary or		PM		H	
		Р	NP	P	NP	P	NP		P	NP	F	-	NP
	CASES VACO	CINATE	5-7	OR BEFO	RE WITH	ONSETS 30	DAYS O	R LESS	AFTER	VACCIN	ATION**	*	
otals through 8-24	(Revised)	60 74	14	18	24	3	2		3	2	. 9	12	3
o New Cases 8-25 th	rough 8-31				-,-	,							
	CASES VAC	CINATE	5-7	OR BEFO	RE WITH	ONSETS 31	DAYS O	R MORE	AFTER	VACCI	ation**	¥	
otals through 8-24 New Cases 8-25 through		6	4	17 1	59 4	5 1	20 0		8	7 0	5		9
otals through 8-31		6	h	18	63	6	20		8	7	6		10
		10	-		81.	26				15		16	
	CASES VAC		•		81.	26 ONSETS 30 I		LESS A			TION***		
Potals through 8-24			•		81.	_		LESS A			ATION*** 1 C		2 0
Potals through 8-24 New Cases 8-25 through 8-31	ugh 8-31		•	OR LATE	81. R WITH 20 3	ONSETS 30 I 18 0	DAYS OR 18 2 20	LESS A	FTER O	VACCINA 2 1	1		
otals through 8-24 lew Cases 8-25 thro	ugh 8-31	C INATE	D 5-8	OR LATE 7 1 8	81. R WITH 20 3	ONSETS 30 I	DAYS OR 18 2 20		FTER OO	VACCINA 2 1 3	1 C	3	0
Potals through 8-24 New Cases 8-25 through 8-31 Potals through 8-31	ugh 8-31 CASES VAC (Revised)	C INATE	D 5-8	OR LATE 8 OR LATE 2	81. R WITH 20 3	ONSETS 30 I 18 0 18 38	DAYS OR 18 2 20		FTER OO	VACCINA 2 1 3	1 C	3	0
Potals through 8-24 New Cases 8-25 through 8-31	CASES VAC (Revised) ugh 8-31	C INATE	D 5-8	OR LATE 7 1 8	81. R WITH 20 3	ONSETS 30 I 18 0 18 38 ONSETS 31 I	DAYS OR 18 2 20 3 DAYS OR		FTER OO	VACCINA 2 1 3	1 C 1 YTION***	3	2

Table 3

Comparison of Reported* and Expected** Cases of Poliomyelitis

Among Children Inoculated in NFIP Clinics from April 15 to May 7, 1955

Vaccine Mfr.*** And Number Vaccinated****C		5 Weeks Apr.17 -May 21	5 Weeks May 22- June 25		Aug.	Aug. 13	Aug. 20	Aug.
Reported	P	31	2	2	0	0	_	-
CUTTER	NP	11	5	3		ĩ	_	
303,000	Total	42	7	5	3 3	ī	0	0
Expected	Total	11	12	16	4	4	5	
Reported	P	17	11	12	0	0	1	-
LILLY	NP	22	38	30	8	5	1	0
2,514,000	Total	39	49	42	8	5	2	U
Expected	Total	26	52	95	26	32	30	7 E
Reported	P	1	3	4	1	_	-	-
PARKE-DAVIS	NP	2	4.	16	0	~	-	-
860,000	Total	3	7	20	1	0	0	. 0
Expected	Total	6	11	43	19	26	22	
Reported	Р	2	4	5	0	_	_	
PITMAN-MOORE	NP	2	1	5	2	-	-	0
411,000	Total	4	5	10	2	0	0	
Expected	Total	2	4	18	6	7	6	
Reported	P	8	3	4	_	_	-	0-9 10-9 10-9
WYETH	NP	3	4	6	-	_	-	0
775,000	Total	11	7	10	0	0	0	
Expected	Total	4	9	20	10	11	15	0 4

^{*}Reported Cases include only cases accepted by PSU through August 31 and vaccinated in NFIP Clinics April 16 through May 7, 1955.

^{**}Expected Cases among this group of children estimated from 1955 incidence of poliomyelitis (paralytic and non-paralytic) reported to National Office of Vital Statistics by the States.

^{***}CUTTER vaccine was used in Idaho, Nevada, Arizona, New Mexico and southern California. LILLY vaccine was used in Texas, Oklahoma, Louisiana, Arkansas, Mississippi, Alabama, Tennessee, Florida, Georgia, South Carolina, North Carolina, Virginia, West Virginia, Indiana and parts of Ohio, California and Colorado. PARKE-DAVIS vaccine was used in Michigan, Illinois, Iowa, Wyoming, Utah, and part of Colorado. PITMAN-MOORE vaccine was used in Kentucky, Missouri, Kansas, and Nebraska. WYETH vaccine was used in Pennsylvania, Delaware, Maryland, District of Columbia and part of Ohio.

POLIOMYELITIS AMONG VACCINATED INDIVIDUALS (PSU Accepted Cases August 25 - August 31, 1955)

PSU Case NO.	County	Ini- tials	Age	Sex	Date Inoc.	Date 1st Symp.	Date 1st Para.	Site Inoc.	Site 1st Para.	Mfr.	Lot No.	Remarks
						N	EW					
Mich-15 Mich-16	Wayne Wayne	AB NR	6	F F	4-25 4-22 8-2	6 - 29 8 - 3	? 8 - 3	LA ? ?	?	PD PD PM	028860в 028860в ?	
Cal-59 NY-39	L. A.Co. Erie	DWB DH	7 11	M M	5-16 5-23	5 - 30 7 - 10	None None	RA ?	None None	PD PD	028848A 029129A	Spinal fluid, 270 cells.
NY-41 NY-41	Erie Erie	RB CR	8 7	M F	5-? 5-?	7 -1 9 7 - 23	None None	?	None None	PD PD	028850B 029129A	Spinal fluid,
NY-42	Broome	DE	7	M	5-20	7-29	None	LA	None	PD	029129A	Spinal fluid,
NY-43	Chautauqua	CEB	8	M	5-?	7-31	None	LA	None	PD	029129A	Spinal fluid 278 cells.
MX-fifi	Erie	RA	7	M	6-16	7-13	None	?	None	PD	028850В	Spinal fluid 267 cells
NY-45	Erie	DG	8	M	5-?	7-20	None	?	None	PD	029129A	
NY-46	Westcheste	r NJR	8,	F	5-?	7-18	None	?	None	W	723lı 7236	Vaccinated in Maryland. Spinal fluid, 350 cells.
NY-47	Schoharie	EK	7	M	5-19 8-17	8-18	None	IA IA	None	PD L	0291280 9184 -6 53-	802 Spinal fluid,
их-48	Suffolk	SH	6	M	L-26	8 –1 lı	None	LA	None	L	5079-64,93	100 cells. 38 Vaccinated in Florida, spinal
NY-1:9 NY-50	New York Queens	AL SY	7 8	F M	5-25 5-?	8 –1 6 8 –1 2	None None	LA LA	None None	PD PD	?029128C 029129A	fluid, 65 cells. Spinal fluid, 17 cells.

PSU CASE NO.	County	Ini- tials	Age	Sex	Date Inoc.	Date 1st Symp.
						NEW
NY -51	Chautauqua	JM 7	7	M	5-19	8-18
Fla-16	Bay	SW	7	F	8 - 9 6 - 20	8-1
W.Va-5	Greenbrier	JWM	6	M	4-26 7-25	8-16
Ind-3	Delaware,	JH	8	F	May	7 - 25
Ind-4	Dearborn	JE	8	F	May	8-1
Wisc-16	Brown	RLH	7	M	5 - 20 6-20	8-2
Wisc-17 Wisc-18	Manitowoc Waukesha	BB CK	8	M M	5-20 5-23 6-16	8-17 8-21
Penn-11	Delaware	AD	7	M	5-?	7-16
Penn-12	Dauphin	CH	8	M	5-28	8-21
Penn-13	Delaware	FG	6	M	5-?	7-26
NH-5	Strafford	DT	9	M	6-7	8-23
Minn-10	Meeker	DR	8	M	5-?	8 – 24
Cal-73	Sacrament	o KTE	8	M	5-25 8-6	8-17

Date		Site		· · · · · · · · · · · · · · · · · · ·	
lst	Site	lst		Lot	
Para.	Inoc.	Para.	Mfr	. No.	Remarks
(Contin	ued)				
None	I.A I.A	None	PD L 6	029129A 002-653-805	Spinal fluid,188 cells.
None	Arm-	None	L	5206-649	347 Spinal fluid, Positive
8-23	$^{ m LL}$	Leg	L L	8122 - 649	334
7-25	?	?	L	?8122-649 ?8123-649	
None	?	None	L	?8122-649 ?8123-649	
None	Arm Arm	None	PD PD	029127A	Spinal fluid, 8 cells
8–24	LA	Bulba	r PD	029127A	
8-25	LA RA	LL	PD PD	029127A	
None	?	None	W	235	Spinal fluid, 235 cells.
None	IA	None	W	?	Spinal fluid, 77 cells.
7 - 24	?	?	W	?235, ?236,?238	.,
None	?	None	PD	029126A	Spinal fluid, 65 cells, also vaccinated in 1954 field trials.
None	?	None	PD	029126A	
None	LA AI	None	L	8124-649336 8199-649331	or 8123-649335

PS U CASE	NO. County	Ini- tials	. Age:	Sex	Date Inoc.	Date 1st Symp,	Date 1st Fara,	Site Inoc.	Site 1st Para.	Mfr.	Lot No.	Remarks
						NE√	(Contin	ued)				
/a-19	Fairfax	RB	7	M	4-27	8-9	None	Arm	None	L	8122 - 64,9334	Spinal fluid, 119 cells.
/a – 20	Arlington	EJV	7	M	4-25	8-10	None	IA	None	L	8122 - 649334	Spinal fluid, 231 cells.

PSU CASENNO.	County	Ini-	Age	Sex	Date Inoc.	Date 1st Symp.	Date lst Para.	Site Inoc.	Site 1st Para.	Mfr.	Lot No.	Remarks
					(Re		EVISION [tems Ur	S derline	ed)			
NY-28	Suffolk	SA	10	F	5-20	<u>8-6</u>	None	LA	None	PD	0291280	Spinal fluid 609 cells
Va-15	Eliz City	SL	8	F	5-19	7-22	7-22	Arm	LL	L	8122-6lg	
Cal-9	L. A.Co.	RN	1	M	4-19	4-24	4-26	IA	$rac{ ext{LL}}{ ext{Arm}}$	C	E5972	Quadriplegia Type 3 (6-4)
Cal-11	Riverside	DJM	8	F	կ-18	Lı-23	Ļ - 26	RL	RL	C	E5927	Type I virus in stool 5-7, (Dr. Lennette)
Cal-28	L. A. Co.	MK	7	М	4-22	5-2	None	LA	None	С	E6037	Type 2 virus 5-25 (Dr. Lennette) Spinal Fluid 1 cells
Ky=1	Rowan	GC	7	M	4-28	6 - 20	6-26	?	Spina	al PM	175B027	Untypable virus 8-23 (Dr. Schulte)
Miss-l	Sunflower		6	F	4-18	4-20	None	RA	None		80-649339	AND THE PROPERTY OF THE PROPER
Miss-6	Panola	JP	8	M	Լ⊶20 5 –1 8	7- 5	None	LA LA	None		30-61;93 <u>14</u> 9	Untypable agent recovered from siblings (Potash 8-17.)
Fla-13	Hillsboro	ugh TT	6	M	4-28	6 –1 4	None	?	None	L <u>507</u>	9-61 ₁ 9338	(2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2