

POLIOMYELITIS SURVEILLANCE REPORT

NO. 114 THIRD YEAR JUNE 21, 1957

U.S. Department of Health, Education and Welfare
Public Health Service Bureau of State Services
Communicable Disease Center
Poliomyelitis Surveillance Unit
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Atlanta, Georgia

The total of 89 cases has been reported for the 24th week of the year since 1947 when 42 cases were reported. The totals for this week during the years 1948 through 1956 ranged between 102 (in 1951) and 121 (in 1954) cases. The national cumulative total for the 1957 calendar year is 1133 cases, also the lowest since 1947 when 1045 cases had been reported.

Total national reported poliomyelitis		Total for 1957	
Week	Cumulative	Week	Cumulative
24th	1133	24th	1133
25th	1133	25th	1133
26th	1133	26th	1133
27th	1133	27th	1133
28th	1133	28th	1133
29th	1133	29th	1133
30th	1133	30th	1133
31st	1133	31st	1133
1st	1133	1st	1133
2nd	1133	2nd	1133
3rd	1133	3rd	1133
4th	1133	4th	1133
5th	1133	5th	1133
6th	1133	6th	1133
7th	1133	7th	1133
8th	1133	8th	1133
9th	1133	9th	1133
10th	1133	10th	1133
11th	1133	11th	1133
12th	1133	12th	1133
13th	1133	13th	1133
14th	1133	14th	1133
15th	1133	15th	1133
16th	1133	16th	1133
17th	1133	17th	1133
18th	1133	18th	1133
19th	1133	19th	1133
20th	1133	20th	1133
21st	1133	21st	1133
22nd	1133	22nd	1133
23rd	1133	23rd	1133
24th	1133	24th	1133

SPECIAL NOTE

The information in this report represents a factual summary of preliminary data reported to the Poliomyelitis Surveillance Unit from State Health Departments, Epidemic Intelligence Service Officers, participating laboratories and other pertinent sources. It is understood that the contents of these reports will not be released to the press, except by the Office of the Surgeon General, Public Health Service, U. S. Department of Health, Education and Welfare. State Health Officers, of course, are free to release any information they may wish concerning data from their state.

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I. Current Poliomyelitis Morbidity Trends

A total of 89 poliomyelitis cases was reported to the National Office of Vital Statistics for the week ending June 15, 1957. This represents the fourth consecutive week that national incidence has shown a small increase for each week with 59, 61, 64, and 74 cases reported for the preceding weeks since 5-18. Figure 1 presents national poliomyelitis incidence by weeks since April, 1957, with similar weekly figures for April to July of the years 1952 through 1956.

The total of 89 cases last week represents the lowest incidence for the 24th week of the year since 1947 when 45 cases were reported. The totals for this week during the years 1948 through 1956 ranged between 162 (in 1951) and 421 (in 1954) cases. The national cumulative total for the 1957 calendar year is 1133 cases, also the lowest since 1947 when 1045 cases had been reported.

	<u>Total national reported polio incidence</u>			
			<u>1948 thru 1956</u>	
	<u>1957</u>	<u>1947</u>	<u>Minimum</u>	<u>Maximum</u>
24th Week	89	45	162 (1951)	421 (1954)
Cumulative total through 24th Week	1133	1045	1707 (1948)	3656 (1954)

Total for whole year - 10,789 15,463(1956) 57,440 (1952)

Incidence by states and regions for the past six weeks is presented in Table 1, with six-week totals for the comparable periods of the previous four years. During the past week scattered slight increases in polio incidence relative to the previous week were reported from seven North Central and three South Eastern states. In addition, Texas incidence increased again to 30 cases, following the totals of 32 and 20 reported for the preceding weeks ending 6-1 and 6-8.

* * * *

Dr. G.E. McDaniel, Director, Division of Disease Control, South Carolina State Board of Health, has reported preliminary data of interest concerning South Carolina polio incidence. Through June 19 a cumulative total of 37 cases have been reported for the 1957 calendar year. This total has been exceeded only once (1954) during the years 1945 through 1956. A relatively heavy incidence during the winter months of January and February (see PSU Report No. 106, March 1, 1957) contributed to this present high cumulative total. Seven of the 1957 cases occurred in Richland County (Columbia), 7 in Aiken County (near Augusta, Ga.), 3 in Dillon County and the remainder scattered among 12 additional counties. Of the 34 cases reported through 6-15, 22 were paralytic, 4 non-paralytic, and 8 as yet unspecified. Only 3 of the total occurred in vaccinated individuals. Over 75% of the cases have occurred in white persons.

II. Routine Poliomyelitis Surveillance

During the week June 13 - 20, the Polio Surveillance Unit received reports of nine poliomyelitis cases occurring within 30 days of a polio vaccine inoculation. Of these nine cases, three were non-paralytic and six were paralytic.

The six paralytic cases are listed in detail in Table 2. Specific lot numbers of vaccine used has been determined for three of the cases; no other cases have been reported to PSU in association with these three lots. One of the paralytic cases developed quadriparesis; in the remaining five cases there was no correlation of site of last vaccine inoculation with site of first paralysis.

III. Triply-Vaccinated Cases

A total of twenty 1957 triply-vaccinated cases has been reported to PSU through June 19, 1957. Of these 20 cases, 7 were reported as paralytic and 13 as non-paralytic. The paralytic cases, one each from the states of Missouri, California (4 inoculations), New Mexico (fatal), Kansas, Texas, Nebraska, and New York, are listed in Table 3. Of these 7 cases, 4 (3V Nos. 27, 29, 34, and 37) were previously listed in PSU Reports Nos. 108 and 110. It may be noted that laboratory evidence suggested Type III poliovirus infection in the fatal New Mexico case (3V-34).

The 13 non-paralytic 1957 triply-vaccinated cases were reported from 7 states; 4 cases from Arizona, 3 from Nebraska, 2 from Louisiana, and one each from California, Iowa, Oregon and Washington.

During the past month five additional 1956 paralytic polio cases have been reported to PSU, bringing to 35 the total of reported 1956 triply-vaccinated paralytic cases (including two possible paralytic cases).

(This Report was prepared by Dr. Lauri David Thrupp and Miss Helen Forester, with assistance from the Statistics Section, CDC.)

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Fig. 1

CURRENT U.S. POLIO INCIDENCE COMPARED WITH YEARS 1952-1956

DATA PROVIDED BY NATIONAL OFFICE OF VITAL STATISTICS

NUMBER OF REPORTED CASES

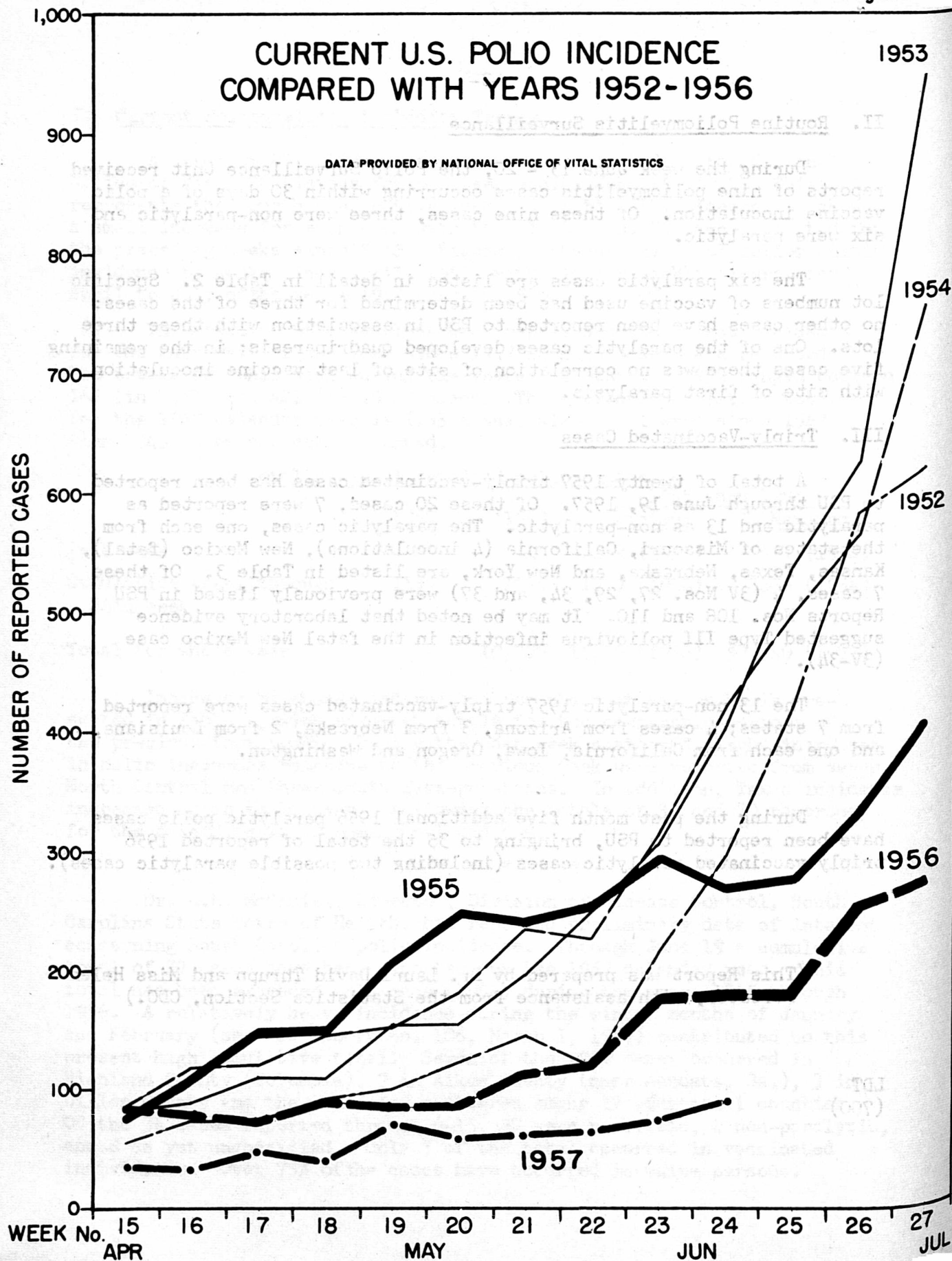


Table 1
TREND OF 1957 POLIOMYELITIS INCIDENCE

State and Region	Cases Reported to NOVS* for Week Ending:						Six Week Total	Comparable Six Week Totals in:			
	5-11	5-18	5-25	6-1	6-8	6-15		1956	1955	1954	1953
UNITED STATES	71	59	61	64	74	89	418	759	1509	1529	1464
NORTH EAST	6	1	2	1	1	3	14	48	163	56	124
Maine	-	-	-	-	-	-	-	1	2	-	7
New Hampshire	-	-	-	-	-	-	-	-	-	2	6
Vermont	1	-	1	-	-	-	2	1	1	-	-
Massachusetts	1	-	-	-	-	1	2	7	4	3	11
Rhode Island	-	-	-	-	-	-	-	-	2	-	-
Connecticut	1	-	-	-	-	-	1	5	-	7	10
New York	1	-	1	1	-	2	5	21	91	28	65
New Jersey	-	-	-	-	1	-	1	5	16	7	10
Pennsylvania	2	1	-	-	-	-	3	8	47	9	15
NORTH CENTRAL	7	7	10	6	4	14	48	129	273	223	298
Ohio	1	1	-	1	-	2	5	13	46	43	44
Indiana	-	-	-	-	-	1	1	5	17	9	20
Illinois	-	1	2	-	1	-	4	41	47	20	30
Michigan	-	4	1	3	-	3	11	14	42	51	22
Wisconsin	1	-	-	-	-	-	1	14	24	15	11
Minnesota	1	-	-	-	-	-	1	7	20	7	47
Iowa	-	1	-	-	-	2	3	14	23	25	27
Missouri	2	-	3	1	1	2	9	10	14	17	45
North Dakota	-	-	-	-	-	-	-	-	4	2	5
South Dakota	-	-	-	-	2	-	2	1	11	2	4
Nebraska	1	-	4	-	-	3	8	7	13	17	18
Kansas	1	-	-	1	-	1	3	3	12	15	25
NORTH WEST	4	-	1	1	1	1	8	25	125	33	34
Montana	-	-	-	-	-	-	-	1	4	1	4
Wyoming	3	-	-	-	-	-	3	1	2	3	5
Idaho	1	-	-	-	-	-	1	6	64	4	2
Washington	-	-	-	-	-	-	-	7	26	15	10
Oregon	-	-	1	1	1	1	4	10	29	10	13

* National Office of Vital Statistics

(CONTINUED ON NEXT PAGE)

Table 1 (Continued)

State and Region	Cases Reported to NOV5* for week Ending:						Six Week Total	Comparable Six Week Totals in:			
	5-11	5-18	5-25	6-1	6-8	6-15		1956	1955	1954	1953
SOUTH EAST	7	5	10	5	16	17	60	106	276	349	325
Delaware	-	-	-	-	-	-	-	2	15	1	-
Maryland	-	-	-	-	-	-	-	4	21	4	7
D. C.	-	-	-	-	-	-	-	-	3	1	3
Virginia	1	-	1	2	1	-	5	8	22	17	15
West Virginia	-	-	-	-	1	1	2	6	13	12	16
North Carolina	-	1	3	-	2	2	8	10	17	13	47
South Carolina	-	-	2	2	3	5	12	9	13	28	9
Georgia	-	1	1	-	-	3	5	5	34	63	39
Florida	5	2	1	-	6	2	16	38	71	133	42
Kentucky	1	-	-	1	-	3	5	11	24	16	16
Tennessee	-	1	-	-	1	1	3	8	14	17	31
Alabama	-	-	2	-	2	-	4	5	29	44	96
SOUTH CENTRAL	26	30	19	42	32	39	188	259	389	524	440
Mississippi	2	1	-	3	3	1	10	13	37	38	47
Arkansas	1	5	-	2	-	-	8	2	24	35	28
Louisiana	8	1	1	4	5	6	25	52	55	60	54
Oklahoma	-	-	-	1	4	2	7	14	14	43	41
Texas	15	23	18	32	20	30	138	178	259	348	270
SOUTH WEST	21	16	19	9	20	15	100	192	283	344	243
Colorado	-	1	2	1	2	-	6	3	30	12	17
New Mexico	2	1	1	-	2	1	7	5	4	7	4
Arizona	1	-	-	2	1	-	4	11	12	22	18
Utah	-	-	4	-	-	1	5	3	4	6	8
Nevada	-	-	-	-	-	-	-	1	21	8	-
California	18	14	12	6	15	13	78	169	212	289	196
TERRITORIES	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	3	2	8	1
Hawaii	-	-	-	-	-	-	-	5	8	39	7
Puerto Rico	-	-	-	-	1	-	1	8	36	-	4

* National Office of Vital Statistics.

TABLE 2

PARALYTIC POLIOMYELITIS OCCURRING WITHIN 30 DAYS OF LAST VACCINE INOCULATION

Cases Reported to PSU June 13 through June 20, 1957

PSU Case No.	County	Ini- tials	Age	Sex	Date Inoc.	Date 1st Symp.	Date 1st Para.	Site Inoc.	Site 1st Inoc.	Mfr.	Lot No.	Remarks
W.Va-28	McDowell	PLP	1	F	4-13-57 5-28-57	6-1	6-1	? Arm	RL	SD	39177	12 cells
N.Y.-258	Nassau	MS	22	F	8-20-56 9-25-56 6-6-57	6-10	6-10	? ? LA	Legs	? ? SD	39176	
N.Y.-257	Dutchess	MM	6	F	7-21-56 5-21-57	5-24	5-24	LA LA	Legs	L L	697783	
Utah-16	Salt Lake	SF	19	F	? 4-10-57	4-23	?	? ?	Bulbar	? L	? ?	
Tex-153	Hidalgo	JB	6 mos	M	5-15-57	5-18	5-24	? Arms Legs	SD		?	
Utah-17	Salt Lake	GR	22	F	? 3-28-(?)	4-22	?	? ?	Spinal	? ?	? ?	

Table 3

1957 Paralytic Poliomyelitis Following Three Inoculations of Vaccine
(Reports through June 19, 1957)

3 V Case No.	State	County	Ini- tials	Age	Sex	Date 1st Symp.	Cerebro- Spinal Fluid	Site of Para.	Dates of Vacc. Inoc.	Mfr.	Lot No.
27	Mo.	St. Louis	BD	7	F	1-4-57	33 WBC 63% L	RL, LL	6-?-56 7-?-56 12-28-56	L L L	? ? 679914
29	Cal.	L.A.	MH	11	MF	1-10-57	0 WBC normal protein	Bulbo- Spinal	4-25-55 3-28-56 4-4-56 5-10-56	C L L L	? 658259 658259 671708
Comment: On discharge, pharyngeal paresis had cleared but muscle examination revealed slight weakness of neck flexors and right shoulder.											
34	N.M.		TM	6	M	1-19-57	294 WBC 100% L	Bulbar (Expired 1-25)	12-15-55 1-17-56 9-14-56	L L PD	653800 653800 1993

Comment: Rapid progression of involvement necessitated tracheotomy on 1-24, and respirator care on 1-25. Histopathological findings were characteristic of acute anterior polio-encephalomyelitis. No stool specimen from the patient was available. However, the CDC Virus and Rickettsia Section, Montgomery, Alabama examined stool and serum specimens obtained from three contacts of the patient. Each stool yielded Type III poliovirus but neutralization tests showed a significant rise in antibody against Type III virus in only one of the contacts. The single serum specimen obtained from the patient 5 days after onset revealed neutralizing antibody titers of 216, 128 and 512 to Types I, II, and III, respectively. Complement fixation tests were negative to Types I and II but showed a 1:2 titer against Type III. Dr. M. Schaeffer has reported that this positive CF test may be of some significance in view of the high neutralizing ab titer to Type III, and that the total picture is strongly suggestive of Type III infection in the patient.

Table 3 (Continued)

3 V Case No.	State	County	Ini- tials	Age	Sex	Date 1st Symp.	Cerebro- Spinal Fluid	Site of Para.	Dates of Vacc. Inoc.	Mfr.	Lot No.
37	Kan.	Ford	RB	6	M	2-22-57		RL,LL, Trunk	11-10-55 12-1-56 1-12-57	L L ?	? ? ?
Comment: Private Physician reports that approx. six weeks after onset there remained some residual weakness.											
44	Tex.	Smith	BF	7	F	5-27-57		RL,LL, Trunk	4-27-56 6-1-56 1-18-57	L L L	? ? ?
45	Neb.	Daw.	CR	9	F	3-10-57	28 WBC 80% L	RA (mild)	4-25-55 9-12-55 7-?-56	L L L	? ? ?
Comment: Stool specimen collected 3-15-57 and examined by the Reihart Virus Lab was negative. Neutralizing antibody titer rose from 128 to 256 between 3-13 and 4-9 (not a diagnostic rise). Types II and III titers of 64 and 512 remained stable.											
46	N.Y.	Nass.	MS	22	F	6-10-57		Legs	8-20-56 9-25-56 6-6-57	? ? SD	? ? 39176
Comment: Patient two months pregnant.											

(Barthelme) E. J. 1987