

SUMMARY

1. National incidence of paralytic poliomyelitis increased during the past week to 81 cases compared with 70 and 71 reported for each of the two preceding weeks. This increase in paralytic disease was recorded despite a fall in total reported poliomyelitis incidence to 319 from the 356 cases reported last week. Of the total cases, the proportion reported paralytic remains low compared with 1955 and 1956. Provisional reporting of non-polio aseptic meningitis as nonparalytic poliomyelitis has contributed to this excess of reported nonparalytic poliomyelitis.

2. Increased incidence of poliomyelitis has been observed in Washington, D.C. with a majority of cases reported paralytic. A geographic concentration of cases has developed in three small census tracts. Almost all cases are under 5 years of age, the large majority are Negro, and most of the cases have occurred in unvaccinated individuals.

3. Preliminary review is presented of the Age Distribution, Paralytic Status and Vaccination Status of poliomyelitis cases in 26 states and territories during the period January through June, 1957. A high proportion of non-vaccinated paralytic cases occurred in children under 5. The frequency of paralysis appears to be lower among total vaccinated cases than among unvaccinated cases. The overall proportion of cases in vaccinated individuals was higher for nonparalytic than for paralytic cases. The small numbers in this preliminary and incomplete summary and regional variations preclude further definitive interpretation of the data.

4. Outbreaks of probable non-polio aseptic meningitis observed in 12 states have been brought to the attention of CDC. Aseptic meningitis with associated skin rash has been encountered in Minnesota, Milwaukee, Ohio, and Georgia. Type 9 ECHO virus has been isolated from the extensive Milwaukee outbreak, and from small numbers of cases in Ohio and Michigan. Coxsackie B-5 has been isolated from the outbreak (without rash) in Durham, North Carolina.

I. POLIOMYELITIS

A. Current Poliomyelitis Morbidity Trends

Total national poliomyelitis incidence decreased slightly during the past week. For the week ending August 17, 1957, the National Office of Vital Statistics received reports of 319 cases, compared with 356 for the week of August 10. This total is lower than the 410 cases reported for the corresponding week in 1947, and is the lowest since 1942 when the week's incidence was 183 cases. This year's cumulative total of 3,238 cases through the 33rd week may be compared with 7,110 for last year, 11,878 for 1955 and 2651 for 1947. Figure 1 shows the U.S. poliomyelitis incidence for the years 1947 and 1952 through 1957.

Figure 2 shows the U.S. incidence by paralytic status for the 19th through 33rd weeks of 1955, 1956, and 1957. The proportion reported as paralytic remains low compared with 1955 and 1956. However, in spite of a decline in the total incidence during the past week, the paralytic incidence rose from 70 to 81.

Table 1 presents the distribution of total cases by State and Region, and of paralytic cases by region, for the past six weeks, with six-week totals for the comparable periods of the previous four years.

In the North Central region the total incidence of 167 cases comprises 36 paralytic, 94 nonparalytic and 37 unspecified and is the largest total in any of the regions. Cases reported from Michigan were almost wholly nonparalytic, 41 of 47, and Wisconsin reported one paralytic, 22 nonparalytic and 9 unspecified. This high nonparalytic incidence may represent non-polio aseptic meningitis. Similarly, in the South East region, of the total of 22 cases reported from North Carolina, 17 were nonparalytic, largely representing provisional reports of the aseptic meningitis cases in Durham. (See Aseptic Meningitis reports).

B. Reports from States

1. District of Columbia - Dr. William E. Long, Epidemiologist, and Dr. Daniel L. Finucane, Director of Public Health, have reported an increased incidence of poliomyelitis in the District of Columbia. Through August 22, a cumulative total of 19 cases had been reported, occurring almost entirely during the past four weeks. By this time last year only three cases had been reported. Of the 19 cases, 15 occurred in unvaccinated individuals. The age distribution of the 19 cases is remarkable in that 18 of the 19 were five years of age or under; the other was a fatal bulbar case in a 36 year old male. The large majority of cases (16) have been Negro.

An unusual geographic concentration of cases has developed within the city, with 11 of the 19 cases being reported from three small adjoining census tracts. Onset of illness in these 11 cases, which include 8 paralytic and 3 nonparalytic, has been distributed throughout the period, July 11 to August 19. All 11 are pre-school children, eight being Negro and three white. Specific ages of cases reported from Census tracts 61, 62 and 63 are as follows:

<u>Age</u>	<u>Number of Cases</u>
<1	1
1	2
2	2
3	3
4	3
<hr/>	<hr/>
Total	11

One of the three nonparalytic and three of the eight paralytic cases in these Census tracts occurred in vaccinated individuals.

2. Indiana - Dr. A.L. Marshall, Jr., Director, Division of Communicable Disease Control, has reported an increase in reported poliomyelitis in Indiana from eight cases during the week ending August 10 to a total of 19 for the week ending August 17, including 9 paralytic, 4 non-paralytic, and 6 unspecified. Of these 19 cases, 7 were reported from Marion County (Indianapolis) and 4 from Lake County (Gary).

A cumulative 1957 total of 67 cases, including 27 paralytic, 31 nonparalytic and 9 unspecified has been reported through August 17. The large majority of these were unvaccinated. Age distribution of cases this year reveals concentrations of cases in the age-groups one through six years, and 20 years and over.

C. Age Distribution of 1957 Poliomyelitis Cases

A total of 45 states, the District of Columbia, New York City, and 2 territories have indicated their desire to participate in the "Monthly Listing" (formerly "Age Distribution") analysis in the continuing national Poliomyelitis Surveillance Program. Those states participating are requested to submit monthly listings of all reported polio cases on the "Monthly Listing" form provided by CDC, including data on age, onset date, paralytic status and vaccination history. Preliminary tabulations of reported poliomyelitis cases occurring during the period January through June, 1957, have now been completed from 25 states, New York City, Hawaii and Puerto Rico. Since the records are preliminary and are not yet complete for the remaining states, interpretation of the data must at this time be limited.

These data cover 446 poliomyelitis cases including 228 paralytic, 211 nonparalytic and 7 unspecified. Cases with a history of prior polio vaccine inoculation totaled 58 paralytic and 91 nonparalytic. Unvaccinated cases totaled 287 and cases with vaccination history unknown, 10. Data are presented by geographic region, state, paralytic status and vaccination history in Table 2. Over 66% of the January-June reported incidence occurred in the South East and South Central regions; the six states reporting in these regions totaled 295 cases. This is the expected picture, in keeping with the seasonal pattern of the disease.

Table 3 presents the percentage of cases reported as vaccinated, by paralytic status and age group. In both the paralytic and nonparalytic forms of the disease it may be noted that the percent of the total cases which were in vaccinated persons increases with each five-year age group through 10-14 and decreases thereafter. The overall proportion of cases in vaccinated individuals was higher for nonparalytic cases (43%) than for paralytic cases (26%).

Table 4 shows the frequency of paralysis by age-group and vaccination history. The frequency of paralysis is lower among total vaccinated cases (39%) than among total unvaccinated cases (59%). This lower frequency of paralysis in vaccinated individuals is apparent in the specific age groups 0-4 and 5-9. The numbers of cases in the remaining age-groups are too small for these percentages to be meaningful.

Percentage distribution by age groups and vaccination status are presented in Table 5 for paralytic and nonparalytic cases. Differences in the percent age distributions may be noted between vaccinated and non-vaccinated cases both for paralytic and for nonparalytic disease. For example, in nonvaccinated paralytic cases there is a high percent of cases in pre-school children, with a compensatory low percent in the 5-9 year age group. However, it is difficult to interpret the significance of these variations in age distributions at this time due to small numbers and regional variations.

D. Current Poliomyelitis Incidence in Great Britain

The incidence of poliomyelitis in Great Britain continues to climb. The British Ministry of Health received 137 paralytic and 123 nonparalytic notifications for the week ending July 27. This is an increase of 71 compared with the previous week, when there were 105 paralytic and 84 nonparalytic.

Uncorrected polio notifications through the 30th week of the year (July 27) totaled 2106, compared with 1356 at this time last year. The highest corresponding figure during the period 1948-56 was 2224 in 1950. Sixteen individual districts of 15,000 population or more have experienced notification rates for the year in excess of 30 per 100,000.

The notifications for the 30th week and the year's total are presented in the table below with corresponding data for the nine preceding years.

<u>Year</u>	<u>Total cases up to and including</u>	
	<u>30th Week</u>	<u>Cases in 30th Week</u>
1948	828	39
1949	1016	169
1950	2224	305
1951	1282	121
1952	1430	253
1953	1959	270
1954	986	94
1955	1215	243
1956	1356	160
1957	2106	260

E. Routine Poliomyelitis Surveillance

1. Polio cases occurring within 30 days of vaccine inoculation - During the week ending August 21, PSU received reports of three paralytic cases and two nonparalytic cases occurring within 30 days of a polio vaccine inoculation. The paralytic cases are reviewed briefly below and in detail in Table 6.

1. District of Columbia - a two inoculation case developed paresis in both legs three days following right arm inoculation with Sharp and Dohme vaccine, lot number 39178 (100,000 cc's distributed to 18 states in April and May). No other cases have been reported to PSU in association with this lot.

2. Michigan - a case developed left leg paralysis two days following a single right arm inoculation with Lilly vaccine, lot number unknown.

3. New Jersey - a two inoculation paralytic case was reported. Site of inoculation, first paralysis, manufacturer and lot number were not known.

2. Triply-Vaccinated Cases - During the week ending August 21 a total of 43 triply-vaccinated poliomyelitis cases was reported to PSU of which 7 were paralytic and 36 nonparalytic. The paralytic cases are listed in Table 7.

PSU has now received reports of 39 paralytic and 160 non-paralytic 1957 poliomyelitis cases occurring in triply-vaccinated individuals.

F. Vaccine Distribution

Releases, shipments and inventory of poliomyelitis vaccine are presented in Table 8. During the week ending August 9, a total of 2.8 million cc's of net bottled vaccine were shipped. The total inventory was over 9 million cc's. Almost 10 million cc's were shipped during July of this year, compared to 4.5 million cc's shipped during June.

II. ASEPTIC MENINGITIS

Outbreaks of nonparalytic aseptic meningitis have been reported in an increasing number of states. Laboratory studies have now implicated nonpolio viruses as etiologic agents in several of these outbreaks. It is felt that continued review of these outbreaks may be of value to physicians concerned with poliomyelitis and polio-like diseases.

Table 9 presents a summary of aseptic meningitis outbreaks, probably not poliomyelitis, that have come to the attention of PSU this year.

Aseptic meningitis outbreaks are geographically located in Figure 3 with the symbol indicating the etiologic agent, if such has been identified. Large or small symbols have been used to indicate whether the cases are but a small localized group, or whether they represent a large outbreak in the community.

Newly reported outbreaks of aseptic meningitis and progress reports of previously listed outbreaks are presented in the following sections.

A. Newly Reported Outbreaks

1. Colorado (Reported by Dr. Joseph Cannon and Dr. R. L. Cleere, Colorado Department of Health and Dr. Luther Giddings, EIS Officer.)

Three nonparalytic mildly encephalitic cases with headache and dizziness as predominate symptoms are reported from La Junta.

Lumbar punctures revealed pleocytosis. One family contact has become ill, and there would appear to be other similar illnesses throughout the community. Laboratory studies are underway at the University of Colorado.

2. North Dakota (Reported by Mr. K. Mosser, North Dakota State Department of Health, and Dr. C. Eklund, Rocky Mountain Laboratory, NIH.)

An outbreak of eleven cases of aseptic meningitis with slight disorientation occurred in Garrison. Lumbar punctures revealed 8-12 leukocytes. Cases were reported in four teenagers, two young adults, and two people over sixty. No rash has been reported. The cases were initially reported as encephalitis. Laboratory studies are underway.

3. Utah (Reported by Dr. A.A. Jenkins, Utah State Department of Health and Dr. L. Giddings, EIS Officer)

An outbreak of four cases of aseptic meningitis has been reported in Ogden. Laboratory studies are underway at the Utah State Department of Health. Various communities throughout Utah have experienced outbreaks of acute febrile illness with pleurodynia. Other areas have experienced large numbers of cases of herpangina-like pharyngitis. It has not yet been determined whether the pleurodynia or herpangina has also been observed in Ogden.

B. Progress Reports

1. North Carolina (Reported by Dr. Jacob Koomen, Assistant Director, Division of Epidemiology, North Carolina State Department of Health and Dr. Paul Glezen, EIS Officer; see PSU Report 119 and 122.)

There is now a total of 80 hospitalized aseptic meningitis cases in Durham. Coxsackie B-5 has been isolated in thirteen cases; eight from cerebrospinal fluid. Coxsackie A-9 has been isolated from one case. One paralytic case from the area has been reported as poliomyelitis and is currently being investigated. Many of the nonparalytic aseptic meningitis cases were provisionally reported as nonparalytic poliomyelitis.

2. Wisconsin (Reported by Dr. E.R. Krumbiegel, Commissioner of Health, Milwaukee, and Dr. Albert Sabin, Children's Hospital, Cincinnati, and Dr. David Carver, EIS Officer; see PSU Report 122.)

The extensive outbreaks of aseptic meningitis, often with a fine papular skin rash, continues. Dr. Sabin reports further isolations of ECHO type 9 from stools and cerebrospinal fluid. There are now reported 115 hospitalized cases.

3. Wisconsin (Reported by Dr. Milton Feig, Director, Section on Preventable Diseases, Wisconsin State Department of Health and Dr. Kenneth Wilcox, EIS Officer, see PSU Report 120 and 121.

The following data is from a summary report by Dr. Wilcox of an outbreak of 97 cases of aseptic meningitis in New Richmond, a town of approximately 3,000. Some cases also occurred in the surrounding rural area and in Somerset, a village of about 700 population. The fully developed illness was characterized by fever, headache, nuchal rigidity, nausea and vomiting, myalgia, and periorbital pain. Usually the patient was weak and confined to bed. The cases seen were of varying severity and milder cases were frequent, particularly in the younger ages. It was often difficult to decide whether an illness belonged to the disease under study. The frequency of symptoms is as follows:

Total Cases	97
Headache	91
Fever	86
Weakness	71
Nausea	67
Periorbital Pain	62
Nuchal Rigidity	53
Invalgia	46
Vomiting	30
Sore Throat	26
Stiff Back	23
Diarrhea	12

The headache was often frontal but frequently generalized. The periorbital pain was usually pain accentuated by movement of the eyes. Some patients complained of photophobia. Sore throats noted were mainly "a rough sensation" or the feeling of a "lump in the throat" upon swallowing.

The age distribution of cases is shown in the table below. Peak incidence is seen in the 5-9 and the 30-34 age groups. The real incidence in the younger age groups is probably greater than shown as the illness tended to be milder and less typical in young children.

<u>AGE GROUP</u>	<u>NUMBER OF CASES</u>
0-4	9
5-9	29
10-14	11
15-19	6
20-24	4
25-29	11
30-34	18
35-	10

The duration of illness is shown below. A biphasic course was noted in twelve patients. Most patients had an acute onset and recovered promptly after the febrile illness. Some, however, had vague complaints, usually consisting of malaise and myalgia, 1-2 days before onset of fever. A few complained of weakness as long as 2 or 3 weeks after recovery.

<u>Duration (Days)</u>	1	2	3	4	5	6	7	8	9	10	>10
<u>Number of Cases</u>	11	14	15	14	10	6	9	1	1	2	2

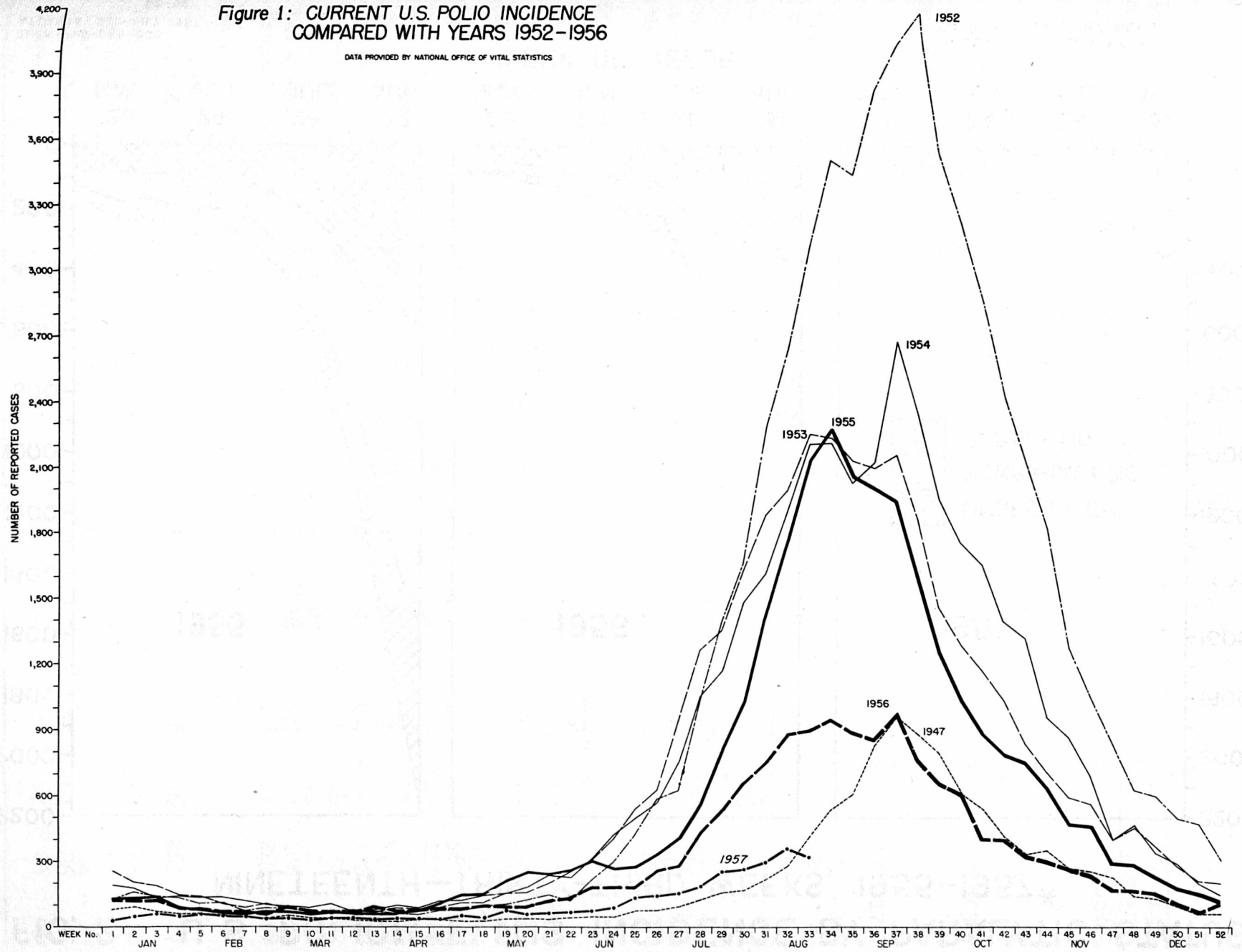
Multiple cases were found in 24 of 61 interviewed families. The table below shows the interval between the first case in the family and subsequent cases. It seems probable that the incubation period would fall within 3-9 days. Considering the cases occurring within 3 days of the initial case as co-primaries and those occurring after 3 days as secondary cases, there were 72 primary cases, 25 secondary cases, and 219 household members not ill. It would therefore appear that the secondary attack rate is low. In only one family was every member ill. There did not appear to be a high correlation between family size and number of cases in the family. There was actually very little history of contact among the cases.

Routine laboratory work usually revealed normal leukocyte counts and differential smears were usually normal except for the occurrence of occasional "abnormal" lymphocytes. Lumbar punctures revealed a pleocytosis in 9 of 10 cases. The cell counts were spread evenly from 125-1300 except for one count of 16,000. The latter was found in one patient with severe nuchal rigidity; the spinal fluid was milky, had normal glucose, chlorides, a slightly elevated protein, and was bacteriologically sterile. The virus studies are not as yet completed.

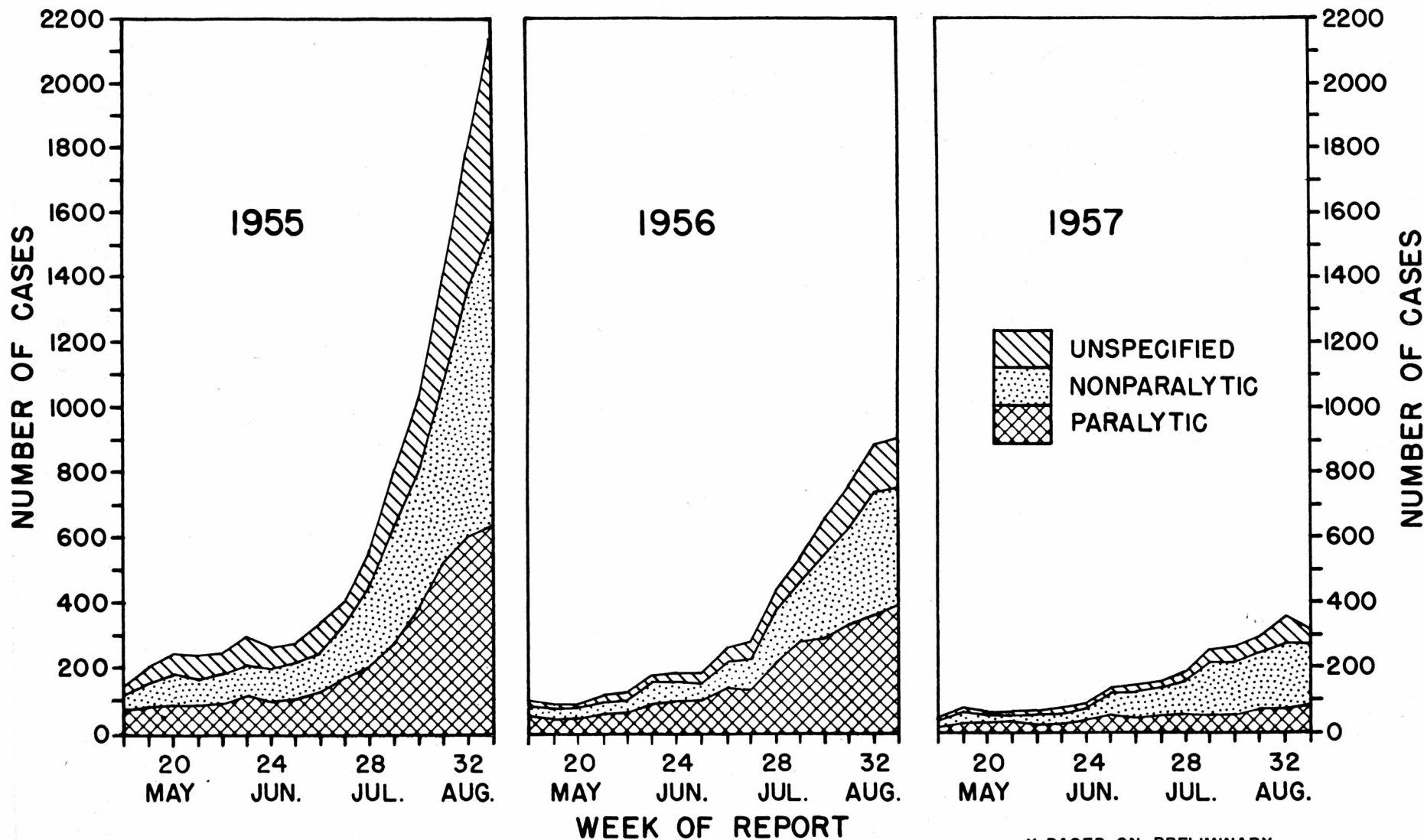
<u>Interval from First Case in Family to Later Cases</u>	1	2	3	4	5	6	7	8	9	>10
<u>Number of Cases</u>	3	4	4	5	3	2	5	1	2	3

Figure 1: CURRENT U.S. POLIO INCIDENCE
 COMPARED WITH YEARS 1952-1956

DATA PROVIDED BY NATIONAL OFFICE OF VITAL STATISTICS



**FIG. 2: U. S. POLIOMYELITIS INCIDENCE BY PARALYTIC STATUS
NINETEENTH—THIRTY-THIRD WEEKS, 1955-1957***



* BASED ON PRELIMINARY
DATA PROVIDED BY NOV5

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:			
	7-13	7-20	7-27	8-3	8-10	8-17		1956	1955	1954	1953
UNITED STATES											
Paralytic	56	50	51	71	70	81	379	1858	2635		
Nonparalytic	103	167	165	172	205	190	1002	1635	3251		
Unspecified	27	35	49	54	81	48	294	677	1851		
Total	186	252	265	297	356	319	1675	4170	7737	9435	10377
NORTH EAST											
Paralytic	2	4	4	8	3	-	21	89	1054		
Total	7	16	18	34	16	14	105	318	2905	1087	1751
Maine	-	1	-	1	-	-	2	2	50	36	107
New Hampshire	-	-	1	1	1	-	3	1	106	21	43
Vermont	-	-	-	-	-	-	-	7	31	9	21
Massachusetts	-	2	2	2	1	-	7	37	1570	150	129
Rhode Island	-	-	-	-	-	-	-	5	86	13	51
Connecticut	2	3	1	3	-	1	10	21	197	82	96
New York	4	7	8	15	7	5	46	170	538	375	787
New Jersey	1	-	6	5	5	5	22	44	154	179	239
Pennsylvania	-	3	-	7	2	3	15	31	173	222	278
NORTH CENTRAL											
Paralytic	6	16	9	24	24	36	115	799	697		
Total	30	70	76	115	182	167	640	1853	2459	3128	4197
Ohio	8	10	10	23	30	17	98	152	321	516	767
Indiana	-	4	5	8	8	19	44	109	127	194	200
Illinois	7	13	14	20	25	20	99	921	392	475	720
Michigan	3	10	12	27	40	47	139	157	381	567	761
Wisconsin	7	15	8	12	28	32	102	94	510	117	166
Minnesota	-	2	8	8	6	2	26	39	204	190	732
Iowa	2	2	2	2	6	8	22	169	241	418	223
Missouri	2	6	8	7	10	10	43	107	64	176	278
North Dakota	-	-	-	2	2	-	4	2	19	36	57
South Dakota	-	-	1	-	18	4	23	11	13	24	51
Nebraska	1	4	6	1	3	3	18	37	110	186	84
Kansas	-	4	2	5	6	5	22	55	77	229	158
NORTH WEST											
Paralytic	1	2	2	1	2	1	9	46	125		
Total	2	7	7	5	5	3	29	136	216	265	217
Montana	-	1	-	-	1	-	2	11	20	22	56
Wyoming	-	-	1	1	-	1	3	5	10	69	24
Idaho	1	1	3	1	3	1	10	30	51	22	14
Washington	-	-	1	-	-	1	2	53	68	86	74
Oregon	1	5	2	3	1	-	12	37	67	66	49

* National Office of Vital Statistics.

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Table 1 (Continued)

State and Region	Cases Reported to NOVS* for Week Ending:						Six Week Total	Comparable Six Week Totals in:			
	7-13	7-20	7-27	8-3	8-10	8-17		1956	1955	1954	1953
SOUTH EAST											
Paralytic	15	7	18	21	19	20	100	199	285		
Total	54	48	62	59	66	59	348	495	901	1802	2035
Delaware	-	-	-	-	2	-	2	4	17	17	11
Maryland	-	-	1	1	1	-	3	14	65	37	188
D. C.	-	-	1	6	1	7	15	2	15	21	24
Virginia	7	2	2	7	4	2	24	60	122	165	311
West Virginia	1	2	-	3	1	2	9	35	35	60	182
North Carolina	7	17	31	21	25	22	123	93	154	273	423
South Carolina	9	6	9	3	6	4	37	31	102	112	64
Georgia	4	2	-	3	4	6	19	70	46	241	137
Florida	14	2	7	3	8	-	34	82	78	343	133
Kentucky	5	8	6	7	6	7	39	46	157	227	122
Tennessee	7	7	3	3	6	7	33	39	63	199	305
Alabama	-	2	2	2	2	2	10	19	47	107	135
SOUTH CENTRAL											
Paralytic	20	15	11	10	12	12	80	405	297		
Total	52	68	68	44	43	40	315	726	799	1623	1004
Mississippi	4	8	10	7	3	5	37	60	59	192	104
Arkansas	3	4	5	1	4	3	20	61	63	101	100
Louisiana	2	9	6	4	9	6	36	225	74	178	125
Oklahoma	5	14	9	9	7	5	49	70	102	221	192
Texas	38	33	38	23	20	21	173	310	501	931	483
SOUTH WEST											
Paralytic	12	6	7	7	10	12	54	320	177		
Total	41	43	34	40	44	36	238	640	470	1530	1173
Colorado	-	-	1	2	3	-	6	29	55	98	62
New Mexico	3	4	1	4	5	6	23	16	36	44	31
Arizona	2	2	2	1	3	2	12	31	22	69	180
Utah	-	-	2	-	-	-	2	78	8	42	43
Nevada	1	-	-	-	-	-	1	9	10	47	14
California	35	37	28	33	33	28	194	477	339	1230	843
TERRITORIES											
	-	2	-	6	3	4	15	12	51		
Alaska	-	-	-	-	-	-	-	2	14	95	17
Hawaii	-	-	-	-	-	-	-	7	29	23	9
Puerto Rico	-	2	-	6	3	4	15	5	7	-	3

* National Office of Vital Statistics.

Table 2

REPORTED POLIOMYELITIS INCIDENCE BY VACCINATION HISTORY AND PARALYTIC STATUS
January - June, 1957

(Preliminary data from 26 States and Territories)

					Vaccinated Cases		Unvaccinated Cases	
	P	NP	U*	T	P	NP	P	NP
UNITED STATES AND TERRITORIES	228	211	7	446	58	91	168	119
NORTH EAST	7	4	-	11	3	2	3	2
Connecticut	2	1	-	3	2	1	-	-
New Hampshire	-	2	-	2	-	-	-	2
Vermont	2	-	-	2	-	-	1	-
New York City	3	1	-	4	1	1	2	-
NORTH CENTRAL	45	69	4	118	14	31	31	38
Indiana	12	10	-	22	2	1	10	9
Iowa	1	9	-	10	1	3	-	6
Kansas	2	2	-	4	1	1	1	1
Michigan	12	24	-	36	4	13	8	11
Minnesota	2	-	-	2	-	-	2	-
Nebraska	9	19	4	32	5	11	4	8
North Dakota	1	1	-	2	-	-	1	1
South Dakota	2	1	-	3	-	-	2	1
Wisconsin	4	3	-	7	1	2	3	1
NORTH WEST	3	-	2	5	1	-	2	-
Montana	-	-	2	2	-	-	-	-
Washington	2	-	-	2	-	-	2	-
Wyoming	1	-	-	1	1	-	-	-
SOUTH EAST	26	31	-	57	6	16	19	15
Maryland	4	-	-	4	2	-	1	-
Tennessee	13	23	-	36	3	12	10	11
Virginia	9	8	-	17	1	4	8	4
SOUTH CENTRAL	136	101	1	238	29	40	104	60
Arkansas	11	16	-	27	2	4	6	11
Mississippi	16	16	-	32	5	11	11	5
Texas	109	69	1	179	22	25	87	44
SOUTH WEST	11	6	-	17	4	2	7	4
New Mexico	9	2	-	11	3	1	6	1
Utah	2	4	-	6	1	1	1	3
TERRITORIES	3	-	-	3	1	-	2	-
Hawaii	1	-	-	1	-	-	1	-
Puerto Rico	2	-	-	2	1	-	1	-

* Paralytic Status unspecified.

PERCENTAGE OF POLIOMYELITIS CASES REPORTED AS VACCINATED,
BY PARALYTIC STATUS AND AGE GROUP
January - June, 1957*

Age Group	Paralytic Cases**		Non-Paralytic Cases***	
	Number of Cases	Percent Vaccinated	Number of Cases	Percent Vaccinated
0-4	118	17	65	43
5-9	40	45	57	65
10-14	13	54	21	71
15-19	13	31	23	17
20 /	42	21	43	14
Unknown	-	-	1	-
Total	226	26	210	43

Table 4

FREQUENCY OF PARALYSIS IN POLIOMYELITIS CASES
BY AGE AND VACCINATION HISTORY
January - June, 1957*

Age Group	Vaccinated		Not Vaccinated		Total	
	Total Cases	Percent Paralytic	Total Cases	Percent Paralytic	Total Cases	Percent Paralytic
0-4	48	42	135	73	184	65
5-9	55	33	42	52	99	41
10-14	22	32	12	50	36	42
15-19	8	50	28	32	36	36
20 /	15	60	70	47	86	50
Unknown	1	-	-	-	1	-
Total	149	39	287	59	442	52

* Preliminary data from 26 states and territories.
 ** Excluding 5 cases with vaccination status unspecified.
 *** Excluding one case with vaccination status unspecified.

Table 5

PERCENT AGE DISTRIBUTION OF POLIOMYELITIS CASES BY VACCINATION STATUS

January-June, 1957

Preliminary Data from 26 States and Territories

Age Group	PARALYTIC						NONPARALYTIC					
	Vaccinated		Not Vaccinated		Total		Vaccinated		Not Vaccinated		Total	
	Cases	Percent Distrib.	Cases	Percent Distrib.	Cases	Percent Distrib.	Cases	Percent Distrib.	Cases	Percent Distrib.	Cases	Percent Distrib.
0-4	20	34	98	58	118	52	28	31	37	31	65	31
5-9	18	31	22	13	40	18	37	41	20	17	57	27
10-14	7	12	6	4	13	6	15	17	6	5	21	10
15-19	4	7	9	5	13	6	4	4	19	16	23	11
20+	9	16	33	20	42	19	6	7	37	31	43	20
Unknown	-	-	-	-	-	-	1	1	-	-	1	-
TOTAL	58	100	168	100	226	101	91	101	119	100	210	99

Table 6

PARALYTIC POLIOMYELITIS OCCURRING WITHIN 30 DAYS OF LAST VACCINE INOCULATION
Cases Reported to PSU August 15 through August 21, 1957

PSU Case No.	County	Ini- tials	Age	Sex	Date Inoc.	Mfr.	Lot No.	Date First Symp.	Date First Paral.	Site Inoc.	Site Paral.	Extent Paral.	Remarks
N.J.-17	Union	GF	3	M	? 7-12-57	?	? ?	7-18-57	?	?	?		
Mich-38	Wayne	JB	4	M	7-6-57	L	?	7-8-57	?	RA	LL		
D.C.-5	Washington	FS	4	M	? 7-17-57	?	? SD 39178	7-20-57	?	?	Legs		

Table 7

1957 PARALYTIC POLIOMYELITIS CASES FOLLOWING THREE INOCULATIONS OF VACCINE

(Reports through August 21, 1957)

3 V Case No.	State	County	Ini- tials	Age	Sex	Date lst Symp.	Cerebro- Spinal Fluid	Site of Para.	Dates of Vacc. Inoc.	Mfr.	Lot No.
72	California	Los Angeles	DMM	5	M	6-18-57	660	Legs	4-25-56 6-21-56 2-21-57	W L L	24902 ? ?
<p>Comment: This boy had onset of muscular weakness of both legs five days after onset of febrile illness. At the conclusion of the acute illness only mild paresis of neck muscles remained. The illness is listed by the California Health Department as "aseptic meningitis, possible non-paralytic polio" pending laboratory examination.</p>											
73	Colorado	Boulder	CJ	14	F	6-20-57		?	?	?	?
<p>(Preliminary Report)</p>											
74	Georgia	Columbus	JLD	18 mos.	F	?		LL	?	?	?
<p>Comment: Laboratory studies pending.</p>											
75	Mississippi	Washington	JW	7	M	8-1-57		?	?	?	?
<p>(Preliminary Report)</p>											

(CONTINUED NEXT PAGE)

Table 8

POLIOMYELITIS VACCINE REPORT through 8-16-57

(Data provided by the Polio Vaccine Activity, BSS, USPHS.
Listed in 1000's of cc's of Net Bottled Vaccine)

<u>Period</u>	<u>VACCINE RELEASED</u>					
	<u>Lilly</u>	<u>Parke, Davis</u>	<u>Pitman-Moore</u>	<u>Wyeth</u>	<u>Sharpe & Dohme</u>	<u>Cutter</u>
June	-	3,375	2,812	402	-	-
July	5,047	1,843	1,239	378	1,015	-
August 1-16	850	-	-	-	331	1181
Cumulative to date	114,594	26,428	28,188	8,972	8,844	401

<u>Period</u>	<u>VACCINE SHIPPED</u>				
	<u>NFIP</u>	<u>Public Agencies</u>	<u>Commercial Channels</u>	<u>Export</u>	<u>Total</u>
1955	13,541	7,893	6,233	-	27,667
1956	194	45,588	24,784	6,477	77,043
1957					
January-March	8	19,306	13,483	4,111	37,538
April	-	8,639	5,161	1,360	15,161
May	73	5,365	3,767	536	9,740
June	70	2,734	1,349	378	4,531
July	-	4,642	4,903	327	9,871
August 1-9	-	1,070	1,689	62	2,820
Cumulative Totals	13,886	95,867	61,368	13,252	184,373

<u>Week Ending</u>	<u>VACCINE INVENTORY</u>			
	<u>Unshipped by Manufacturers</u>	<u>In State and Local Health Departments</u>	<u>In Commercial Channel and Physicians Office</u>	<u>Total</u>
7-26-57	5,234	3,193	2,110	10,538
8-2-57	4,693	4,179	3,561	12,434
8-9-57	1,873	4,289	2,945	9,108

Table 9

Suspected Outbreaks - Aseptic Meningitis
United States 1957

PSU Report No.	State	City	No. of Cases	Clinical Picture	CSF Findings	Virus Isolation	Laboratory
123	Colo.	La Junta	3	Headache, dizziness	Pleocytosis		Univ. Colorado (Dr. Kempe)
122	Ga.	Atlanta	15	Headache, fever, rigid neck and back, several day's duration.	Pleocytosis		CDC Virus Lab, (Dr. Kalter)
122	Ga.	Columbus	12 ¹	Headache, fever, rigid neck and back, several day's duration.	Pleocytosis		CDC Virus Lab, (Dr. Kalter)
119	La.	Shreveport	35	Headache, fever, vomiting, All recover within four days.	100-150	Polio Type I isolated in 4-5 sporadic cases from periphery of epidemic.	Tulane Univ. (Dr. Fox)
121	Mich.	Throughout State	Sporadic Cases 21			2 ECHO 9 8 Coxsackie B4	Univ. of Michigan (Dr. Brown)
122	Minn.	Minneapolis	250	Headache, fever, orbital pain, vomiting, stiff neck, morbilliform rash.	20-1500 Lymphocytes Predominately		Minn. Dept. of Health (Dr. Bauer)
119	N.C.	Durham	80	Headache, stiff neck, fever, nausea, vomiting, myalgia	100-1000 Predominately Lymphocytes	Coxsackie B5 (13 Cases) Coxsackie A9 (1 Case)	Univ. N.C. (Dr. Curnen)

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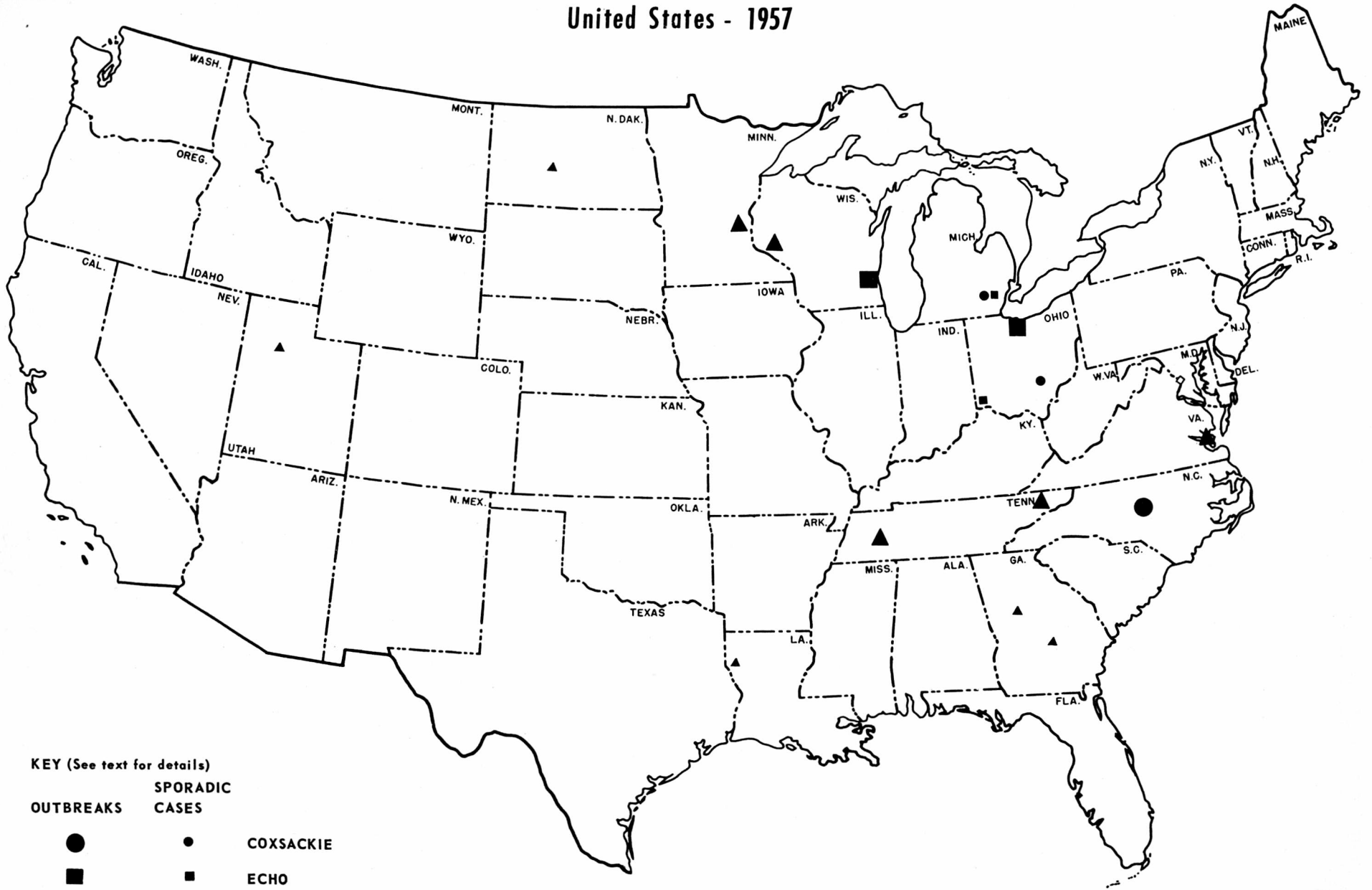
Table 9 (Continued)

PSU Report No.	State	City	No. of Cases	Clinical Picture	CSF Findings	Virus Isolation	Laboratory
123	N. Dak.	Garrison	11	Slight disorientation	8-12 cells		No. Dak. State Health Dept. (Dr. M. Kooms) Rocky Mt. Lab USPHS (Dr. C. Eklund)
121	Ohio	Athens	7			Coxsackie	Ohio St. Health Dept. (Dr. Anderson)
121	Ohio	Norwood	5	Headache, nausea, fever stiff neck & rash.	Pleocytosis	ECHO Type 9 (CSF)	Dr. Sabin, Children's Hospital, Cincinnati (Ohio)
121	Ohio	Willard	100	Headache, nausea, vomiting, fever, stiff neck / macular rash.	Pleocytosis	ECHO 9	(Dr. Robbins Cleveland, Ohio)
116 117	Tenn.	Johnson City	54 Hospitalized, 51 Contacts 170 Suspect	Headache, fever, stiff neck & back, & orbital pain, varied from mild to severe toxic encephalitic symptoms - all recovered, no paralysis.	Pleocytosis 15-400		Tenn. St. Health Dept. (Mr. J. H. Barrick) and CDC Virus Lab, (Dr. Kalter)
122	Tenn.	Camden	80	Headache, fever, vomiting, stiff neck and back.			Tenn. St. Health Dept. Lab (Mr. Barrick)
123	Utah	Ogden	4	Aseptic meningitis			Utah State Health Dept. (Mr. R. S. Fraser)

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ASEPTIC MENINGITIS

United States - 1957



KEY (See text for details)

OUTBREAKS		SPORADIC CASES	
●	●	●	COXSACKIE
■	■	■	ECHO
▲	▲	▲	UNDETERMINED

