



POLIOMYELITIS SURVEILLANCE REPORT

FOR ADMINISTRATIVE USE

REPORT NO. 212

September 23, 1960

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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
COMMUNICABLE DISEASE CENTER
Clarence A. Smith, Chief
Epidemiology Branch
Alexander D. Langmuir, Chief
Surveillance Section
E. Russell Alexander, Chief
Atlanta 22, Georgia

SPECIAL NOTE

This report is intended for the information and administrative use of those involved in the investigation and control of poliomyelitis and polio-like diseases. It presents a summary of provisional information reported to CDC from State Health Departments, the National Office of Vital Statistics, Virology Laboratories, Epidemic Intelligence Service Officers, and other pertinent sources. Since much of the information is preliminary in nature, confirmation and final interpretation should be determined in consultation with the original investigators prior to any further use of the material.

SUMMARY

There was a moderate increase in both total and paralytic cases of poliomyelitis reported to NOVS this week. The total for the current week was 176 cases, of which 114 were paralytic. This is slightly higher than the previous week's total of 154 cases, including 105 paralytic.

A concentration of cases has been noted in Baltimore, Maryland. New clusters have occurred in a western New York county and in eastern Connecticut. Additional cases have been reported in Portland, and vicinity, Maine. There have been no new cases in Wyoming's Gas Hills Uranium Mining District.

Narrative reports are included from Maryland, Maine, Connecticut, New York, Illinois, and Indiana. The vaccination status and the paralytic classification of fatal cases reported to the Poliomyelitis Surveillance Unit thus far in 1960, are presented in Section 3.

1. CURRENT POLIOMYELITIS MORBIDITY TRENDS

During the week ending September 17, the 37th week of 1960, a total of 176 cases, 114 paralytic, was reported to the National Office of Vital Statistics. This represents an increase over both the 154 total and 105 paralytic cases reported last week. During the corresponding week in 1959, a total of 515 cases including 326 paralytic was reported. As seen in Figure I, the total number of cases remains well below that of any recent year, while the incidence of paralytic cases continues at a level between those of 1957 and 1958.

The 1960 cumulative total is now 1928 cases. Of these, 1299 or 67% are paralytic. As seen below, these figures are lower than any for the past four years:

	<u>Cumulative Totals through the 37th Week</u>				
	<u>1960</u>	<u>1959</u>	<u>1958</u>	<u>1957</u>	<u>1956</u>
Paralytic	1299	3455	1461	1375	4779
Total	1928	5474	3000	4444	10828

The increase in total cases during the past week is reflected in 6 of the 9 national regions. However, major increases occurred only along the eastern seaboard, in the Middle Atlantic and South Atlantic regions, where new concentrations of cases were reported from New York and Maryland.

2. REPORTS

A. Maryland

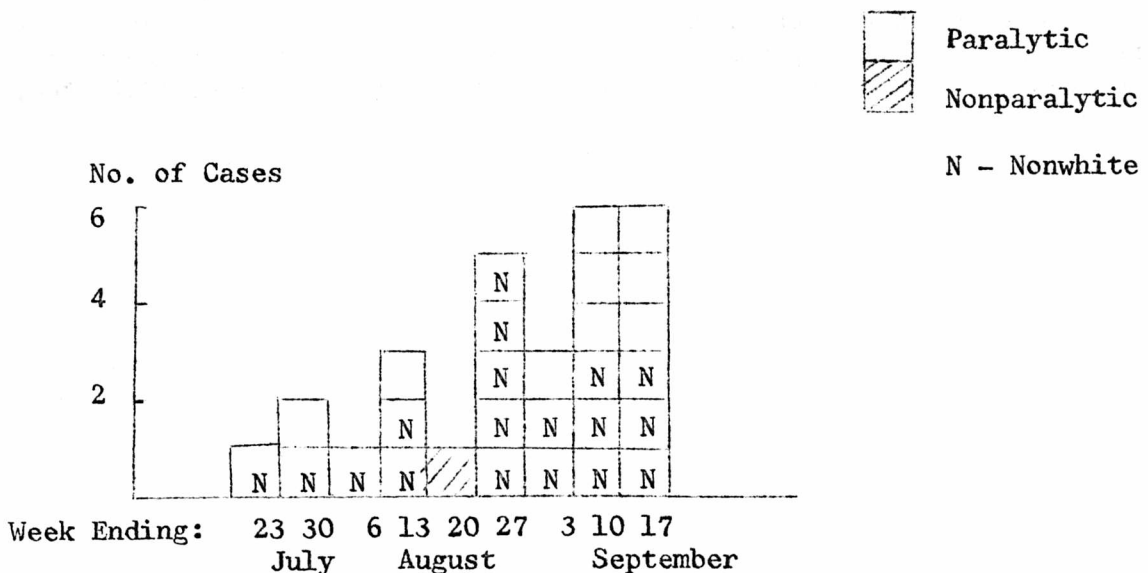
Dr. Glen E. Gresham, EIS Officer, assisting Dr. Charlotte Silverman, Epidemiologist, Maryland State Health Department, reports an increase in paralytic poliomyelitis in Baltimore during the past month. Of 44 paralytic cases reported in the State through September 21, 28 have occurred in Baltimore and 20 of these have had onset since the week ending August 20.

The majority of the Baltimore cases have occurred in low socio-economic areas, both in the southwestern part of the city just west of the business district, and also east of the business district in the vicinity of Johns Hopkins Hospital. Of the 28 cases, 18 are nonwhite, and as can be seen below there is a marked difference in the vaccination status of the white and nonwhite cases. Thus far in 1960, all poliovirus isolations in Baltimore have been type III. The vaccination status by race is as follows:

	OV	<u>Doses of Vaccine</u>				Unk.	<u>Total</u>
		1V	2V	3V	4+V		
White	3	0	0	5	1	1	10
Nonwhite	10	1	3	2	1	1	18
TOTAL	13	1	3	7	2	2	28

The 27 paralytic cases with known onset are shown below by week of onset with one nonparalytic case that has also been reported. Note that 80 percent of the cases through September 3, were nonwhite but during the past two weeks only 50 percent have been in the nonwhite population.

Baltimore - 1960



B. Maine

Dr. Dean H. Fisher, Director, Communicable Disease Control, Maine Department of Health and Welfare, reports an additional 7 cases of paralytic poliomyelitis in Portland and vicinity (Cumberland County) bringing the number of cases in this area to 14 through September 21, 1960. The location and vaccination status of these paralytic cases is as follows:

<u>City or Town</u>	<u>Doses of Vaccine</u>						<u>Total</u>
	<u>0V</u>	<u>1V</u>	<u>2V</u>	<u>3V</u>	<u>4+V</u>	<u>Unk.</u>	
Portland	3	0	0	3	0	0	6
Westbrook	1	0	1	1	0	1	4
South Portland	2	0	0	0	0	0	2
Gorham	0	0	0	0	1	0	1
Naples	1	0	0	0	0	0	1
TOTAL	7	0	1	4	1	1	14

As can be seen above, 38 percent of the cases with known vaccination status have received three or more doses of vaccine while over 50 percent are unvaccinated. There were only 2 cases reported from Cumberland County last year with a type III poliovirus being isolated from one of them. The 1960 cases have had onset as follows:

<u>Week Ending:</u>	<u>8-6</u>	<u>8-13</u>	<u>8-20</u>	<u>8-27</u>	<u>9-3</u>	<u>9-10</u>	<u>9-17</u>
<u>Paralytic Cases:</u>	1	1	0	1	4	5	3

One new case each from Kennebec and Androscoggin Counties brings the State total to 26 paralytic cases with onset in 1960. There have now been 6 cases in Androscoggin County, all of which are unvaccinated.

C. Connecticut

Dr. Mila Rindge, Chief of the Section of Epidemiology, Connecticut State Department of Health, states that 7 new polio cases were reported during the week ending September 17, constituting a weekly high for the year. Connecticut now has had 28 cases, of which 19 are paralytic, 6 nonparalytic, and 3 new cases as yet unspecified. Of the paralytic cases, 4 have been bulbar and 2 bulbo-spinal. There have been 4 fatalities.

Cases have been largely concentrated in the eastern part of the State in areas adjacent to Rhode Island. The first 6 cases, all with July onsets, occurred in the Groton region of New London County. Since early August the majority of cases has been in Windham County where 12 cases have now been reported, especially localized in the Putnam-Thompson area in the northeast corner of Connecticut. In the more populous western counties only 9 cases have been reported.

The vaccination status, by age group, for the 19 cases specified as paralytic, is as follows:

<u>Age Group</u>	<u>Paralytic Doses of Vaccine</u>						<u>Total</u>
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4+</u>	<u>Unk.</u>	
0-4	3	1	1	3	2	-	10
5-9	-	-	-	2	1	-	3
10-14	-	-	1	-	-	-	1
15-19	1	-	-	-	-	-	1
20-29	2	1	-	-	-	-	3
30-39	1	-	-	-	-	-	1
40+	-	-	-	-	-	-	-
Unk.	-	-	-	-	-	-	-
TOTAL	7	2	2	5	3	-	19

Over half of the cases are pre-school children. However 8 of the 19 patients had received 3 or more doses of vaccine. Type I poliovirus has been isolated in 8 instances and type III poliovirus twice by the state health department laboratories.

D. New York State

Dr. Robert M. Albrecht, Director, Division of Epidemiology, New York State Department of Health, reported 15 new upstate cases in the past week, bringing the 1960 total to 94 of which 67 are paralytic. Five of the newly reported cases are from Cattaraugus County in western New York, directly south of Erie County, site of an outbreak of type III polio in 1959.

Cattaraugus County has had 23 cases, 13 paralytic and 10 nonparalytic. Of the 21 cases with onsets this summer, 4 occurred in July, 9 in August, and 8 thus far in September. The nonparalytic cases have all had onset since August 1. Estimated population for the county as of July, 1960 is 85,670, giving a paralytic attack rate of 16 per 100,000.

The age distribution and paralytic status of the cases is as follows:

<u>Age Group</u>	<u>0-4</u>	<u>5-9</u>	<u>10-19</u>	<u>20-29</u>	<u>30+</u>
Paralytic	3	2	4	2	2
Nonparalytic	3	6	1	0	0

Only 38% of the paralytic cases have been under 10 years of age. Only 2 of the 13 paralytic cases have had 3 or more doses of polio vaccine whereas 7 were unvaccinated. There has been one fatality, a 39 year old woman who had 2 doses of vaccine. A vaccine survey of children entering kindergarten, carried out in August, showed that 76% had 3 or more vaccine doses and only 11% were unvaccinated.

Nine of the Cattaraugus County cases have been from the city of Olean and 3 others in the adjacent townships. The remaining 11 have been widely scattered about the county. Thus far the laboratory of Dr. Karzon at the University of Buffalo has isolated type III poliovirus from 4 paralytic and 2 nonparalytic cases, and type I poliovirus from one paralytic patient.

E. Illinois

Dr. Norman J. Rose, Chief, Bureau of Epidemiology, Illinois Department of Public Health, reports a total of 103 cases of poliomyelitis, 70 paralytic, reported to the State Health Department through September 20. During the corresponding period in 1959, there were 152 total cases of which 116 were paralytic.

Recent cases have been scattered throughout the State with the exception of 11 cases, 9 paralytic, occurring in Macon County (est. population - 120,000). These cases have had onset over a seven week period from July 14 to August 31 with no additional cases being reported thus far in September.

Of these 11 cases, 7 paralytic and 2 nonparalytic are from the city of Decatur, 1 paralytic from Harristown and 1 paralytic from Blue Mound. There has been a type I poliovirus isolation from the case in Blue Mound. Four of the paralytic cases are unvaccinated and three have had 3 doses of vaccine.

F. Indiana

Dr. A. L. Marshall, Director of Communicable Disease Control, Indiana State Board of Health has now received notification of 69 cases, 41 paralytic, 17 nonparalytic, and 11 unspecified. Concentrations have been reported in Indianapolis (Marion County) with 23 cases, in Lake County with 10, and in Knox County with 3 recent cases from the town of Bicknell.

Of the 69 cases reported, 74% have been in children, 22% in adults, and 4% in adolescents. There have been 3 deaths, 2 in adults. Of the 41 paralytic cases, 76% were unvaccinated and only one case had 3 doses of vaccine.

In Indianapolis, cases have been widespread throughout the city, not limited to slum areas. However, although Negroes comprise only one-seventh of the city population, they have accounted for over one-third of the cases (8 of 23). Dr. Bruce Peck of the Eli Lilly Company has isolated type I poliovirus from several cases at Marion County General Hospital.

3. 1960 POLIOMYELITIS CASES REPORTED TO PSU

During the week ending September 19, 118 cases of poliomyelitis were reported to the Poliomyelitis Surveillance Unit on individual case forms. This brings the 1960 total to 1,257 cases, of which 906 are paralytic, 314 nonparalytic, and 37 unspecified as to paralytic status. Thus, 69.7 percent of the 1,299 paralytic cases reported to NOVS through September 17, have been reported to PSU.

The Poliomyelitis Surveillance Unit has been notified of 76 fatalities during 1960. Of 65 with known type of involvement, 45 had bulbar polio, 17 bulbo-spinal and 3 were recorded as spinal paralysis. The vaccination status of the fatalities reported is as follows:

<u>DOSES OF VACCINE</u>	<u>0V</u>	<u>1V</u>	<u>2V</u>	<u>3V</u>	<u>4+V</u>	<u>Unk.</u>	<u>TOTAL</u>
Number of Fatalities	42	11	6	8	4	5	76
Percent Doses	59.2	15.5	8.4	11.3	5.6	-	100.0

The cases reported to PSU are presented on the following page in Table 3.

TABLE 3
 POLIOMYELITIS CASES BY PARALYTIC STATUS, AGE GROUP
 AND VACCINATION HISTORY REPORTED ON PSU FORMS
 (Through September 19, 1960)

Age Group	Paralytic						Tot
	Doses of Vaccine						
	0	1	2	3	4+	Unk	
0-4	225	51	42	49	12	24	403
5-9	83	17	22	49	27	13	211
10-14	24	5	7	29	10	11	86
15-19	26	7	4	10	1	7	55
20-29	53	7	7	7	2	6	82
30-39	31	5	5	3	2	2	48
40+	18	0	0	1	0	2	21
Unk.	0	0	0	0	0	0	0
Total	460	92	87	148	54	65	906
PER CENT DOSES	54.7	10.9	10.3	17.6	6.4	-	100.0

Age Group	Nonparalytic						Tot
	Doses of Vaccine						
	0	1	2	3	4+	Unk	
0-4	32	6	9	14	11	5	77
5-9	14	8	9	21	26	10	88
10-14	4	5	0	18	17	1	45
15-19	7	0	4	11	9	1	32
20-29	11	2	4	15	5	7	44
30-39	5	2	3	5	5	1	21
40+	5	0	1	0	0	1	7
Unk.	0	0	0	0	0	0	0
Total	78	23	30	84	73	26	314
PER CENT DOSES	27.1	8.0	10.4	29.2	25.3	-	100.0

4. ROUTINE POLIOMYELITIS SURVEILLANCE

A. Cases with Onset Within 30 Days of Vaccination

During the week ending September 19, the Poliomyelitis Surveillance Unit was notified of 6 cases of poliomyelitis, 4 paralytic, with onset within 30 days of vaccination. The 1960 total now stands at 77 cases. Of these, 59 are paralytic (7 correlated) and 18 nonparalytic.

There are eight paralytic cases associated with Pittman-Moore lot number 175B137, seven of which are from the epidemic area in Rhode Island where mass vaccination programs have been in progress. None of these cases are correlated. Three other cases from Rhode Island are associated with Merck, Sharpe, and Dohme lot number 63788, which was also used in the mass vaccination program. One-third of the under 30-day cases reported this year have been from epidemic areas. The others have been scattered throughout the nation.

The four paralytic cases reported this week are presented in Table II with pertinent surveillance information thus far available.

B. Vaccine Distribution

The summary of current and cumulative data concerning poliomyelitis vaccine and quadruple antigen vaccine shipped is presented in Table III.

(This report was prepared by the Poliomyelitis and Polio-like Diseases Surveillance Unit, Joseph Oren, M.D., Chief, and Leo Morris, Statistician, with the assistance of Statistics Section, CDC.)

FIG. 1 CURRENT U.S. POLIO INCIDENCE
 COMPARED WITH YEARS 1955-1959, APR.-DEC., BY WEEK

PROVISIONAL DATA SUPPLIED BY NATIONAL OFFICE OF VITAL STATISTICS

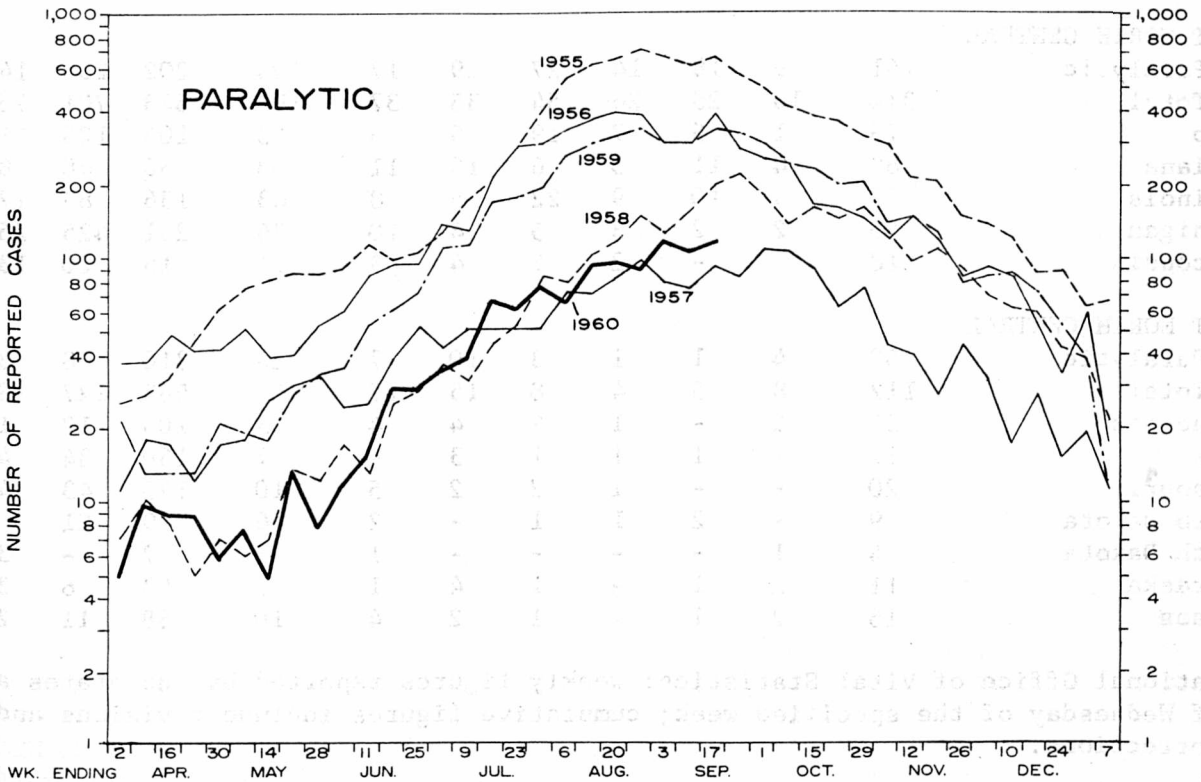
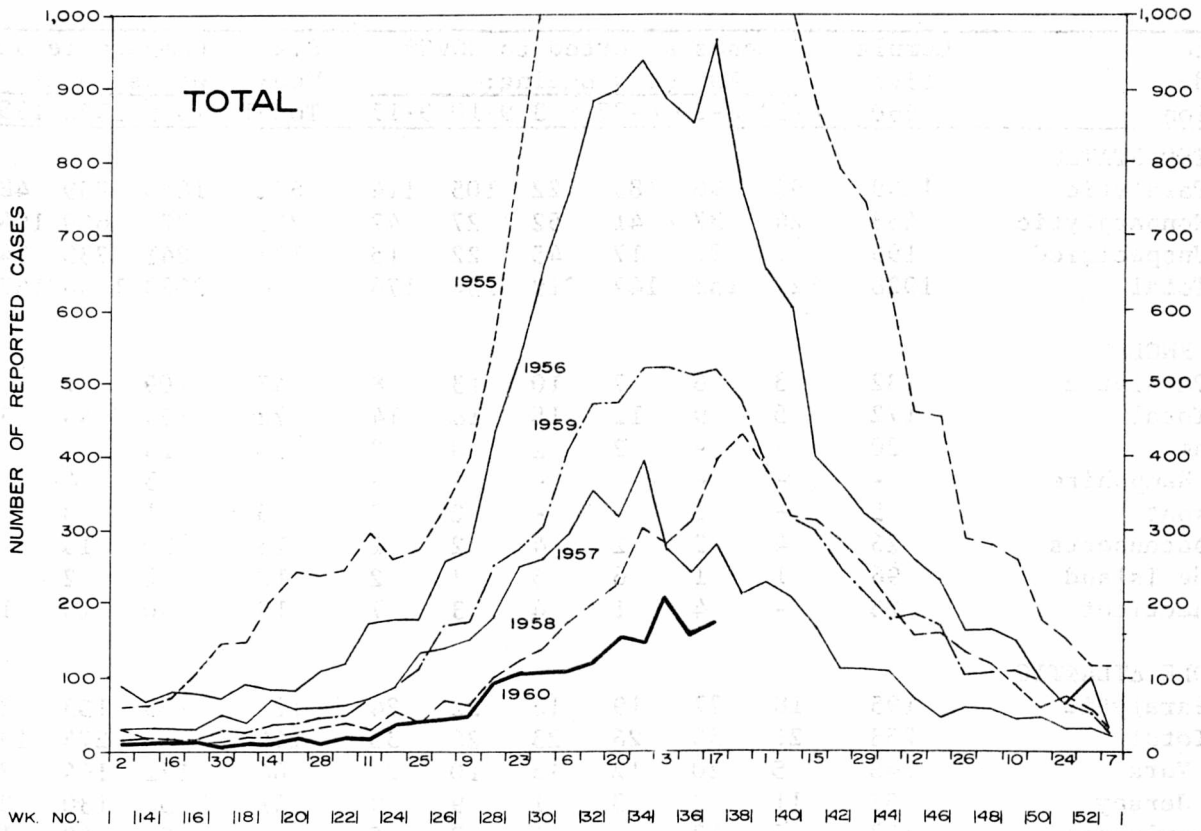


Table I

TREND OF 1960 POLIOMYELITIS INCIDENCE

State and Region	Cumulative 1960	Cases Reported to NOVS*						Six Week Total	Comparable Six Weeks Totals in:		
		8-13	8-20	8-27	9-3	9-10	9-17		1959	1958	1957
UNITED STATES											
Paralytic	1299	96	96	89	122	105	114	622	1855	839	489
Nonparalytic	433	24	37	41	52	27	47	228	927	669	1044
Unspecified	196	7	20	17	45	22	15	126	241	238	344
Total	1928	127	153	147	219	154	176	976	3023	1746	1877
NEW ENGLAND											
Paralytic	132	3	6	7	10	13	8	47	109	17	5
Total	172	5	9	11	15	18	14	72	159	43	31
Maine	20	-	-	2	2	8	2	14	13	-	3
New Hampshire	-	-	-	-	-	-	-	-	3	4	2
Vermont	5	-	1	-	-	2	2	5	1	3	2
Massachusetts	26	4	3	2	4	2	1	16	80	16	9
Rhode Island	96	1	1	6	5	3	2	18	2	2	-
Connecticut	25	-	4	1	4	3	7	19	60	18	15
MIDDLE ATLANTIC											
Paralytic	195	18	27	19	16	22	24	126	156	153	34
Total	258	21	35	26	23	26	35	166	286	274	133
New York	148	5	20	12	16	10	21	84	171	104	79
New Jersey	57	11	3	8	1	9	9	41	59	130	39
Pennsylvania	53	5	12	6	6	7	5	41	56	40	15
EAST NORTH CENTRAL											
Paralytic	161	9	18	14	27	19	17	104	202	268	141
Total	314	16	28	26	54	35	37	196	543	701	758
Ohio	73	1	5	7	19	6	5	43	104	125	115
Indiana	69	4	11	5	6	16	11	53	56	48	80
Illinois	99	9	10	9	22	5	8	63	136	83	175
Michigan	55	2	2	3	5	4	10	26	231	425	255
Wisconsin	18	-	-	2	2	4	3	11	16	20	133
WEST NORTH CENTRAL											
Paralytic	58	4	1	1	3	10	7	26	310	58	33
Total	112	8	5	4	8	15	17	57	588	127	183
Minnesota	35	2	-	1	2	4	4	13	106	12	15
Iowa	17	1	1	1	1	3	-	7	160	34	41
Missouri	20	-	-	1	2	2	5	10	175	43	45
North Dakota	9	-	2	1	1	-	2	6	9	21	5
South Dakota	4	1	-	-	-	-	1	2	7	-	31
Nebraska	11	2	1	-	1	4	1	9	43	6	20
Kansas	16	2	1	-	1	2	4	10	88	11	26

* National Office of Vital Statistics: weekly figures reported by the states as of Wednesday of the specified week; cumulative figures include revisions and corrections.

Table I (Continued)

State and Region	Cumulative 1960	Cases Reported to NOVS For Week Ending						Six Week Total	Comparable Six Weeks Totals in:		
		8-13	8-20	8-27	9-3	9-10	9-17		1959	1958	1957
SOUTH ATLANTIC											
Paralytic	217	21	10	20	24	11	24	110	362	114	96
Total	313	26	16	33	35	16	32	158	464	210	225
Delaware	-	-	-	-	-	-	-	-	3	11	2
Maryland	34	1	4	10	4	2	11	32	14	6	4
D. C.	-	-	-	-	-	-	-	-	6	-	34
Virginia	15	3	1	1	1	2	4	12	126	43	29
West Virginia	30	3	-	3	9	-	2	17	91	62	11
North Carolina	68	4	2	11	8	5	5	35	90	31	75
South Carolina	104	12	8	5	8	4	6	43	33	5	20
Georgia	14	-	1	3	-	3	2	9	65	16	23
Florida	48	3	-	-	5	-	2	10	36	36	27
EAST SOUTH CENTRAL											
Paralytic	59	8	3	4	5	2	2	24	229	37	33
Total	117	8	18	15	29	5	3	78	326	92	91
Kentucky	57	-	14	10	22	3	-	49	19	7	34
Tennessee	22	3	3	4	4	1	2	17	172	38	34
Alabama	11	1	-	-	1	1	-	3	104	15	7
Mississippi	27	4	1	1	2	-	1	9	31	32	16
WEST SOUTH CENTRAL											
Paralytic	118	8	5	1	12	6	7	39	210	115	72
Total	201	10	9	2	25	8	9	63	314	167	213
Arkansas	21	-	3	-	5	1	1	10	101	3	12
Louisiana	40	1	3	-	-	-	-	4	39	20	42
Oklahoma	12	-	-	-	-	2	2	4	46	13	33
Texas	128	9	3	2	20	5	6	45	128	131	126
MOUNTAIN											
Paralytic	25	2	-	-	2	1	3	8	33	19	20
Total	59	5	2	1	4	10	5	27	61	51	58
Montana	13	1	-	-	-	-	-	1	3	23	5
Idaho	5	1	-	-	-	-	-	1	-	6	9
Wyoming	18	2	1	-	1	8	2	14	-	2	3
Colorado	9	-	1	-	1	1	2	5	11	4	15
New Mexico	6	-	-	1	1	1	1	4	12	4	15
Arizona	4	1	-	-	-	-	-	1	27	8	7
Utah	4	-	-	-	1	-	-	1	6	3	4
Nevada	-	-	-	-	-	-	-	-	2	1	-
PACIFIC											
Paralytic	334	23	26	23	23	21	22	138	244	58	55
Total	382	28	31	29	26	21	24	159	282	81	185
Alaska	2	-	-	-	-	-	-	-	5	-	1
Washington	22	5	1	1	3	-	2	12	84	5	7
Oregon	27	1	-	2	4	-	1	8	67	11	3
California	324	21	30	26	18	21	21	137	126	46	172
Hawaii	7	1	-	-	1	-	-	2	-	19	2
TERRITORIES											
Puerto Rico	427	10	20	11	14	7	9	71	-	7	12

Table II

PARALYTIC POLIOMYELITIS OCCURRING WITHIN 30 DAYS OF LAST VACCINE INOCULATION
(Cases Reported to PSU from September 13 through September 19, 1960)

State	County	Ini- tials	Age	Sex	Date Inoc.	Mfr. Lot No.	Date First Symp.	Site Inoc.	Site First Para.
Ky.	Pulaski	R.H.	7	M	9-2-60	M.S.&D. 63787	9-8-60	unk.	unk.
Ky.	Taylor	B.J.	6 mos.	F	8-13-60	unk. unk.	8-22-60	unk.	unk.
Minn.	Beltrami	G.L.	7	M	8-5-60	Wyeth or Lilly 36206 2136755918	8-13-60	left arm	left leg
Tenn.	Shelby	E.B.	5	M	6-11-60	unk. unk.	6-22-60	unk.	right foot

Additional information received on Utah Case J. S. listed in Report 211 indicates vaccine manufacturer and lot number - Parke-Davis 060495B.

Additional information received on West Virginia Case J.N. listed in Report 211 indicates - site of inoculation - left arm, site of first paralysis - both lower extremities, vaccine manufacturer and lot number - Parke-Davis 060496A.

Additional information received on Wisconsin Case S. S. listed in Report 211 indicates site of inoculation - left arm, vaccine manufacturer and lot number - Lilly 6013-749227.

Table III

POLIOMYELITIS AND QUADRUPLE ANTIGEN VACCINE REPORTS

(Data provided by the Polio Vaccine Activity, BSS, USPHS, through September 9, 1960)

POLIOMYELITIS VACCINE SHIPPED (1000's cc's)

Period	National Foundation	Public Agencies	Commercial Channels	Domestic Total	Export
1955	13,541	7,893	6,223	27,657	--
1956	194	45,588	24,784	70,566	6,477
1957	154	50,026	38,062	88,242	12,784
1958	203	18,533	28,319	47,055	33,571
1959	160	26,160	37,553	63,873	21,161
1960					
Jan-March	--	4,298	5,371	9,669	2,782
April-June	--	6,149	9,763	15,912	3,498
<u>WEEK ENDING</u>					
7-8	--	480	621	1,101	95
7-15	--	1,175	500	1,675	106
7-22	--	245	608	853	70
7-29	--	839	553	1,392	158
8-5	--	487	711	1,198	58
8-12	1	120	417	538	50
8-19	--	1,376	473	1,849	47
8-26	--	133	406	539	16
9-2	--	821	551	1,372	122
1960 Total to Date	1	16,123	19,974	36,098	7,002
Cumulative Total	14,253	164,323	154,915	333,491	80,995
<u>QUADRUPLE ANTIGEN VACCINE SHIPPED (1000's cc's)</u>					
1959		157	4,020	4,177	59
1960					
Jan-March		118	1,308	1,426	65
April-June		165	1,928	2,093	62
<u>WEEK ENDING</u>					
7-8		14	148	162	2
7-15		9	124	133	13
7-22		13	149	162	1
7-29		10	169	179	3
8-5		42	155	197	10
8-12		23	153	176	4
8-19		36	150	186	3
8-26		18	161	179	--
9-2		10	177	187	11
1960 Total to Date		458	4,622	5,080	174
Cumulative Total		615	8,642	9,257	233
GRAND TOTAL	14,253	164,938	163,557	342,748	81,228

