



POLIOMYELITIS SURVEILLANCE REPORT

FOR ADMINISTRATIVE USE

REPORT NO. 216

October 28, 1960

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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

A sharp increase in paralytic and moderate increase in total cases of poliomyelitis were reported to the National Office of Vital Statistics during the 42nd week ending October 22. This represents a reversal of the declining trend of paralytic case reports during the previous 3 weeks.

Though no recent outbreaks have occurred, new cases continue to occur in Maryland, Maine, and Virginia. Narrative reports from these States and from Tennessee and New York State, and a report of aseptic meningitis in Illinois are included.

A final summary account of vaccine distribution through September 30, 1960, is presented.

1. CURRENT POLIOMYELITIS MORBIDITY TRENDS

During the 42nd week ending October 22 a total of 140 cases, 93 paralytic, was reported to the National Office of Vital Statistics. As depicted in Figure I this represents a moderate increase in total cases and a sharp increase in paralytic cases reported over the previous week's total of 122 cases, 78 paralytic. However, it should be noted that the preceding week had been one in which the declining incidence noted for 3 consecutive weeks was especially marked in the paralytic cases reported. Thus the current week demonstrates a sharp reversal in the downward trend, similar to that seen in 1957 during the 43rd week.

The table below compares the current cumulative numbers of paralytic and total cases with comparable figures of recent years. The number of paralytic cases reported this year is equal to that of 1957, while the current total is approximately one-half the total of that year. This probably reflects a lower incidence of aseptic meningitis and more definitive diagnostic criteria differentiating nonparalytic poliomyelitis from other neurotropic enterovirus infections.

POLIOMYELITIS

TOTAL (CUMULATED WEEKLY) THROUGH THE 42nd WEEK FOR PAST FIVE YEARS

	<u>1960</u>	<u>1959</u>	<u>1958</u>	<u>1957</u>	<u>1956</u>
Paralytic	1,838	4,709	2,300	1,838	5,854
Total	2,699	7,204	4,744	5,385	13,656

The nation-wide increase is reflected in 5 of the 9 national regions. Cases continue to occur in the vicinities of Portland, Maine, and Baltimore, Maryland, accounting for increases along the Atlantic Seaboard. Increases in the East Central Regions are due to delayed reports and scattered cases in Indiana, Michigan, Kentucky, and Alabama. No new epidemics have occurred.

2. REPORTS

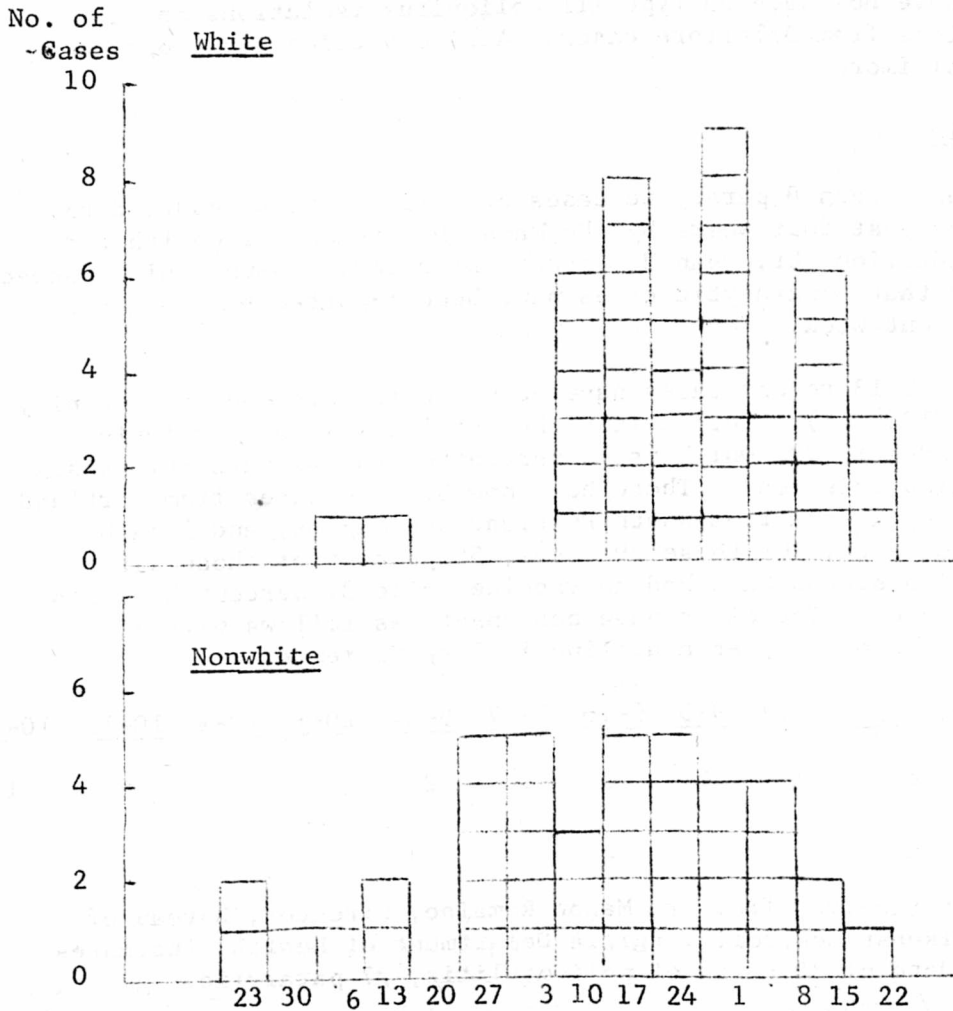
A. Maryland

During the past two weeks, 17 new paralytic cases of poliomyelitis have been reported to the Maryland State Health Department from the City of Baltimore. Dr. Glen E. Gresham, EIS Officer assisting Dr. Charlotte Silverman, cites that these additional cases bring the 1960 Baltimore total to 91 cases, of which 87 are paralytic, through October 26.

Although 13 of the 17 new cases are in the white population, the Negro attack rate of 14.1/100,000 is still twice the attack rate of 7.3/100,000 among the white population. The cases are shown below by race and week of onset. This histogram depicts the earlier incidence seen in the Negro population.

Paralytic Cases by Race and Week of Onset

Baltimore - 1960



Of the 87 paralytic cases, 56 percent have occurred among pre-school age children and 79 percent have been under 10 years of age. Whereas 50 percent of the paralytic cases with immunization status known had no vaccine, 27 percent have had 3 or more doses. These cases are shown below by age group and vaccination status:

Age Group	Doses of Vaccine						Total
	0	1	2	3	4+	Unk.	
0-4	22	6	10	6	3	2	49
5-9	8	0	2	8	2	0	20
10-14	1	0	0	4	0	0	5
15-19	0	0	0	0	0	1	1
20+	11	0	1	0	0	0	12
Total	42	6	13	18	5	3	87
Percent Doses	50.0	7.1	15.5	21.4	6.0	-	100.0

There have now been 35 Type III poliovirus isolations and 2 type I isolations from Baltimore cases. Active vaccination programs continue in Baltimore.

B. Maine

There have been 8 paralytic cases of poliomyelitis reported to NOVS during the past four weeks by the Maine Department of Health and Welfare. In addition, Dr. Dean H. Fisher, Director, Communicable Disease Control, cites that 5 paralytic cases have been reported to the State during the current week.

All of the 13 recent cases have occurred in Portland and vicinity (See PSU 211, 212, 213). This brings the total number of paralytic cases in this area to 29, which is 71 percent of the 41 paralytic cases reported by Maine this year. There have now been 16 cases from Portland, 7 from Westbrook, 2 each from South Portland and Naples, and 1 each from Gorham and Casco. Of these 29 cases, 58 percent of those with known vaccination status have had no vaccine while 37 percent have had three or more doses. The cases have had onsets as follows with a flare-up in mid-October after a decline in late September:

Week Ending:	<u>Thru 8-27</u>	<u>9-3</u>	<u>9-10</u>	<u>9-17</u>	<u>9-24</u>	<u>10-1</u>	<u>10-8</u>	<u>10-15</u>	<u>10-23</u>
Paralytic Cases	3	4	5	3	2	4	1	6	1

C. Virginia

A report received from Dr. Mason Romaine, Director, Bureau of Communicable Disease Control, Virginia Department of Health, indicates occurrence to date of 30 cases of poliomyelitis, 27 paralytic.

The 7 most recent cases reported this week are all paralytic and have onsets in October. Two have been reported from Lancaster County, and one each from Rockingham, Washington, Warren and Clarke Counties and Richmond City. All of the patients are preschool and school age children with inadequate Salk immunization.

D. Tennessee

A total of 36 cases of poliomyelitis, 25 paralytic, have occurred to date in Tennessee. Dr. Cecil B. Tucker, Director, Division of Preventable Diseases, Tennessee Department of Public Health, states that most of these have been scattered in the State.

Of interest, however, is a concentration of 7 cases in the western part of the State in Tipton County. Most of the patients reside in rural areas, and only 2 are from Covington, the County Seat. A listing of these cases is presented below:

<u>Age</u>	<u>Race</u>	<u>Sex</u>	<u>Date of Onset</u>	<u>Paralytic Status</u>	<u>Vaccination Status</u>
5	W	M	7-21	Paralytic	0V
6	N	M	8-5	Paralytic	1V
2	N	M	8-9	Paralytic	0V
8	N	F	8-9	Paralytic	0V
2	N	F	8-15	Paralytic	0V
13	W	M	8-21	Nonparalytic	4V
?	?	?	?	Nonparalytic	?

Both nonparalytic cases were confirmed with either virus isolation or titer rise. Thus with preliminary 1960 census population of 28,404, the crude attack rate in the County is 26.4 per 100,000, a rate comparable to those of other moderate rural outbreaks this year (Pulaski County, Kentucky; Barren County, Kentucky; Somerset County, Pennsylvania).

E. New York State

During the past week only 7 new cases have been reported from up-state New York, making a cumulative total to date of 139 cases. According to Dr. Robert M. Albrecht, Director, Division of Epidemiology, New York State Department of Health, there have been 91 paralytic and 38 nonparalytic cases, plus 10 with status unknown. At this time last year there had been 279 cases, including 225 paralytic.

The only case concentrations have been in the western section of the State, Cattaraugus County and adjacent Allegheny County. In Cattaraugus County there have been 30 cases, 14 paralytic, with 20 onsets in August-September, but only 4 thus far in October. The last 5 cases have all been nonparalytic. In Allegheny County there have been 13 cases, 6 paralytic, 4 unspecified, and 3 nonparalytic. Eight of these had onsets in September, but only one thus far in October. In contrast to the preponderance of type III poliovirus isolations from Cattaraugus Cases (PSU No. 215), 3 of the 4 virus isolations from Allegheny County cases have been type I poliovirus.

F. Illinois

Five newly reported cases of poliomyelitis in Illinois bring the case total for the year to 128 cases, including 90 paralytic, according to Dr. Norman J. Rose, Chief, Bureau of Epidemiology, Illinois Department of Public Health. Of this total, 28 cases have been from Chicago, 39 from suburban Cook County and 61 from downstate Illinois. The only concentration outside of Cook County has been in Macon County (PSU No. 212).

In contrast to the generally low reported incidence of aseptic meningitis throughout the country this year, Illinois has now had 211 cases diagnosed, including 30 reported in the past two weeks. These cases have been widely scattered throughout the State but with clusters of cases occurring in the central (Peoria, Tazewell and Sangamon Counties) and northeast (Lake and Cook Counties) portions of the State. Poliovirus type I has been predominant among the poliomyelitis cases whereas Coxsackie B viruses have been isolated frequently from cases of aseptic meningitis.

3. 1960 POLIOMYELITIS CASES REPORTED TO PSU

During the week ending October 17, 97 cases of poliomyelitis were reported to the Poliomyelitis Surveillance Unit on individual case forms. This brings the 1960 total reported to PSU to 1,829 cases of which 1,352 are paralytic, 435 nonparalytic and 42 unspecified as to paralytic status.

As of this report, 74 percent of the cases reported to PSU have been paralytic and only 2.3 percent have been unspecified whereas 68 percent of the cases reported to NOVS have been paralytic and 10.6 percent unspecified. This indicates that a significant proportion of the unspecified cases reported by wire to NOVS are found to be paralytic upon further investigation. The cases reported to PSU are presented in Table 3 on the following page.

TABLE 3

POLIOMYELITIS CASES BY PARALYTIC STATUS, AGE GROUP
AND VACCINATION HISTORY REPORTED ON PSU FORMS
(Through October 17, 1960)

Age Group	Paralytic						Tot
	Doses of Vaccine						
	0	1	2	3	4/	Unk	
0-4	332	68	68	76	22	31	597
5-9	126	21	35	71	37	20	310
10-14	29	10	10	37	12	11	109
15-19	40	7	5	15	1	8	76
20-29	107	12	11	9	4	7	150
30-39	57	7	5	4	2	4	79
40/	25	0	0	1	0	4	30
Unk	1	0	0	0	0	0	1
Total	717	125	134	213	78	85	1352
PER CENT DOSES	56.6	9.9	10.6	16.8	6.1	-	100.0

Age Group	Nonparalytic						Tot
	Doses of Vaccine						
	0	1	2	3	4/	Unk	
0-4	51	10	12	15	14	7	109
5-9	23	10	11	30	33	9	116
10-14	6	6	0	24	22	1	59
15-19	14	0	5	18	10	0	47
20-29	19	5	4	23	9	9	69
30-39	7	2	4	5	6	2	26
4/	5	0	1	0	0	1	7
Unk	0	0	0	1	1	0	2
Total	125	33	37	116	95	29	435
PER CENT DOSES	30.8	8.1	9.1	28.6	23.4	-	100.0

4. ROUTINE POLIOMYELITIS SURVEILLANCE

A. Cases with Onset within 30 Days of Vaccination

During the week ending October 17, report of 1 case of poliomyelitis was received by the Poliomyelitis Surveillance Unit. The patient is a 5 month old infant with right arm paralysis correlated with inoculation in the right arm 17 days previously. Since only one other instance of paralytic disease has been associated with this lot of vaccine (Parke-Davis 061737), and since the report this week is the first correlated case, no break in vaccine safety has been demonstrated. The yearly total now stands at 104 cases, 80 paralytic (8 correlated).

This correlated case and additional information on 5 cases previously reported are presented in Table II.

B. Vaccine Distribution

Table III presents a summary of current and cumulative shipments of poliomyelitis and quadruple antigen vaccines, and Figure II depicts the monthly shipments during 1959-60. Quadruple antigen vaccine makes up approximately 12 percent of the total domestic vaccine shipped in 1960 to date.

This is the final account in the weekly series which have summarized data concerning vaccine shipments and use by various agencies since the vaccine was released in April, 1955. With this concluding vaccine report, the data will no longer be available. Since release of the vaccine in 1955 approximately 420 million doses have been shipped to the National Foundation, public agencies, regular commercial drug outlets, and foreign consumers. Nearly 10 million c.c. of quadruple antigen vaccine have also been distributed through these channels. In addition, 11.6 million doses have become outdated in the hands of manufacturers, and 24 million doses are as yet unshipped.

(This report was prepared by the Poliomyelitis and Polio-like Diseases Surveillance Unit, Joseph Oren, M.D., Chief, Michael J. Regan, M.D., and Mr. 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

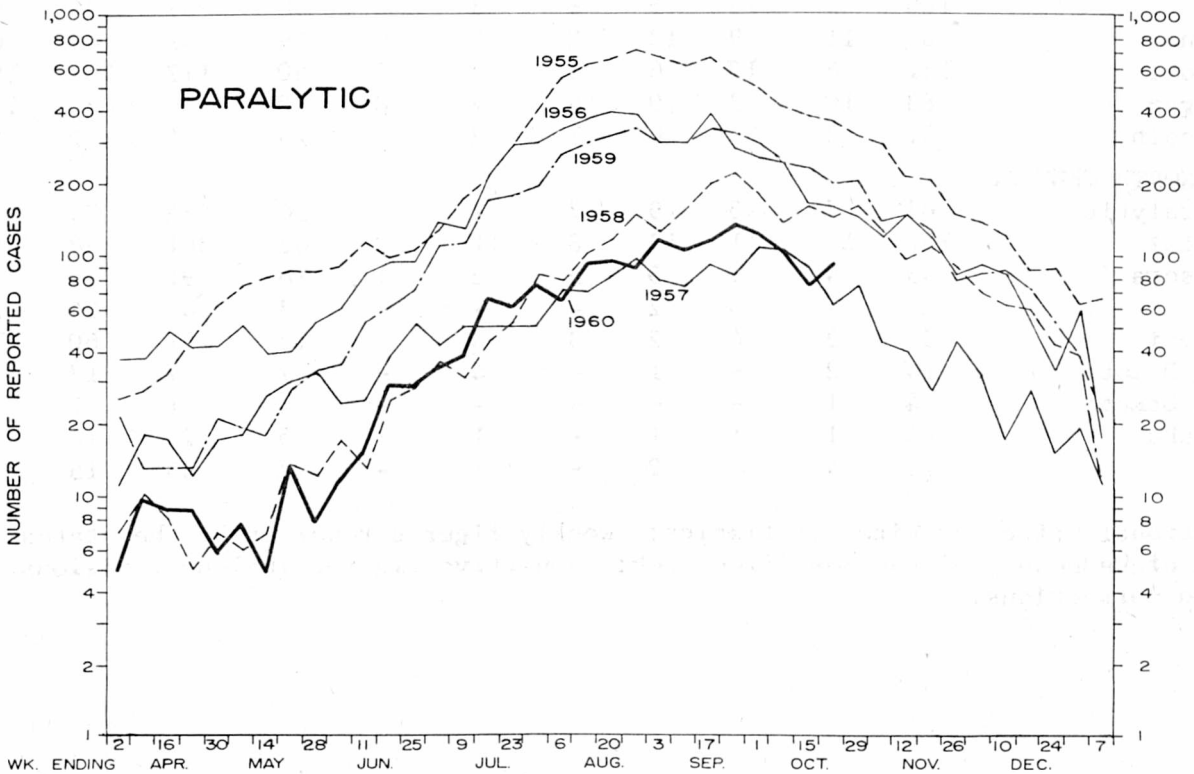
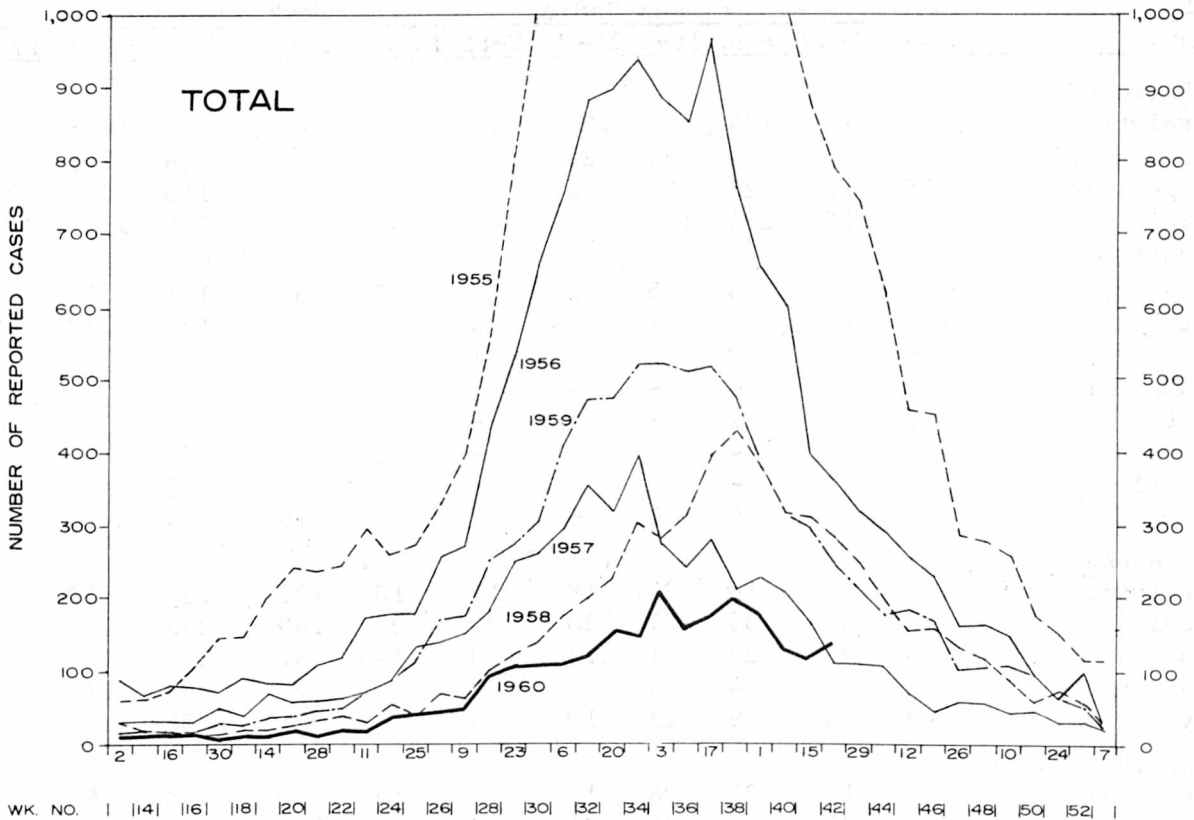


Table 1

TREND OF 1960 POLIOMYELITIS INCIDENCE

State and Region	Cumulative 1960	Cases Reported to NOVS*						Six Week Total	Comparable Six Weeks Total in:		
		For Week Ending	9-17	9-24	10-1	10-8	10-15		10-22	1959	1958
UNITED STATES											
Paralytic	1838	114	134	123	102	78	93	644	1587	1038	533
Nonparalytic	576	48	44	30	25	25	22	194	516	799	498
Unspecified	285	13	26	27	5	19	25	115	145	319	192
Total	2699	175	204	180	132	122	140	953	2248	2147	1223
NEW ENGLAND											
Paralytic	162	8	14	5	1	2	7	37	121	24	10
Total	207	13	14	7	3	3	8	48	134	30	21
Maine	38	2	9	2	1	1	4	19	53	-	-
New Hampshire	-	-	-	-	-	-	-	-	1	-	-
Vermont	7	2	1	-	1	-	-	4	3	4	1
Massachusetts	29	1	-	1	1	-	1	4	55	12	11
Rhode Island	99	2	-	3	-	-	-	5	5	1	-
Connecticut	34	6	4	1	-	2	3	16	17	13	9
MIDDLE ATLANTIC											
Paralytic	274	24	18	21	19	11	10	103	220	142	36
Total	392	35	35	27	30	20	22	169	298	279	97
New York	218	21	22	11	15	10	12	91	187	109	63
New Jersey	75	9	4	3	5	2	4	27	53	123	24
Pennsylvania	99	5	9	13	10	8	6	51	58	47	10
EAST NORTH CENTRAL											
Paralytic	263	17	25	28	16	8	16	110	178	367	144
Total	457	37	41	39	21	17	26	181	393	1037	431
Ohio	106	5	13	5	8	3	4	38	67	196	62
Indiana	106	11	9	13	2	5	9	49	41	48	63
Illinois	131	8	12	6	6	3	5	40	117	101	107
Michigan	83	10	3	9	4	4	8	38	154	670	173
Wisconsin	31	3	4	6	1	2	-	16	14	22	26
WEST NORTH CENTRAL											
Paralytic	87	7	5	9	7	7	1	36	232	73	41
Total	154	17	11	13	8	11	2	62	361	148	86
Minnesota	49	4	1	5	5	2	1	18	97	15	15
Iowa	21	-	5	2	-	-	-	7	66	24	28
Missouri	32	5	4	2	3	3	-	17	131	60	15
North Dakota	14	2	-	1	-	4	-	7	7	17	3
South Dakota	4	1	-	-	-	-	-	1	1	1	6
Nebraska	15	1	1	1	-	1	1	5	26	16	11
Kansas	19	4	-	2	-	1	-	7	33	15	8

* 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 1 (Continued)

State and Region	Cumulative 1960	Cases Reported to NOVS For Week Ending:						Six Week Total	Comparable Six Weeks Totals in:		
		9-17	9-24	10-1	10-8	10-15	10-22		1959	1958	1957
SOUTH ATLANTIC											
Paralytic	375	24	30	33	35	26	33	181	289	149	107
Total	489	32	33	38	38	27	41	209	348	231	187
Delaware	-	-	-	-	-	-	-	-	3	8	1
Maryland	126	11	17	21	21	15	18	103	25	8	10
D. C.	2	-	-	-	-	2	-	2	1	-	24
Virginia	31	4	2	4	2	1	7	20	77	47	37
West Virginia	46	2	3	2	4	2	6	19	66	81	24
North Carolina	85	5	2	2	6	3	4	22	87	25	34
South Carolina	123	6	6	7	5	-	1	25	27	8	26
Georgia	18	2	1	1	-	2	-	6	35	7	11
Florida	58	2	2	1	-	2	5	12	27	47	20
EAST SOUTH CENTRAL											
Paralytic	85	2	9	3	4	3	7	28	174	63	44
Total	211	3	30	20	7	20	17	97	215	98	87
Kentucky	118	-	20	17	-	14	10	61	51	17	31
Tennessee	40	2	7	1	4	5	1	20	103	34	39
Alabama	21	-	2	1	1	-	6	10	37	11	12
Mississippi	32	1	1	1	2	1	-	6	24	36	5
WEST SOUTH CENTRAL											
Paralytic	158	7	9	10	6	11	5	48	132	111	67
Total	258	9	12	15	11	14	6	67	220	162	124
Arkansas	31	1	3	2	1	4	-	11	83	8	11
Louisiana	48	-	4	-	4	-	1	9	19	26	29
Oklahoma	16	2	-	2	-	2	-	6	21	11	20
Texas	163	6	5	11	6	8	5	41	97	117	64
MOUNTAIN											
Paralytic	39	3	3	5	1	2	3	17	20	22	17
Total	75	5	3	5	1	2	5	21	38	46	50
Montana	18	-	1	2	-	-	2	5	-	19	3
Idaho	7	-	-	-	-	-	2	2	1	4	9
Wyoming	19	2	-	-	-	-	1	3	-	1	2
Colorado	15	2	2	2	-	2	-	8	9	6	16
New Mexico	7	1	-	1	-	-	-	2	8	5	6
Arizona	4	-	-	-	-	-	-	-	16	6	12
Utah	5	-	-	-	1	-	-	1	3	4	2
Nevada	-	-	-	-	-	-	-	-	1	1	-
PACIFIC											
Paralytic	395	22	21	9	13	8	11	84	221	87	67
Total	456	24	25	16	13	8	13	99	241	116	140
Alaska	2	-	-	-	-	-	-	-	7	1	-
Washington	33	2	6	-	4	-	1	13	80	16	3
Oregon	32	1	2	3	-	1	-	7	44	8	1
California	382	21	17	13	9	7	12	79	109	78	131
Hawaii	7	-	-	-	-	-	-	-	1	13	5
TERRITORIES											
Puerto Rico	467	9	16	5	8	3	3	44	1	1	5

Table II

PARALYTIC POLIOMYELITIS OCCURRING WITHIN 30 DAYS OF LAST VACCINE INOCULATION
(Cases Reported to PSU from October 11, through October 17, 1960)

State	County	Ini- tials	Age	Sex	Date Inoc.	Mfr. Lot No.	Date First Symp.	Site Inoc.	Site First Para.
N. Y. City	Kings	S.L.	5 mos.	M	8-31-60	P-D 061737	9-15-60	right arm	right arm

Additional information received on previously reported cases:

Ky.	Pulaski	R.H.	7	M	9-2-60	MS&D 63787	9-8-60	left arm	both legs
Ky.	Pulaski	R.D.	23 mos.	M	9-9-60	MS&D 63787	9-19-60	left arm	right lower extre- mity
N. Y. City	Manhattan	T.P.	8 mos.	M	8-25-60	P-D 064364	8-26-60	right arm	left leg
New Mexico	Curry	C.M.	4	F	4-25-60	P-D 061732	5-9-60	left arm	muscles of pharynx
Texas	Harris	J.M.	10 mos.	M	6-6-60	P-D Unk.	7-4-60	gluteal muscles	left lower leg

FIGURE II

MONTHLY SHIPMENTS OF POLIOMYELITIS VACCINE; 1959-60

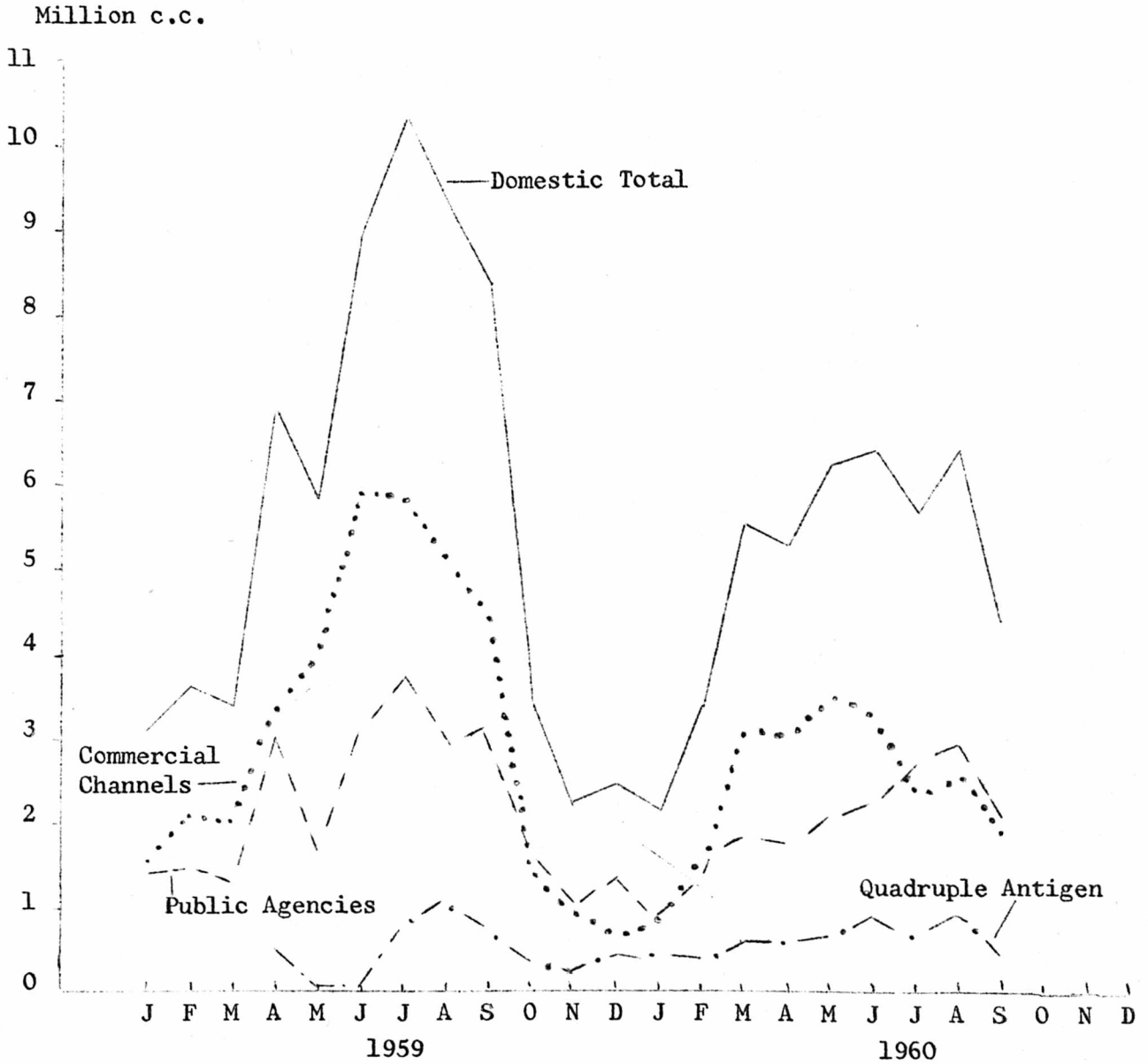


Table III

POLIOMYELITIS AND QUADRUPLE ANTIGEN VACCINE REPORTS

(Data provided by the Polio Vaccine Activity, BSS, USPHS, through September 30, 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
July	--	2,740	2,282	5,022	430
August	1	2,937	2,558	5,496	293
September	--	2,014	1,885	3,899	1,216
1960 Total to Date	1	18,138	21,859	39,998	8,218
Cumulative Total	14,253	166,338	156,800	337,391	82,211
<u>QUADRUPLE ANTIGEN VACCINE SHIPPED (1000'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
July		47	589	636	20
August		128	797	925	28
September		38	427	465	35
1960 Total to Date		496	5,049	5,545	210
Cumulative Total		653	9,069	9,722	269
GRAND TOTAL	14,253	166,991	165,869	347,113	82,480

