

COMMUNICABLE DISEASE CENTER

# POLIOMYELITIS

## SURVEILLANCE

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# PREFACE

Summarized in this report is information received from State Health Departments, university investigators, virology laboratories and other pertinent sources, domestic and foreign. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Anyone desiring to quote this report should contact the original investigator for confirmation and interpretation.

Contributions to the Surveillance Report are most welcome. Please address to:  
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## SUMMARY

During the 24th week ending June 16, a total of 16 cases, 13 paralytic, was reported by telegram to the CDC Morbidity Unit. Fourteen of the 16 cases were from Texas. A further report on incidence in Texas is presented in Section 2.

A final report on virus isolations from 1961 cases reported to PSU is presented in Section 3. Sixty percent of the poliovirus isolates were due to Type I.

Current enterovirus surveillance is also included in this report.

### 1. CURRENT MORBIDITY TRENDS

Sixteen cases of poliomyelitis, 13 paralytic, were reported during the week ending June 16 (Table I). Texas reported 14 cases, 12 paralytic, and Louisiana reported 2 cases, 1 paralytic.

The table below compares the current seasonal six-week morbidity reporting with that of recent years. Figures for this year exceed those of 1961 but remain well below those of 1958-60. Texas accounts for more than 70 percent of the paralytic cases during the past six weeks.

Six-Week Totals (19th thru 24th Week) for Past Five Years

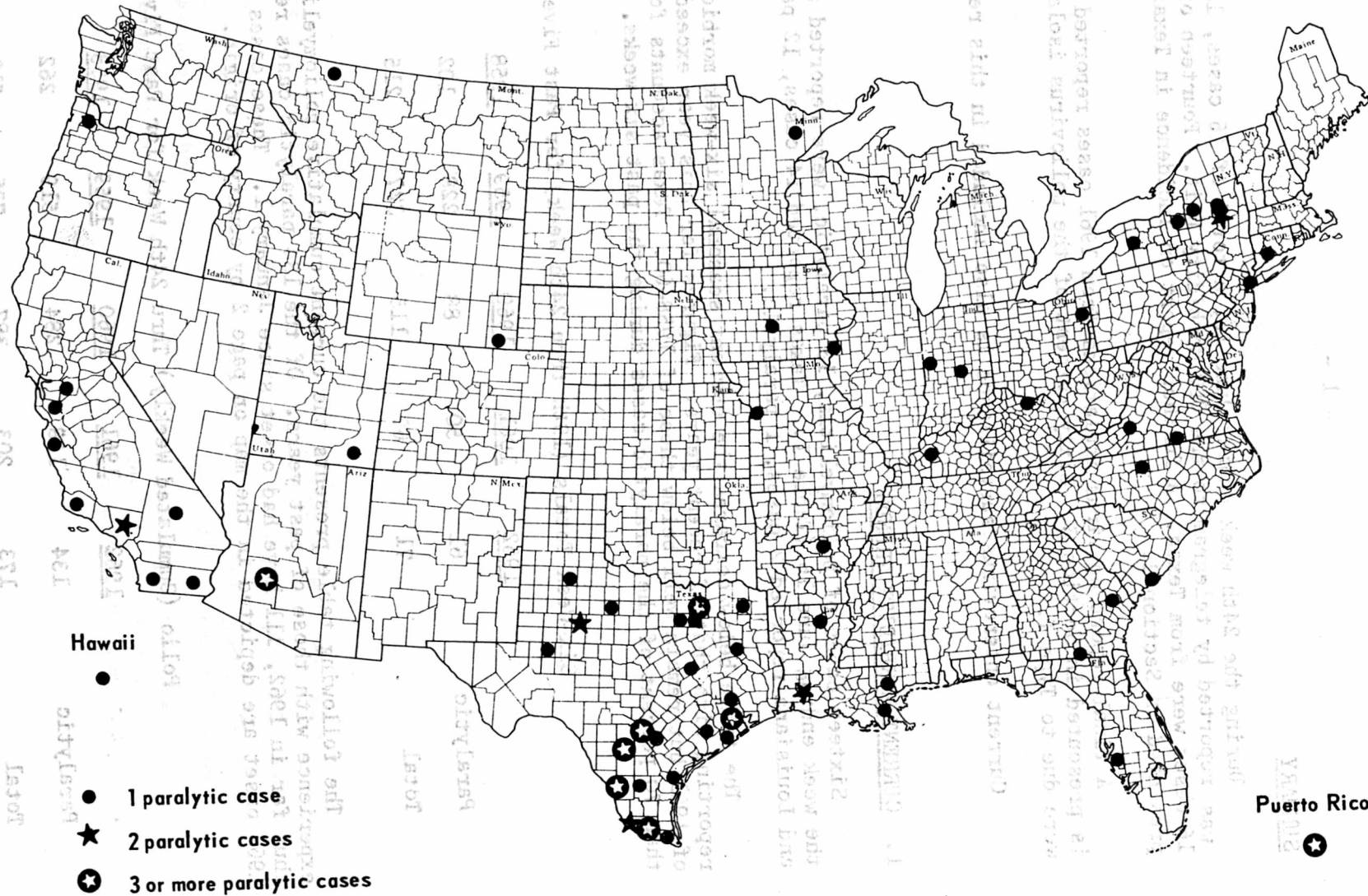
	<u>1962</u>	<u>1961</u>	<u>1960</u>	<u>1959</u>	<u>1958</u>
Paralytic	61	50	88	228	102
Total	71	67	115	327	215

The following table presents the current cumulative poliomyelitis experience with those of past years. Of the 134 paralytic cases reported thus far in 1962, 111 have had onset since January 1. These cases with 1962 onset are depicted in the map on page 2 by county of origin.

Polio (Cumulated Weekly) Thru 24th Week for Past Five Years

	<u>1962</u>	<u>1961</u>	<u>1960</u>	<u>1959</u>	<u>1958</u>
Paralytic	134	138	284	519	262
Total	173	203	387	736	512

# REPORTED PARALYTIC POLIO IN U. S. BY COUNTY - 1962 onset through June 16



## 2. STATE REPORT - TEXAS

Dr. Van C. Tipton, Chief, Communicable Disease Division, Texas State Department of Health, reports an additional 12 cases of paralytic poliomyelitis for the week ending June 16. Four of the 12 cases are from Bexar County and 2 from Collin County. The remaining 6 cases represent single case reports from Brazoria, Dallas, Frio, Harris, Titus, and Wilson Counties.

There have now been 64 paralytic cases in Texas as shown in the following table by county and vaccination history. Over half of the 64 cases have occurred in Bexar, Frio and Webb County. These three counties have received Type I oral vaccine from the CDC epidemic reserve (See PSU Report No. 259).

### PARALYTIC POLIOMYELITIS BY COUNTY AND VACCINATION HISTORY TEXAS - 1962

County	Inactivated Vaccine				Total	Oral Vaccine*	
	OV	1-2V	3+V	Unk.		Yes	No
Bexar (S. Antonio)	16	2	0	0	18	4	2
Frio (Near Bexar)	5	3	0	0	8	2	0
Webb (Laredo)	4	1	2	0	7	0	0
Hidalgo (South Texas)	4	0	0	0	4	-	-
Harris (Houston)	3	0	0	0	3	-	-
Collin (Near Dallas)	0	0	0	3	3	-	-
Cameron (South Texas)	2	0	0	0	2	-	-
Starr (South Texas)	1	0	0	1	2	-	-
Others	8	1	1	7	17	-	-
Total	43	7	3	11	64	6	2

\*Cases with onset since oral vaccine program.

Eight cases have occurred in Bexar and Frio Counties since the oral vaccine program. Six of these had received oral vaccine as follows:

County	Age	Sex	Onset	Oral Vaccine	Interval (days)	Inactivated Vaccine
Bexar	3 yr.	M	6 - 1	5 - 31	1	OV
Bexar	1 yr.	M	6 - 5	5 - 31	5	OV
Bexar	5 yr.	M	6 - 8	6 - 3	5	OV
Frio	3 yr.	M	6 - 8	5 - 31	8	1V
Bexar	9 mo.	F	6 - 12	6 - 3	9	OV
Frio	7 yr.	M	6 - 13	5 - 31	13	OV

The paralytic cases in Bexar, Frio, and Webb Counties are shown below by week of onset. No cases have been recognized in Webb County during the past 4 weeks.

<u>Week ending:</u>	Prior to								
	<u>4/21</u>	<u>4/21</u>	<u>4/28</u>	<u>5/5</u>	<u>5/12</u>	<u>5/19</u>	<u>5/26</u>	<u>6/2</u>	<u>6/9</u>
Bexar	1	1	1	3	0	3	0	3	4
Frio	0	0	0	0	0	0	4	2	1
Webb	3	0	1	1	1	1	0	0	0

**Starr (1), and Tarrant (1) Counties.**

### 3. 1961 POLIOMYELITIS REPORTED TO PSU - VIRUS ISOLATIONS

The Poliomyelitis Surveillance Unit received reports of attempted virus isolation on 735 cases of poliomyelitis with onset in 1961. This represents virologic study of 54.2 percent of the 1356 cases reported to PSU on individual case forms.

Poliovirus was isolated from 481 or 65 percent of the specimens submitted. As in past years, there was a greater percentage of poliovirus isolates from those cases with residual paralysis; poliovirus was isolated from 78.3 percent of those with specimens submitted (as compared to 76.6 percent in 1960 and 78.1 percent in 1959). In those paralytic cases with no residual paralysis, poliovirus was isolated in 45.8 percent of the cases studied. The nonparalytic-aseptic meningitis syndrome group showed a poliovirus isolation in only 34.7 percent of the specimens studied. Table 3A presents the virus isolations by final classification of cases reported.

Table 3A  
VIRUS ISOLATIONS FROM REPORTED CASES  
OF POLIOMYELITIS IN THE UNITED STATES, 1961

Final Classification	VIRUS ISOLATIONS					**		
	Poliovirus				ECHO	Cox- sackie	Neg- ative	Tot. Spec
	I	II	III	Other*				% POLIO
Nonparalytic - AsM Syndrome	32	0	27	0	5	31	76	170 34.7
"Paralytic," No Residual Para.	22	0	11	0	1	5	33	72 45.8
Paralytic, Residual Paralysis	211	5	135	3	0	6	95	452 78.3
Diagnosis Changed***	0	0	0	0	0	1	3	4
No Final Classification****	22	1	9	0	1	1	4	37
<b>TOTAL</b>	<b>287</b>	<b>6</b>	<b>182</b>	<b>3</b>	<b>7</b>	<b>44</b>	<b>211</b>	<b>735</b>

\*Three double isolates were both Type I and Type III from the same cases.

\*\*Total isolations and negatives may add to more than total specimens due to double isolates of poliovirus and non-polio enterovirus.

\*\*\*Not Polio of Aseptic Meningitis

\*\*\*\*No 60-day report.

Of the 481 poliovirus isolates, 290 (60.3 percent) were Type I and 185 (38.5 percent) were Type III. Type II was isolated in only 6 cases (1.2 percent). Although poliomyelitis was again predominantly due to Type I virus, there was an increased proportion due to Type III -- 38 percent in 1961 compared to 26 percent in 1960 and 11 percent in 1959.

As can be seen in Table 3B on page 6, New York accounted for over one-third of the Type I isolates in 1961. Three states in the South Atlantic Region, Maryland, South Carolina and Georgia, accounted for 40 percent of Type III isolates throughout the nation.

#### 4. ROUTINE POLIOMYELITIS SURVEILLANCE - 1962

##### A. Cases with Onset Within 30 Days of Vaccination - (Inactivated)

Two cases of poliomyelitis, 1 paralytic, with onset within 30 days of inoculation (IPV) have been reported to the Poliomyelitis Surveillance Unit during the week ending June 16. Both cases are from Frio County, Texas. Each of these two, previously unvaccinated, had received Type I oral polio vaccine on the same date that they had been inoculated with inactivated vaccine.

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TABLE 3B

**POLIOMYELITIS BY STATE - 1961**  
**LABORATORY STUDIES AND POLIOVIRUS ISOLATIONS**  
**REPORTED ON PSU FORMS\***

State and Region	Total Cases*	Total Cases Lab Studied	%	Poliovirus Isolations**				ECHO	Cox- sackie
				I	II	III	Unsp.		
<b>UNITED STATES</b>	<b>1356</b>	<b>735</b>	<b>54</b>	<b>290</b>	<b>6</b>	<b>185</b>	<b>0</b>	<b>7</b>	<b>44</b>
<b>NEW ENGLAND</b>									
Maine	6	3	50	3	0	0	0	0	1
New Hampshire	1	1	100	0	0	1	0	0	0
Vermont	13	5	38	5	0	0	0	0	0
Massachusetts	21	16	76	6	0	1	0	0	1
Rhode Island	1	1	100	1	0	0	0	0	0
Connecticut	5	5	100	3	0	0	0	0	0
<b>MIDDLE ATLANTIC</b>									
New York	276	159	58	108	0	9	0	3	21
New Jersey	38	26	68	4	0	5	0	0	2
Pennsylvania	62	48	77	18	0	12	0	0	1
<b>EAST NORTH CENTRAL</b>									
Ohio	44	22	50	10	0	4	0	0	0
Indiana	24	3	13	3	0	0	0	0	0
Illinois	32	21	66	2	0	0	0	2	3
Michigan	42	9	21	8	0	1	0	0	0
Wisconsin	34	15	44	2	1	11	0	0	0
<b>WEST NORTH CENTRAL</b>									
Minnesota	8	6	75	2	0	4	0	0	0
Iowa	23	2	9	0	0	0	0	0	1
Missouri	27	14	52	1	2	1	0	0	0
North Dakota	5	3	60	0	0	0	0	0	1
South Dakota	3	0	0	0	0	0	0	0	0
Nebraska	8	0	0	0	0	0	0	0	0
Kansas	5	2	40	1	0	0	0	0	0

\* Cases reported to PSU as Poliomyelitis on preliminary PSU forms.

\*\* Type I and Type III were both isolated from 3 cases: Florida (1), Georgia (1), Maryland (1).

Two cases of poliomyelitis, I paralytic, with onset within 30 days of inoculation (IPV) have been reported to the Poliomyelitis Surveillance Unit during the week ending June 16. Both cases are from Frio County, Texas. Each of these two, previously unvaccinated, had received Type I oral polio vaccine on the same date that they had been inoculated with inactivated vaccine.



TABLE 3B (Continued)

State and Region	Total Cases*	Total Cases Lab Studied	% Studied	Poliovirus Isolations**				ECHO	Cox- sackie
				I	II	III	Unsp.		
SOUTH ATLANTIC									
Delaware	0	0	-	0	0	0	0	0	0
Maryland	45	39	87	1	0	31	0	0	0
D. C.	3	3	100	0	0	3	0	0	0
Virginia	18	8	44	0	0	3	0	0	0
West Virginia	35	25	71	5	0	0	0	0	0
North Carolina	19	6	32	3	0	3	0	0	0
South Carolina	34	28	82	1	0	25	0	0	0
Georgia	30	22	73	2	0	17	0	0	1
Florida	45	30	67	14	0	5	0	0	4
EAST SOUTH CENTRAL									
Kentucky	13	2	15	1	0	1	0	0	0
Tennessee	28	15	54	3	0	4	0	0	2
Alabama	13	9	69	0	0	9	0	0	0
Mississippi	39	15	38	13	0	2	0	0	0
WEST SOUTH CENTRAL									
Arkansas	25	11	44	4	0	1	0	0	0
Louisiana	54	51	94	32	1	7	0	1	0
Oklahoma	0	0	-	0	0	0	0	0	0
Texas	79	19	24	5	0	0	0	1	0
MOUNTAIN									
Montana	3	2	67	0	0	2	0	0	0
Idaho	15	11	73	2	1	3	0	0	1
Wyoming	0	0	-	0	0	0	0	0	0
Colorado	10	2	20	1	0	0	0	0	0
New Mexico	6	3	50	2	0	1	0	0	0
Arizona	7	0	0	0	0	0	0	0	0
Utah	4	2	50	1	0	1	0	0	0
Nevada	0	0	-	0	0	0	0	0	0
PACIFIC									
Washington	36	26	72	2	0	10	0	0	3
Oregon	17	7	41	1	1	3	0	0	0
California	95	34	36	17	0	5	0	0	2
Alaska	0	0	-	0	0	0	0	0	0
Hawaii	5	4	80	3	0	0	0	0	0

\* Cases reported to PSU as Poliomyelitis on preliminary PSU forms.

\*\* Type I and Type III were both isolated from 3 cases: Florida (1), Georgia (1), Maryland (1).

Five cases of poliomyelitis, 2 paralytic, have been reported thus far this year. Details concerning the paralytic case reported this week are shown below.

County	Age	Sex	Onset	Date Vacc.	Onset Interval	Site of Inoc.	Site of 1st Para.	Mfg. & Lot No.
Frio	3	M	6-8-62	5-31-62	8 days	Unk.	Unk.	Unk.

**B. Cases with Onset Within 30 Days of Vaccination - (Oral)**

During the week ending June 16, four under-30-day cases (OPV), 3 paralytic, have been reported to the Poliomyelitis Surveillance Unit from Texas. Of the paralytic cases, two were from Bexar Co. and one from Frio Co. The patient from Frio County had received inactivated vaccine on the same date that he had been fed Type I oral polio vaccine.

To date in 1962, there have been 6 cases, 5 paralytic, reported. Details concerning the 3 paralytic cases reported this week are shown below.

County	Age	Sex	Onset	Date Fed.	Onset Interval	Mfg.	Lot No.
Bexar	5	M	6-8-62	6-3-62	5 days	Pfizer	Unk.
Bexar	3	M	6-1-62	5-31-62	1 day	Pfizer	Unk.
Frio	3	M	6-8-62	5-31-62	8 days	Pfizer	Unk.

**5. ENTEROVIRUS SURVEILLANCE**

A total of 72 nonpolio enterovirus isolates has been reported thus far in 1962. Hawaii with 40 isolates reported continues to account for the largest State total. Thirteen Coxsackie A4, twelve A5, and six B5 isolates are included in the Hawaii total along with several other Coxsackie A subtypes. According to Dr. James R. Enright, Epidemiologist, and Dr. Paul Yoder, Virologist, Hawaii State Department of Health, most isolates are from cases of aseptic meningitis, stomatitis, herpangina and pharyngitis in Honolulu, and Kailua, Oahu. Preschool age children are largely involved.

A tabular listing of reported isolates is presented on the following page.

NONPOLIO ENTEROVIRUS ISOLATES REPORTED DURING 1962

<u>State</u>	<u>ECHO*</u>	<u>Coxsackie**</u>	<u>Total</u>	<u>Reported by</u>
California	13	2	15	E. Lennette
Florida	2	2	4	J. Bond
Hawaii	-	40	40	K. Wilcox & J. Enright
Louisiana	2	1	3	G. Hauser
Michigan	2	1	3	G. Agate
Missouri	-	1	1	I. Adams
New Jersey	1	4	5	W. Dougherty & M. Goldfield
New York	-	1	1	R. Albrecht
Pennsylvania	-	1	1	I. Gratch & K. Hummeler
	<hr/>	<hr/>	<hr/>	
TOTAL	20	53	73	

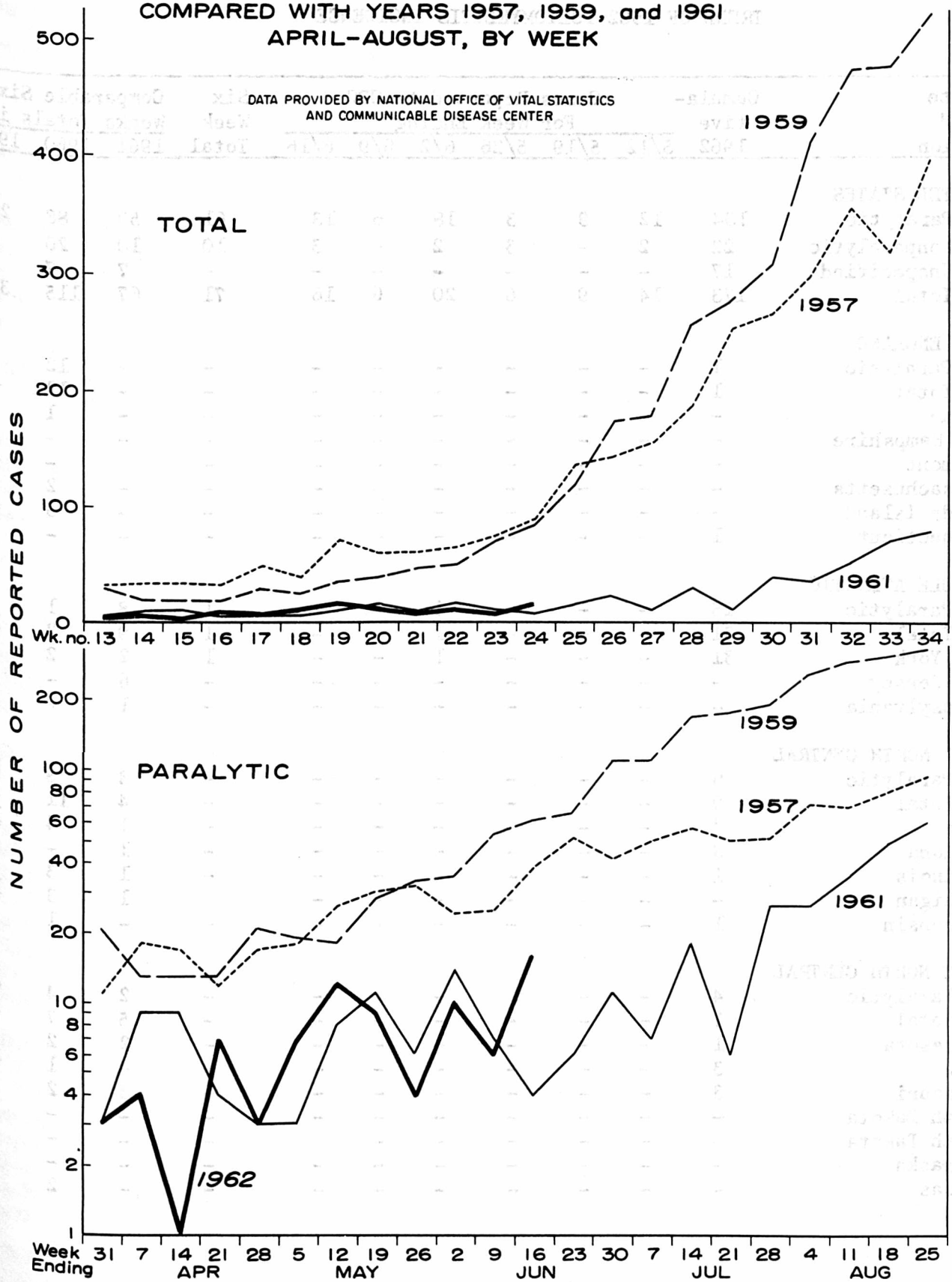
\*Specific types include five ECHO 22 from California; two ECHO 4 from Florida and one from California; two ECHO 9 from Louisiana and one from California; two ECHO 14 from Michigan; one ECHO 20 from New Jersey. Other scattered types include ECHO 2, 10, 11, 15.

\*\*Specific types include thirteen Coxsackie A4, twelve A5, and six B5 from Hawaii; three B5 from New Jersey, and one each from New York and Pennsylvania. Other scattered types include Coxsackie A2, A9, A10, A12, A16, B2, and B3.





**Figure 1**  
**CURRENT U.S. POLIO INCIDENCE**  
**COMPARED WITH YEARS 1957, 1959, and 1961**  
**APRIL-AUGUST, BY WEEK**



**Table I**

**962 POLIOMYELITIS INCIDENCE**

Table 1 (Continued)

State and Region	Cumula- tive 1962	Cases Reported to CDC For Week Ending						Six Week Total	Comparable Six Weeks Totals in		
		5/12	5/19	5/26	6/2	6/9	6/16		1961	1960	1959
SOUTH ATLANTIC											
Paralytic	8	1	1	-	-	-	-	2	7	8	44
Total	11	1	1	-	-	-	-	2	7	11	53
Delaware	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-
D. C.	1	-	-	-	-	-	-	-	-	-	-
Virginia	2	-	-	-	-	-	-	-	-	-	10
West Virginia	-	-	-	-	-	-	-	-	1	1	5
North Carolina	2	-	-	-	-	-	-	-	1	2	8
South Carolina	1	-	-	-	-	-	-	-	1	4	1
Georgia	2	1	-	-	-	-	-	1	4	-	5
Florida	3	-	1	-	-	-	-	1	-	4	24
EAST SOUTH CENTRAL											
Paralytic	5	-	-	-	1	-	-	1	3	3	20
Total	7	-	-	-	1	-	-	1	6	5	28
Kentucky	2	-	-	-	1	-	-	1	2	2	4
Tennessee	2	-	-	-	-	-	-	-	2	1	9
Alabama	1	-	-	-	-	-	-	-	-	-	7
Mississippi	2	-	-	-	-	-	-	-	2	2	8
WEST SOUTH CENTRAL											
Paralytic	71	7	6	1	16	5	13	48	11	12	58
Total	82	8	6	4	18	5	16	57	17	20	85
Arkansas	1	-	-	-	-	-	-	-	-	-	13
Louisiana	7	-	-	-	-	-	2	2	2	9	10
Oklahoma	1	-	-	1	-	-	-	1	-	-	13
Texas	73	8	6	3	18	5	14	54	15	11	49
MOUNTAIN											
Paralytic	7	1	-	1	-	1	-	3	2	3	12
Total	8	1	-	1	-	1	-	3	3	7	18
Montana	3	-	-	-	-	1	-	1	-	5	2
Idaho	-	-	-	-	-	-	-	-	1	-	1
Wyoming	1	-	-	1	-	-	-	1	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	1	3
Arizona	3	1	-	-	-	-	-	1	2	1	12
Utah	1	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-
PACIFIC											
Paralytic	14	3	2	1	-	-	-	6	14	37	31
Total	17	4	2	1	-	-	-	7	16	40	38
Washington	-	-	-	-	-	-	-	-	5	1	3
Oregon	1	-	1	-	-	-	-	1	1	4	6
California	15	4	1	1	-	-	-	6	9	31	29
Alaska	-	-	-	-	-	-	-	-	-	2	-
Hawaii	1	-	-	-	-	-	-	-	1	2	-
TERRITORY											
Puerto Rico	6	-	-	-	1	-	-	1	1	121	-

