

COMMUNICABLE DISEASE CENTER

POLIOMYELITIS

S U R V E I L L A N C E

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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

A total of 77 cases of poliomyelitis, 66 paralytic, have been reported by State Health Departments during the two week period ending September 1, 1962. The similar two week period in 1961 accounted for 132 cases, 93 paralytic.

In Section 2 narrative reports concerning localized outbreaks in Alabama, California and Kentucky are given. Type specific oral polio vaccine has been released to these States from the epidemic reserve for mass immunizations in the relevant areas.

Paralytic cases which have occurred in 1962 and submitted on individual case forms are analyzed in Section 3. A summary of cases occurring within 30 days of vaccination is presented in Section 4.

A tabulation of non-poliomyelitis enterovirus isolates from 1962 specimens reported to the Poliomyelitis Surveillance Unit is presented in Section 5.

1. CURRENT POLIOMYELITIS MORBIDITY TRENDS

During the two week period ending September 1, 1962, a total of 77 cases of poliomyelitis, 66 paralytic, were reported. Thirty-four cases, 29 paralytic were submitted for the current week ending September 1, while 43 cases, 37 paralytic were reported the previous week. The same two week period in 1961 accounted for 132 cases, 93 paralytic.

Of the twenty-three States reporting poliomyelitis during the two week period, Texas accounts for the largest proportion with 15 cases. California reported 10 cases, Alabama and Illinois 8 cases each and Kentucky 7. Case concentrations have been noted in Alabama, California and Kentucky. Special reports on these States and their use of type specific oral polio vaccine as an epidemic deterrent are made in Section 2.

The reported totals for poliomyelitis in 1962 are now sharply below similar totals for 1961, the previous low year. This is illustrated in the tabulations below showing total cumulative and six weeks incidence for 1962 and the preceding 4 years.

Polio (Cumulated Weekly) Through 35th Week for Past Five Years

	<u>1962</u>	<u>1961</u>	<u>1960</u>	<u>1959</u>	<u>1958</u>
Paralytic	365	417	1090	2828	1108
Total	464	617	1582	4445	2281

Six-Week Totals (30th thru 35th Week) for Past Five Years

	<u>1962</u>	<u>1961</u>	<u>1960</u>	<u>1959</u>	<u>1958</u>
Paralytic	153	231	562	1677	633
Total	185	329	858	2712	1332

2. STATE REPORTS

A. Alabama

In this State, Dr. W.H.Y Smith, Director, Division of Preventable Diseases, Alabama State Department of Public Health, has reported a total of 8 cases during the past two weeks, all paralytic. Six of the reported cases were from Mobile County and had onset of illness in August. All the cases were among the Negro residents of the County and all were in the pre-school age group. Only one patient had received any inactivated polio vaccine; he had had 2 doses. Two earlier cases had been reported from this County, occurring in the same race and age group noted above. The earlier cases yielded Type I poliovirus strains as did the first of the August cases.

On September 5 and 6, over 250,000 persons availed themselves of Type I oral polio vaccine distributed by State and County health officials from the epidemic reserve of the United States Public Health Service.

B. California

Dr. Henry Renteln, Chief, Surveillance Section, has reported a total of ten cases of poliomyelitis during the past two weeks. All have been paralytic and all but two were reported from Los Angeles County. Thus far in 1962, this county has noted 16 cases of poliomyelitis; however, until the last week in August, no geographic clustering of cases within the county was noted. From the earlier cases, four isolates of Type I poliovirus and three of Type III had been made.

During August an increased number of cases were reported from the city of Pasadena. Epidemiologically they represent a clustering in an area within the city of three square miles. All the cases were among Negroes and all have yielded Type I poliovirus as shown in the line listing below:

Pasadena City Cases

<u>Onset</u>	<u>Age</u>	<u>Race</u>	<u>Sex</u>	<u>IPV</u>	<u>OPV</u>	<u>Virus Isolated</u>	<u>Paralytic Status</u>
6/1	2½	N	M	0	0	I	P
7/8	20	N	F	0	0	I	P
8/6	8	N	M	2	0	I	P
8/16	3	N	M	0	0	I	P
8/16	3	N	F	0	0	I	P

Plans are being formulated to administer Type I oral polio vaccine to the 15,000 persons residing in the epidemiologically relevant area by using localized publicity and local saturation methods on Sunday September 9, 1962. The vaccine is to be supplied from the CDC epidemic reserve.

C. Kentucky

Mr. Clifford Todd, Director of Preventive Medicine, Kentucky State Department of Health has reported three cases of poliomyelitis from Greenup and Mason Counties in the Northeastern portion of the State, close to Flemming County, scene of an August outbreak of 5 cases of paralytic disease from which Type I poliovirus was recovered.

The use of type specific oral polio vaccine on August 19 in Flemming County was described in PSU Report No. 266, August 24, 1962. Type I poliovirus has been recovered from the cases in both Greenup and Mason Counties, and use of type specific oral polio vaccine from the epidemic reserve is planned in both of these counties.

3. 1962 PARALYTIC CASES REPORTED TO PSU

Of the 365 cases of paralytic poliomyelitis reported through the week ending September 1, 344 had onset in 1962. The Poliomyelitis Surveillance Unit has received individual case forms on 253 of the 344 paralytic cases. The vaccination status of the 253 paralytic cases by age group is shown below.

Paralytic Poliomyelitis by Age Group And Vaccination History Reported on PSU Forms (Through September 1, 1962)

Age Group	Doses of Inactivated Vaccine					Total	Percent
	OV	1-2V	3V	4+V	Unk.		
0-4	84	26	7	7	6	130	51.4
5-9	23	5	6	11	2	47	18.6
10-14	11	3	6	4	1	25	9.9
15-19	5	2	4	0	0	11	4.3
20-29	11	4	1	2	2	20	7.9
30-39	7	2	0	2	1	12	4.7
40+	6	1	0	0	1	8	3.2
TOTAL	147	43	24	26	13	253	100.0
PERCENT DOSES	61.3	17.9	10.0	10.8	-	100.0	

Of the 130 cases in the 0-4 age group, 84 or 64.6% had no inactivated vaccine. Only 20% of cases thus far this year have given history of 3 or more doses of inactivated vaccine.

To date in 1962, the Poliomyelitis Surveillance Unit has received results of virological studies on 121 of the 253 paralytic cases. Poliovirus isolations have been reported on 99 (81.8 percent) of the 121 cases. Of these, 85 are Type I and 14 are Type III poliovirus. Texas has accounted for half of the isolates. Isolates have been reported from the following States.

State	Poliovirus			Total
	I	II	III	
Alabama	2	0	0	2
Arizona	2	0	0	2
California	4	0	0	6
Colorado	1	0	0	1
Georgia	1	0	0	2
Illinois	3	0	1	4
Kentucky	8	0	1	9
Louisiana	2	0	0	2
Massachusetts	2	0	0	2
Michigan	0	0	1	1
Minnesota	3	0	0	3
Mississippi	0	0	1	1
Montana	1	0	0	1
New York	4	0	0	4
Ohio	0	0	2	2
Oregon	0	0	3	3
Pennsylvania	3	0	0	3
Texas	47	0	2	49
Utah	1	0	0	1
Wyoming	1	0	0	1
TOTAL	85	0	14	99

4. ROUTINE POLIOMYELITIS SURVEILLANCE - 1962

A. Cases with Onset Within 30 Days of Vaccine (Inactivated)

During the two week period ending September 1, two cases of paralytic poliomyelitis with onset within 30 days of vaccination with inactivated vaccine have been officially reported to the Poliomyelitis Surveillance Unit. One case was a 4-year-old male from Mobile County, Alabama who was immunized on July 31, and had the first symptoms of illness on August 6. The other case was a 13-year-old male from Cambria County, Pennsylvania who was immunized on July 17, and whose date of onset was July 24. The Alabama case had one previous vaccination on January 9. The case from Pennsylvania had 3 previous vaccinations, all in 1957.

B. Cases with Onset Within 30 Days of Vaccine (Oral)

Three cases of paralytic poliomyelitis occurring within 30 days following administration of the oral vaccine were officially reported to the Poliomyelitis Surveillance Unit during the past two weeks. Ohio, Texas and Washington State accounted for one case each. All three cases had received oral polio vaccine during mass community feedings. A detailed listing of these cases is presented below:

<u>State</u>	<u>County</u>	<u>Age</u>	<u>Sex</u>	<u>Onset</u>	<u>Date Fed</u>	<u>Type Fed</u>	<u>Onset Interval</u>	<u>Type Illness</u>
Ohio	Portage	16	M	6-7-62	5-24-62	III	14 days	P
Texas	Tarrant	33	F	8-3-62	7-29-62	I	5 days	NP
Washington	Franklin	6	M	6-10-62	6-7-62	III	3 days	NP

5. ENTEROVIRUS SURVEILLANCE

To date a total of 160 nonpolio enterovirus isolates has been reported to the Poliomyelitis Surveillance Unit. This year there is no marked predominance of any specific virus on a nationwide basis (unlike the 1961 experience when Coxsackie B-5 predominated - See PSU Report No. 247, November 27, 1961).

A sharp outbreak of Coxsackie A-4 illness was noted in Hawaii early in the year. ECHO 9 and ECHO 22 have been recovered from a number of cases of enterovirus illness in California. Coxsackie B viruses of several different types have been recovered in Ohio, with no reported large scale outbreaks.

Non-Polio Enterovirus Isolations from 1961 Specimens

<u>State</u>	<u>ECHO*</u>	<u>Coxsackie</u>				<u>Total</u>	<u>Reported by</u>
		<u>B-2</u>	<u>B-4</u>	<u>B-5</u>	<u>Other and Unsp.</u>		
Alabama	1	-	-	-	-	1	T. Hosty
California	23	1	-	-	8	32	E. Lennette and H. Renteln
Connecticut	3	-	-	-	-	3	E. Borman
Florida	2	-	-	-	2	4	J. Bond
Hawaii	3	-	-	7	36**	46	J. Enright
Illinois	1	-	-	-	1	2	H. Shaughnessy
Kansas	1	-	-	-	2	3	C. Hunter
Kentucky	-	-	-	-	1	1	C. Todd
Louisiana	6	-	-	-	3	9	G. Hauser
Maryland	2	-	-	-	5	7	J. Joseph
Michigan	4	-	-	3	2	9	G. Agate
Missouri	-	1	-	-	-	1	I. Adams
New Hampshire	-	-	-	1	-	1	R. Miliner
New Jersey	1	-	1	3	-	5	M. Goldfield and W. Dougherty

Non-Polio Enterovirus Isolations from 1961 Specimens (Continued)

Coxsackie

<u>State</u>	<u>ECHO*</u>	<u>B-2</u>	<u>B-4</u>	<u>B-5</u>	<u>Unsp.</u>	<u>Total</u>	<u>Reported by</u>
New York	-	2	-	1	2	5	R. Albrecht
Ohio	-	11	1	7	2	21	C. Croft
Pennsylvania	-	-	-	2	-	2	K. Hummeler and I. Gratch
Virginia	-	-	-	-	8	8	E. Foxhall
TOTAL	47	15	2	24	72	160	

* Specific types include nine ECHO 9 in California and one each in Hawaii, Illinois, and Louisiana; five ECHO 22 in California; four ECHO 14 in Michigan and two in Louisiana; three ECHO 4 in Connecticut, two in California, two in Florida. Other types reported include ECHO 2, 6, 10, 11, 15, 16, 20, and 21.

** Specific types include Coxsackie A-2, 4, 5, 9, 12, 16, and 2 cases of Coxsackie A undetermined.

Figure 1

CURRENT U.S. POLIO INCIDENCE COMPARED WITH YEARS 1957, 1959 and 1961 April - December, by week

DATA PROVIDED BY NATIONAL OFFICE OF VITAL STATISTICS AND COMMUNICABLE DISEASE CENTER

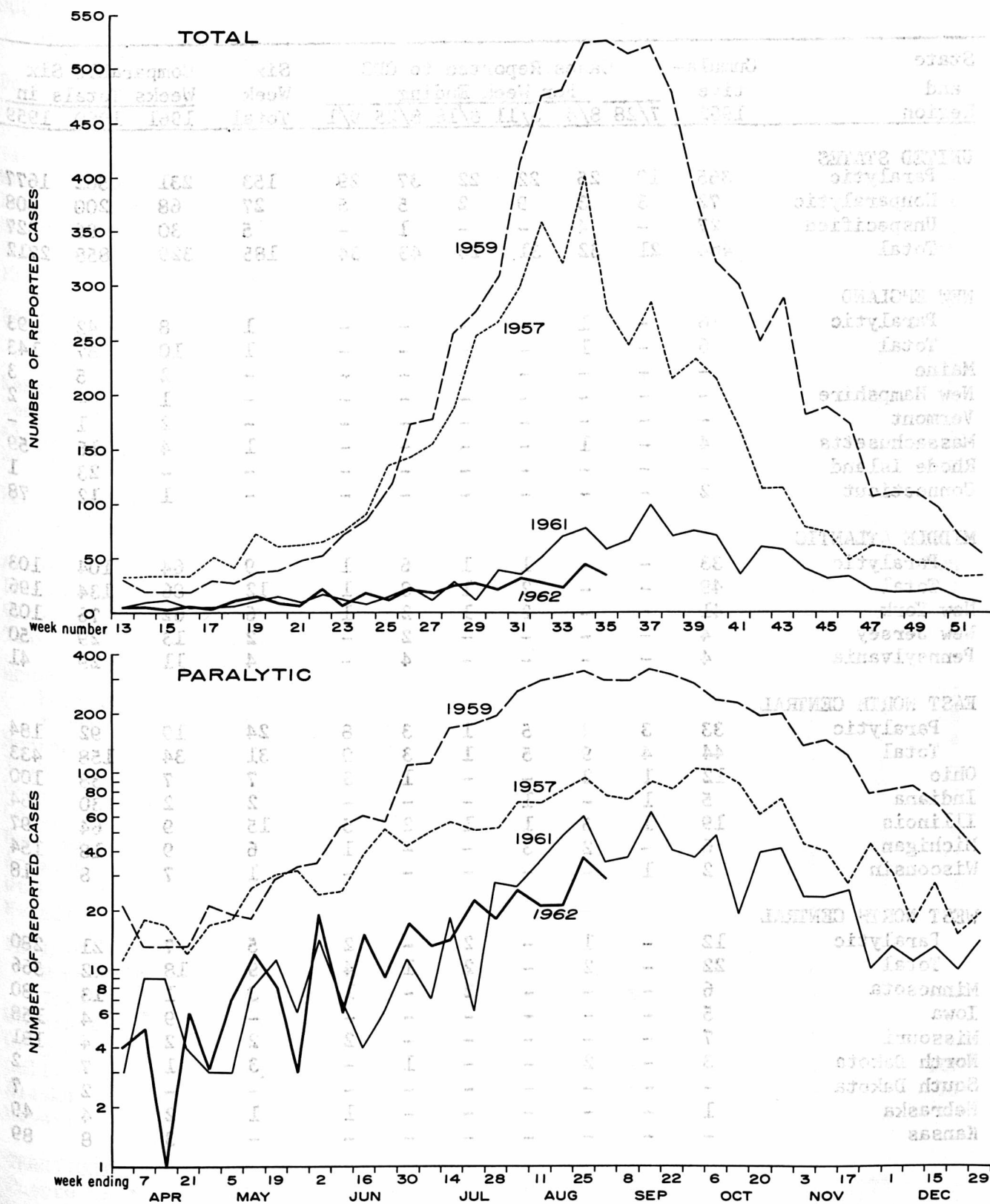


Table 1

TREND OF 1962 POLIOMYELITIS INCIDENCE

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Table 1 (Continued)

State and Region	Cumulative 1962	Cases Reported to CDC For Week Ending						Six Week Total	Comparable Six Weeks Totals in		
		7/28	8/4	8/11	8/18	8/25	9/1		1961	1960	1959
SOUTH ATLANTIC											
Paralytic	28	2	1	4	3	3	3	16	61	109	317
Total	32	2	1	5	3	3	3	17	74	152	406
Delaware	-	-	-	-	-	-	-	-	-	-	1
Maryland	-	-	-	-	-	-	-	-	18	20	9
D.C.	1	-	-	-	-	-	-	-	1	-	3
Virginia	8	1	-	3	-	1	1	6	7	9	117
West Virginia	4	-	-	-	-	-	1	1	7	17	48
North Carolina	3	-	-	-	-	1	-	1	6	33	93
South Carolina	4	1	-	-	2	-	1	4	7	58	29
Georgia	6	-	-	2	1	1	-	4	11	4	71
Florida	6	-	1	-	-	-	-	1	17	11	35
EAST SOUTH CENTRAL											
Paralytic	29	4	2	1	1	10	5	23	20	27	228
Total	34	4	2	1	1	11	5	24	24	77	315
Kentucky	15	1	2	-	-	6	1	10	3	45	16
Tennessee	5	-	-	1	-	1	-	2	7	15	152
Alabama	11	1	-	-	-	4	4	9	4	3	113
Mississippi	3	2	-	-	1	-	-	3	10	14	34
WEST SOUTH CENTRAL											
Paralytic	170	8	13	10	11	10	5	57	22	42	238
Total	216	10	14	17	13	11	7	72	44	79	360
Arkansas	5	-	1	1	1	-	1	4	8	10	106
Louisiana	11	1	1	-	1	-	-	3	17	9	37
Oklahoma	7	-	1	-	2	1	1	5	2	1	59
Texas	193	9	11	16	9	10	5	60	17	59	158
MOUNTAIN											
Paralytic	8	-	1	-	-	-	-	1	9	4	27
Total	11	-	1	-	-	1	-	2	14	17	45
Montana	3	-	-	-	-	-	-	-	1	1	4
Idaho	2	-	1	-	-	1	-	2	7	1	-
Wyoming	1	-	-	-	-	-	-	-	-	7	-
Colorado	1	-	-	-	-	-	-	-	3	2	6
New Mexico	-	-	-	-	-	-	-	-	1	2	9
Arizona	3	-	-	-	-	-	-	-	2	1	23
Utah	1	-	-	-	-	-	-	-	-	3	3
Nevada	-	-	-	-	-	-	-	-	-	-	-
PACIFIC											
Paralytic	46	1	2	1	3	5	5	17	21	121	207
Total	50	1	2	1	3	5	5	17	25	142	248
Washington	1	-	-	-	1	-	-	1	7	13	65
Oregon	5	-	-	-	-	-	-	-	4	7	66
California	43	1	2	1	2	5	5	16	14	120	106
Alaska	-	-	-	-	-	-	-	-	-	-	11
Hawaii	1	-	-	-	-	-	-	-	-	2	-
TERRITORY											
Puerto Rico	10	-	-	-	1	-	-	1	-	73	-

