

# Surveillance of Poliomyelitis in the United States, 1958-61

**T**HE NATIONAL Poliomyelitis Surveillance Program, created by the Surgeon General of the Public Health Service in April 1955, serves as a clearinghouse for collection, analysis, and dissemination of pertinent epidemiologic information on poliomyelitis in the United States. Surveillance of the disease and evaluation of safety and effectiveness of vaccines are also continuing projects. Poliomyelitis Surveillance Reports, available to those with responsibility for control of the disease, have presented current analyses of epidemiologic data since May 1, 1955. These periodic reports have been augmented by annual reviews for 1955, 1956, and 1957 (1-3).

The national experience with poliomyelitis from 1958 through 1961 is summarized in this report to provide a readily available source for statistics and trends during these 4 years.

## Background

The incidence of poliomyelitis since 1935 is shown in figure 1. Reporting of paralytic cases began in 1951. For the period before 1951, the incidence of paralytic cases is based on an arbitrary assumption that 50 percent of the total number of reported cases were paralytic. Some assumption for paralytic cases was necessary because of incomplete reporting of paralytic status by the States. Poliomyelitis incidence exhibited a rising trend in the 1940's and early 1950's. Since 1955 the trend has been generally downward. This was interrupted in 1958 and 1959, but resumed in 1960. The average paralytic rate for 1957-61 was 87 percent lower than that for 1950-54.

Officially reported cases of poliomyelitis since 1951, by paralytic status, are shown in table 1. Marked improvement in the reporting of paralytic status occurred during 1951-56. In

addition to the decided decline in total cases since 1955, the relative proportion of paralytic to total cases has increased from a range of 47 to 65 percent before 1958 to a range of 66 to 80 percent since that year. This reflects more intensive epidemiologic and laboratory investigation of poliomyelitis cases in recent years, with State epidemiologists tending to seek confirmation of diagnosis before reporting cases as poliomyelitis. Infections with nonpoliomyelitis enteroviruses that cause aseptic meningitis and other neurological syndromes that may simulate poliomyelitis are generally being discerned with increasing precision.

## Source of Data

The Poliomyelitis Surveillance Unit receives data from local and State health departments through the national morbidity reporting system. Full participation and cooperation has been evidenced. The basic data supplied from this source have been supplemented with information from diagnostic and research laboratories, the National Foundation, and other or-

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*This report was prepared by the staff of the Poliomyelitis Surveillance Unit, Epidemiology Branch, Communicable Disease Center, Public Health Service. During the period covered by the report, the following officers served in the unit: Jacob A. Brody, M.D., 1958-59; Harold W. Wylie, Jr., M.D., 1958-60; Leo Morris, B.S., 1959-62; Joseph Oren, M.D., 1959-61; Michael J. Regan, M.D., 1960-62; and James A. Bryan II, M.D., 1961-62. The following officers served as chief, Surveillance Section: Mario Pizzi, M.D., 1958-59; E. Russell Alexander, M.D., 1959-60; and D. A. Henderson, M.D., 1961-62. Alexander D. Langmuir, M.D., served as chief, Epidemiology Branch, throughout this period.*

ganizations and agencies with responsibility and interest in poliomyelitis and poliomyelitis-like diseases.

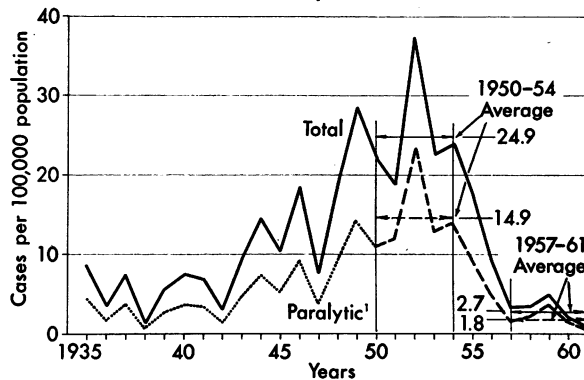
Since 1958, all States and the District of Columbia have been reporting specific and detailed data on cases of poliomyelitis occurring within their jurisdictions, using a poliomyelitis surveillance case record which consists of a preliminary and a 60-day followup form.

The preliminary form includes such epidemiologic information as preliminary diagnosis, age, sex, date of onset of illness, type of paralysis, and vaccination history. The 60-day followup form lists, in addition, available laboratory information and the clinical status of the patient 60 days or longer after onset. Final diagnosis is also listed at that time.

The clinical status of the patient is ascertained and classified by the State epidemiologist as falling within one of the following five categories which represent rough gradients in the severity of the disease: (1) complete recovery with no paralysis, (2) minor involvement including definite weakness or involvement of one limb, or both conditions, (3) significant disability which involves more than one limb, (4) severe disability which includes those confined to bed and wheelchairs or those who require extensive bracing, or (5) fatality.

The final diagnosis is then one of five possibilities: (a) paralytic poliomyelitis with residual paralysis, (b) paralytic poliomyelitis with

**Figure 1. Annual poliomyelitis incidence rates, United States, 1935-60**



<sup>1</sup> Paralytic cases prior to 1951 assumed to be 50 percent of total.

SOURCE: National Office of Vital Statistics, Public Health Service.

no residual paralysis, (c) aseptic meningitis syndrome (due to poliovirus, ECHO or Coxsackie viruses, or unknown etiology), (d) poliomyelitis, unspecified as to paralytic status, or (e) not poliomyelitis or aseptic meningitis, other diagnosis.

**Cases Reported**

The cases reported to the Poliomyelitis Surveillance Unit on individual case records are presented in table 2 and their final classification is shown in table 3. The percentage of cases with a 60-day followup report has increased

**Table 1. Total national poliomyelitis incidence, by paralytic status, 1951-61**

Year	Paralytic status			Total	Total case rate <sup>1</sup>	Percent	
	Paralytic	Nonparalytic	Unspecified			Unspecified	Paralytic <sup>2</sup>
1951	10,037	5,470	12,879	28,386	18.5	45.4	64.7
1952	21,269	12,802	23,808	57,879	37.2	41.1	62.4
1953	15,648	12,144	7,800	35,592	22.5	21.9	56.3
1954	18,308	13,221	6,947	38,476	23.9	18.1	58.1
1955	13,850	12,453	2,682	28,985	17.6	9.3	52.7
1956	7,911	6,555	674	15,140	9.1	4.5	54.7
1957	2,499	2,826	160	5,485	3.2	2.9	46.9
1958	3,697	1,941	149	5,787	3.3	2.6	65.6
1959	6,289	2,045	91	8,425	4.8	1.1	75.5
1960	2,525	626	39	3,190	1.8	1.2	80.1
1961	988	305	19	1,312	.7	1.4	76.4

<sup>1</sup> Case rate per 100,000 population (Bureau of the Census midyear population estimates).

<sup>2</sup> Percent paralytic of those with paralytic status specified.

SOURCE: U.S. Communicable Disease Center: Annual Supplement to Morbidity and Mortality Weekly Report, vol. 10, No. 53, October 1962.

each year. Eighty percent of the cases reported on the preliminary forms had 60-day followup reports in 1958; this increased to 87 percent in 1959, 94 percent in 1960, and 95 percent in 1961. If no 60-day followup report was received, the preliminary diagnosis was retained. No more than seven cases were listed as unspecified during either of the past 2 years.

The cases of paralytic poliomyelitis with residual paralysis, as indicated on individual case records, have been considered the best continuing index of paralytic disease, and they form the basis of subsequent presentation in this paper. These cases include those with residual paralysis at 60 days and the paralytic cases with no 60-day followup. The total thus obtained represents the best available paralytic poliomyelitis count (table 3).

### Seasonal and Geographic Distribution

The seasonal incidence of the paralytic cases from 1958 to 1961 is presented by week of onset in figure 2. The expected early summer increase in incidence and subsequent decline in the autumn occurred each year. The peak week of incidence occurred between the 33d and 38th weeks during the 4-year period.

The geographic distribution of epidemics and other outbreaks of paralytic poliomyelitis is shown in figure 3. All the major epidemics and outbreaks from 1958 through 1960 have been reported in the literature (4-12). Since the

**Table 2. Individual case records reported by States to Poliomyelitis Surveillance Unit, 1958-61**

Year	Number States participating <sup>1</sup>	Total tele-graphic reports	Poliomyelitis Surveillance Unit case records		
			Pre-liminary reports	60-day followup reports	Percent 60-day followup reports
1958..	49	5,787	6,125	4,919	80.3
1959..	50	8,425	8,635	7,523	87.1
1960..	51	3,190	3,304	3,095	93.7
1961..	51	1,312	1,356	1,284	94.7

<sup>1</sup> Includes District of Columbia.

advent of formaldehyde-inactivated poliomyelitis vaccine, sharp concentrations with high attack rates have been reported among the incompletely vaccinated or nonvaccinated lower socioeconomic groups. This pattern, which first became evident in the 1956 Chicago epidemic (13), has continued in the major urban and some rural epidemics occurring in the past 4 years (14).

### Age and Vaccination History

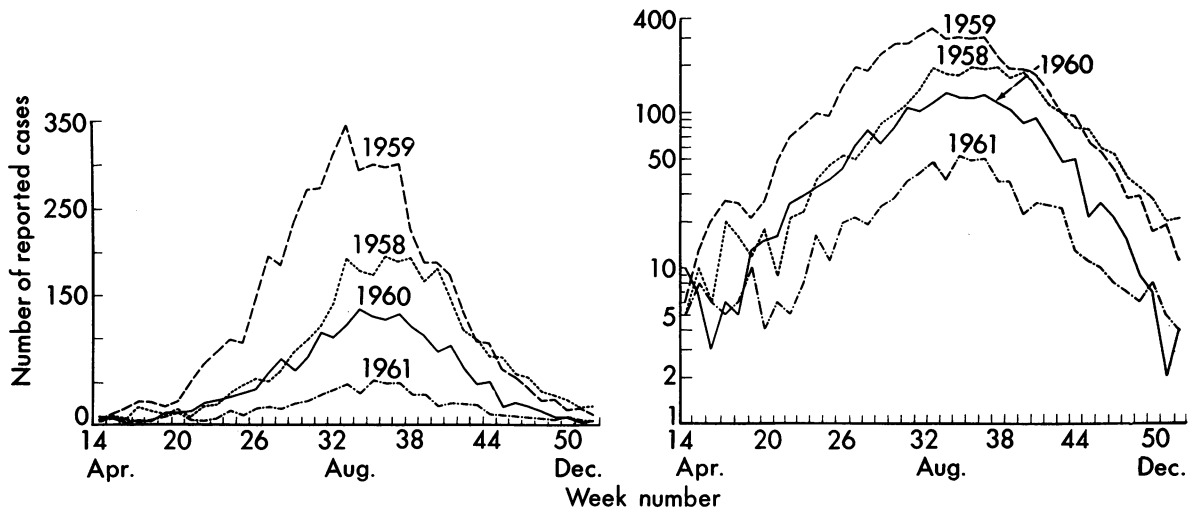
During the years of rising national incidence, the 1940's and early 1950's, poliomyelitis occurred with increasing frequency in school-age children and young adults (15). Following the introduction of the formaldehyde-inacti-

**Table 3. Cases reported to the Poliomyelitis Surveillance Unit on individual case records, by final and preliminary classification**

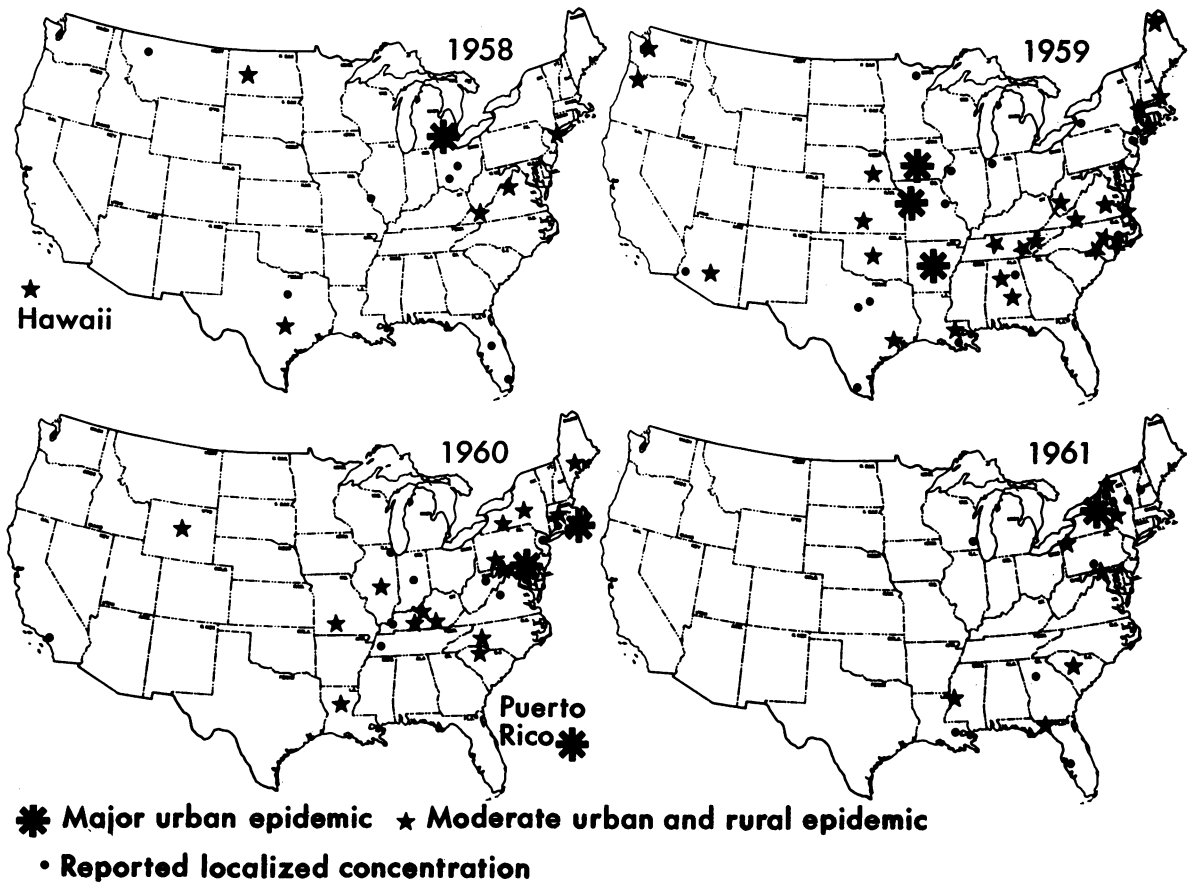
Year	With 60-day followup reports					Without 60-day followup reports				Best available paralytic poliomyelitis count (1+5)
	Final classification				Total	Preliminary classification			Total	
	Paralytic, residual paralysis (1)	Paralytic, no residual paralysis (2)	Aseptic meningitis syndrome (3)	Other final diagnosis <sup>1</sup> (4)		Paralytic poliomyelitis (5)	Non-paralytic poliomyelitis (6)	Unspecified poliomyelitis (7)		
1958.....	2,686	344	1,774	115	4,919	615	488	103	1,206	3,301
1959.....	4,783	748	1,883	109	7,523	689	352	71	1,112	5,472
1960.....	2,078	342	606	69	3,095	140	62	7	209	2,218
1961.....	778	136	342	28	1,284	51	15	6	72	829

<sup>1</sup> Other than poliomyelitis or aseptic meningitis.

**Figure 2. Paralytic poliomyelitis, by week of onset (week number), April–December, 1958–61**



**Figure 3. Geographic distribution of epidemics and other outbreaks of paralytic poliomyelitis, United States, 1958–61**



vated vaccine, the age distribution of cases shifted back toward the infantile group, with highest attack rates in the preschool-age group. In the 5 years 1956-60, the peak incidence occurred in children at ages 1 and 2, followed by a steady drop in incidence until the beginning of the teenage period (table 4). The striking incidence among preschoolers and the secondary peak in the 20- to 29-year-old age group are shown in figure 4. Of special interest in figure 4 are the lower attack rates in the children who were 7 and 8 years old in 1955, as compared with the children immediately older and younger. These two cohorts of children continued to show lower attack rates during the following years. In 1955, the National Foundation for Infantile Paralysis sponsored an immunization program for first- and second-grade school children who were primarily 7 and 8 years old. These children comprised essentially the only population group that received vaccine during the spring and summer of 1955.

Table 5 shows the paralytic cases by vaccination history and age group for each year from 1958 to 1961. In each of these years, paralytic poliomyelitis was concentrated in the unvaccinated preschool-age group. During this 4-year period, an average of 43 percent of paralytic cases were preschool-age children, and an average of 63 percent of all cases had received no formaldehyde-inactivated vaccine.

As shown in figure 5, the proportion of the population adequately immunized has progressively increased during these years. Approximately 60 percent of school-age children had had four or more doses of the inactivated vaccine by September 1961. Fewer than half of the preschool children or young adults had reached this level.

Estimates of the effectiveness of three or more doses of formaldehyde-inactivated vaccine, as studied in four recent epidemics, have ranged from 77 to 82 percent (6, 10, 12). The method of calculation of effectiveness was the same as

**Table 4. Paralytic cases reported to Poliomyelitis Surveillance Unit, with age-specific attack rates,<sup>1</sup> 1956-61<sup>2</sup>**

Age (years)	Paralytic cases						Attack rate per 100,000					
	1956	1957	1958	1959	1960	1961	1956	1957	1958	1959	1960	1961
Under 1.....	464	151	241	282	126	48	12.9	4.1	6.3	7.4	3.1	1.1
1.....	864	267	366	593	212	77	23.5	7.2	9.3	15.1	5.2	1.9
2.....	691	245	407	592	238	62	18.4	6.4	10.3	14.5	5.8	1.5
3.....	617	180	339	478	179	61	16.6	4.8	8.6	11.9	4.5	1.5
4.....	454	157	249	398	197	71	12.5	4.2	6.4	10.0	4.9	1.8
5.....	399	131	197	370	169	46	11.1	3.6	5.1	9.4	4.3	1.2
6.....	295	102	153	263	116	39	8.5	2.9	4.1	6.9	3.0	1.0
7.....	217	65	90	233	92	47	6.2	1.9	2.5	6.2	2.4	1.2
8.....	123	72	92	182	77	27	3.5	2.1	2.6	5.0	2.1	.7
9.....	125	37	66	177	60	25	3.3	1.1	1.9	3.3	1.7	.7
10.....	148	42	35	116	48	23	5.5	1.1	1.0	3.3	1.4	.6
11.....	155	40	43	64	31	18	5.8	1.5	1.1	1.8	.9	.5
12.....	167	44	45	91	35	20	6.2	1.6	1.6	2.4	1.0	.6
13.....	157	41	43	63	29	7	5.5	1.5	1.6	2.3	.8	.2
14.....	160	36	39	73	31	11	6.4	1.3	1.4	2.7	1.1	.3
15-19.....	525	134	197	329	113	39	4.7	1.2	1.6	2.6	.9	.3
20-24.....	526	143	192	352	137	47	5.2	1.4	1.8	3.2	1.3	.4
25-29.....	611	150	216	372	127	59	5.4	1.4	1.9	3.4	1.2	.5
30-34.....	391	97	133	228	86	50	3.2	.8	1.1	1.9	.7	.4
35-39.....	176	51	72	120	54	21	1.5	.4	.6	1.0	.4	.2
40+.....	136	68	68	131	56	30	.2	.1	.1	.2	.1	( <sup>3</sup> )

<sup>1</sup> Excludes cases with unknown age. Rates are based on midyear population estimates by the Bureau of the Census.

<sup>2</sup> Paralytic cases were reported by 47 States in 1956, 48 States in 1957, 49 States in 1958, 50 States in 1959, 51 States in 1960, and 51 States in 1961. The District of Columbia is included as a State.

<sup>3</sup> Less than 0.1.

that used in the 1954 Francis field trial with the addition of adjustments for age and socio-economic status (16, 17).

### Severity of Residual Paralysis

A remarkably uniform distribution of severity occurred among the paralytic cases from year to year (table 6). The number of cases classified as paralytic poliomyelitis with minor involvement ranged from 30.8 to 31.6 percent of the total each year. Those with significant disability contributed 35.3 to 38.8 percent of the year's total. Another 20 to 24 percent suffered severe disability, and fatalities ranged from 9 to 10 percent.

All patients receiving three or more doses of vaccine, reported to the Poliomyelitis Surveillance Unit, are shown by the final classification of their disease in table 7. Each year, the percentage of cases with a history of three or more

doses of formaldehyde-inactivated vaccine has increased. This is true for cases in all three final classifications. However, within a given year, the percentage of cases with a history of three or more doses of vaccine varied inversely with the severity of the final classification. The percentage of paralytic cases with a history of three or more doses of inactivated vaccine has increased from 11 percent of total paralytic cases in 1958 to 27.4 percent in 1961.

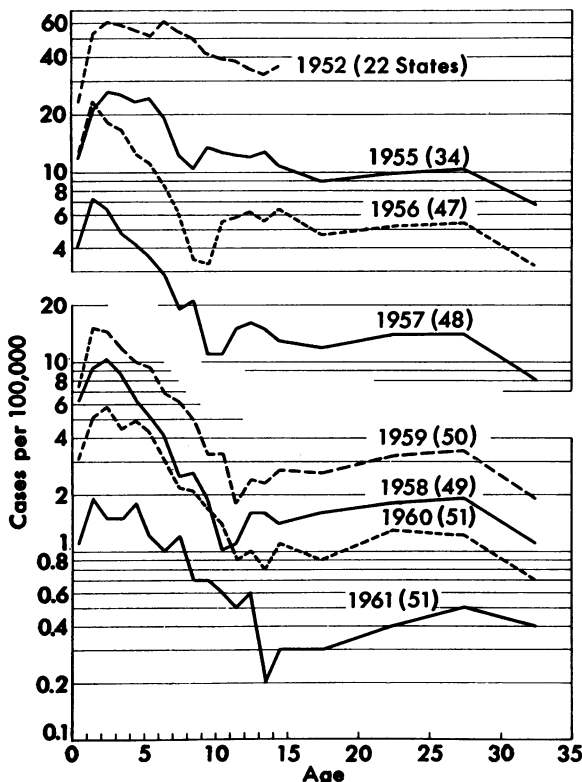
### Poliovirus Isolations

During the years 1958-61, fecal specimens were submitted to laboratories for viral studies on approximately 50 percent of the reported cases. Table 8 presents the number of specimens studied and the type distribution during these years. There has been an increasing percentage of type 3 poliovirus disease during the past 2 years, although type 1 has continued to dominate. Isolation of type 2 poliovirus has been very rare.

In 1958, Michigan, Ohio, and Florida accounted for more than one-third of the 1,171 type 1 isolates. During that year, no State reported more type 3 isolates than type 1. Type 1 poliovirus continued to dominate in 1959 with only the States of Massachusetts, Maine, Pennsylvania, and Nebraska reporting more type 3 than type 1 isolates. Pennsylvania and Maryland were the only States with a clear majority of type 3 isolates in 1960. During that year, New York and Rhode Island accounted for one-fourth of the 813 type 1 isolations. In 1961, New York accounted for more than one-third of the type 1 isolates. Three States in the South Atlantic region, Maryland, South Carolina, and Georgia, accounted for 40 percent of the type 3 isolates from the nation.

Table 9 presents the poliovirus isolations by final classification of cases during 1958-61. Isolates were obtained from 33 to 49 percent of the patients finally classified as having nonparalytic aseptic meningitis syndrome; from 46 to 60 percent of those with paralytic disease but no residual paralysis; and from 77 to 78 percent having paralytic cases with residual paralysis. This trend of a markedly higher percentage of virus isolation from paralytic cases has been consistently observed in all years.

**Figure 4. Paralytic poliomyelitis, with age-specific attack rates, United States, 1952, 1955-61**



SOURCE: Cases reported to the Poliomyelitis Surveillance Unit, Communicable Disease Center, Public Health Service.

All patients with a preliminary diagnosis of paralytic poliomyelitis were examined with respect to the severity of paralysis and to prior vaccination history. In those patients with

more than minor involvement, poliovirus infection occurred as often in the unvaccinated as the vaccinated. But in those patients with no residual paralysis or minor involvement, polio-

**Table 5. Paralytic cases reported to Poliomyelitis Surveillance Unit,<sup>1</sup> by age group and vaccination history**

Age group (years)	Doses of vaccine						Total	Percent
	0	1	2	3	4+	Unknown		
<i>1958</i>								
0-4	1,215	113	120	109	1	44	1,602	48.8
5-9	360	53	64	97	6	18	598	18.2
10-14	106	17	24	46	5	7	205	6.2
15-19	131	10	20	26	0	10	197	6.0
20-29	311	19	36	23	1	18	408	12.4
30-39	156	5	14	16	2	12	205	6.2
40+	62	2	0	1	0	3	68	2.1
Unknown	11	0	3	2	0	2	18	-----
Total	2,352	219	281	320	15	114	3,301	100.0
Percent doses	73.8	6.9	8.8	10.0	0.5	-----	100.0	-----
<i>1959</i>								
0-4	1,508	234	209	267	51	75	2,344	43.0
5-9	576	115	134	243	64	33	1,165	21.4
10-14	208	23	42	97	26	11	407	7.5
15-19	213	21	22	50	9	14	329	6.0
20-29	531	36	51	65	14	29	726	13.3
30-39	256	28	16	21	12	15	348	6.4
40+	109	3	5	7	1	6	131	2.4
Unknown	17	1	2	0	1	1	22	-----
Total	3,418	461	481	750	178	184	5,472	100.0
Percent doses	64.6	8.7	9.1	14.2	3.4	-----	100.0	-----
<i>1960</i>								
0-4	556	100	121	115	41	19	952	43.0
5-9	222	30	52	134	68	8	514	23.2
10-14	52	18	12	56	32	4	174	7.9
15-19	72	9	8	17	4	3	113	5.1
20-29	189	24	14	23	9	5	264	11.9
30-39	105	7	9	10	6	3	140	6.3
40+	52	0	0	1	0	3	56	2.5
Unknown	4	0	0	0	0	1	5	-----
Total	1,252	188	216	356	160	46	2,218	100.0
Percent doses	57.6	8.7	9.9	16.4	7.4	-----	100.0	-----
<i>1961</i>								
0-4	203	29	30	33	20	4	319	38.5
5-9	68	12	23	44	32	5	184	22.2
10-14	27	5	7	20	18	2	79	9.5
15-19	15	0	3	13	8	0	39	4.7
20-29	73	5	8	13	6	1	106	12.8
30-39	53	7	5	2	1	3	71	8.6
40+	24	1	1	1	1	2	30	3.6
Unknown	1	0	0	0	0	0	1	-----
Total	464	59	77	126	86	17	829	100.0
Percent doses	57.1	7.3	9.5	15.5	10.6	-----	100.0	-----

<sup>1</sup> Cases corrected for 60-day followup report.

virus infection was confirmed less often in those who had been vaccinated. The severity of poliomyelitis in relation to vaccination history and laboratory data will be the subject of a subsequent paper.

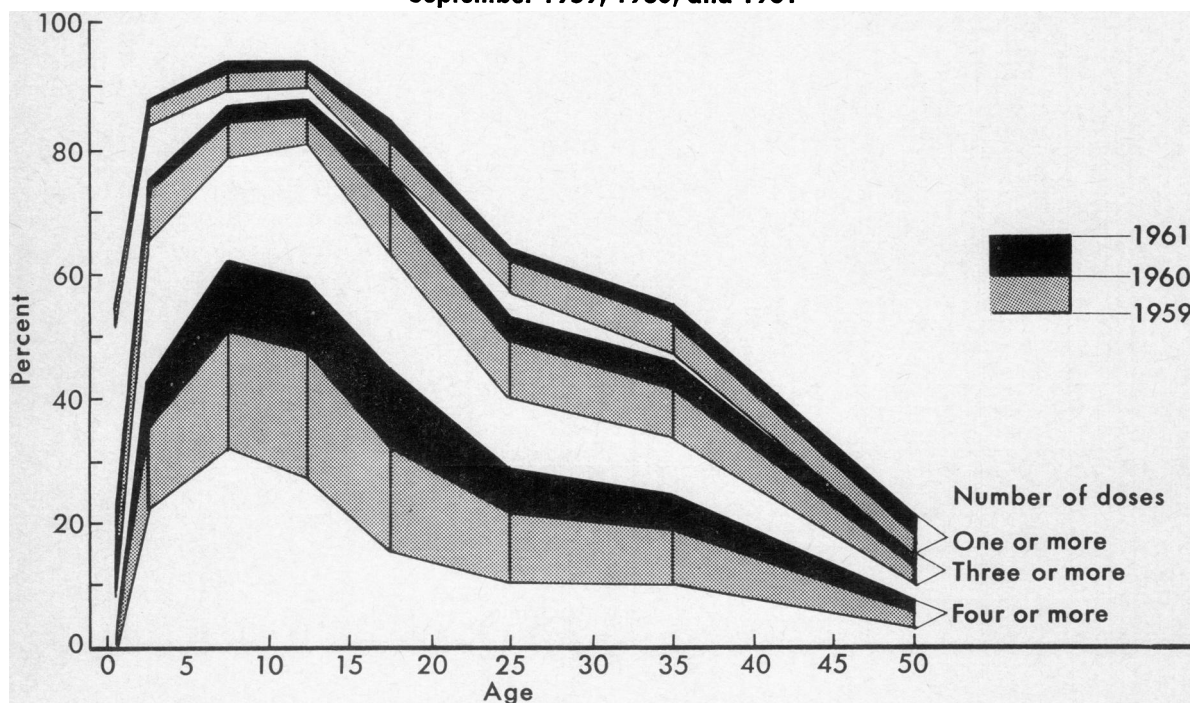
### Summary

During the years 1958-61, more than 18,500 persons in the United States were affected with an illness classified as poliomyelitis. Almost 14,000 of these patients were classified as having

paralytic poliomyelitis. In 1961 less than 1,000 paralytic cases occurred, representing the lowest incidence since reporting began.

Extensive, individual case investigations by State epidemiologists have been carried out during these years. These investigations have yielded sharply defined measures of incidence and experience with poliomyelitis. In each of these years, analysis of incidence by age indicates a preponderance of preschool-age children with a secondary peak in the 20- to 29-year age group. An average of 63 percent of all patients

**Figure 5. Poliomyelitis immunization, by age and doses of vaccine received, United States, September 1959, 1960, and 1961**



SOURCE: National poliomyelitis immunization survey (M. G. Sirken, National Office of Vital Statistics, Public Health Service).

**Table 6. Paralytic poliomyelitis, by severity of paralysis, 1958-61**

Severity of paralysis	Number of cases					Percentage of cases with known severity				
	1958	1959	1960	1961	Total	1958	1959	1960	1961	Total
Minor involvement.....	812	1,563	655	240	3,270	31.5	31.6	31.4	30.8	31.5
Significant disability.....	955	1,780	736	302	3,773	37.1	35.9	35.3	38.8	36.3
Severe disability.....	565	1,157	486	159	2,367	21.9	23.4	23.3	20.4	22.8
Fatality.....	244	452	210	77	983	9.5	9.1	10.1	9.9	9.4
Unknown.....	725	520	131	51	1,427					
<b>Total.....</b>	<b>3,301</b>	<b>5,472</b>	<b>2,218</b>	<b>829</b>	<b>11,820</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>



**Table 7. Triply vaccinated cases, by final classification, 1958-61**

Final classification	Cases in 1958		Cases in 1959		Cases in 1960		Cases in 1961		Percent of cases with 3+ doses			
	Total <sup>1</sup>	3+ doses	Total <sup>1</sup>	3+ doses	Total <sup>1</sup>	3+ doses	Total <sup>1</sup>	3+ doses	1958	1959	1960	1961
Nonparalytic, aseptic meningitis syndrome-----	1,485	559	1,624	698	492	252	307	172	37.6	43.0	51.2	56.0
Paralytic, no residual paralysis-----	335	75	732	211	333	109	134	64	22.4	28.8	32.7	47.8
Paralytic poliomyelitis with residual paralysis-----	2,503	279	4,858	857	2,051	498	766	210	11.1	17.6	24.3	27.4

<sup>1</sup> Includes all cases with 60-day followup and known vaccination status.

**Table 8. Poliovirus isolations from reported cases of poliomyelitis, United States, 1958-61**

Year	Total cases <sup>1</sup>	Number studied <sup>2</sup>	Percent studied	Poliovirus type				Percent		
				1	2	3	Unspecified	1	2	3
1958-----	6,125	2,470	40	1,171	36	256	14	80.0	2.5	17.5
1959-----	8,635	4,222	49	2,464	11	300	30	88.8	.4	10.8
1960-----	3,304	1,595	48	813	2	281	2	74.2	.2	25.6
1961-----	1,356	735	54	290	6	185	0	60.3	1.2	38.5

<sup>1</sup> Cases reported as poliomyelitis on preliminary Poliomyelitis Surveillance Unit forms.

<sup>2</sup> Includes all cases on which one or more fecal specimens were examined for virus isolation. State and local health department laboratories and the laboratories in academic centers reported these results through State epidemiologists to the Poliomyelitis Surveillance Unit.

**Table 9. Poliovirus isolations, by final classification,<sup>1</sup> 1958-61**

Final classification	Total studied				Total poliovirus				Percent poliovirus			
	1958	1959	1960	1961	1958	1959	1960	1961	1958	1959	1960	1961
Nonparalytic, aseptic meningitis syndrome-----	709	863	271	170	232	348	132	59	32.7	40.3	48.7	34.7
Paralytic, no residual paralysis-----	167	434	200	72	99	254	121	33	59.3	58.5	60.5	45.8
Paralytic with residual paralysis-----	1,377	2,554	1,025	452	1,066	1,995	785	354	77.4	78.1	76.6	78.3

<sup>1</sup> Excludes specimens from cases with no 60-day followup report; this represents from 5 to 9 percent of the total specimens reported.

with paralysis reported from 1958 to 1961 had received no formaldehyde-inactivated vaccine. Among those classified as having paralytic disease, 20 to 24 percent were severely disabled and 9 to 10 percent were fatalities.

Poliovirus isolations have been made from 77 to 78 percent of paralytic cases with residual paralysis. Type 1 poliovirus has been preponderant during each of these years; however, type

3 polioviruses were implicated 38.5 percent of the time in 1961. Type 2 isolates have been rare.

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## 60th Anniversary of the Pan American Sanitary Bureau

The Pan American Sanitary Bureau, secretariat of the Pan American Health Organization and regional office of the World Health Organization, was 60 years old on December 2, 1962. The agency was established during the Second International Conference of American States, held in Mexico during October 1901 through January 1902.

At first the bureau was primarily a clearinghouse for information on diseases in the hemisphere, with an initial budget of \$5,000 and a staff of eight. During the last four decades, however, the agency has taken on increasing responsibilities for the improvement of health in the Americas. This year the Pan American Sanitary Bureau is carrying out 303 health projects with a budget of some \$14 million and a staff of more than 1,000. The hemisphere is now approaching eradication of ancient scourges such as malaria and smallpox, and work has begun on modern man's afflictions, such as mental illness and air and water pollution.