REPORT NO. 254
APRIL 20, 1962

COMMUNICABLE DISEASE CENTER

POLIOMYELITIS

SURVEILLANCE

TABLE OF CONTENTS

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

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: Chief, Poliomyelitis Surveillance Unit, Communicable Disease Center, Atlanta 22, Georgia.

Communicable Disease Center	Clarence A. Smith, M.D., Chief
Epidemiology Branch	Alexander D. Langmuir, M.D., Chief
Statistics Section	Robert E. Serfling, Ph.D., Chief
Surveillance Section	Donald A. Henderson, M.D., Chief
Poliomyelitis Surveillance Unit	Michael Regan, M.D., Chief James A. Bryan, II, M.D. Leo Morris, Statistician

SUMMARY

Only 13 cases of poliomyelitis, 11 paralytic, were reported during the four-week period ending April 14. Texas with four paralytic cases accounted for the largest State total.

A narrative report from Texas is included in Section 2. Three paralytic cases have occurred during March in Webb County (Laredo).

A status report of 1962 poliomyelitis is presented in Section 3 along with a listing of poliovirus isolates from 1962 cases.

A summary of 1961 poliomyelitis by age group and vaccination history is discussed in Section 5. Paralytic cases were concentrated in the unvaccinated preschool age group.

Section 6 presents current enterovirus surveillance data, and Section 7 a report of the Israel poliomyelitis experience in 1961 and early 1962.

1. CURRENT MORBIDITY TRENDS

The number of cases reported during the four-week period ending April 14 remained at low levels with only 13 cases of poliomyelitis, 11 paralytic, reported. Figure 1 illustrates the low total of cases reported as compared with similar weekly reports of recent years.

The table below compares current cumulative poliomyelitis experience with those of past years. Of the 55 paralytic cases reported thus far in 1962, only 37 have had onset in 1962, the remainder represent delayed reports from late last year.

Polio (Cumulated Weekly) Through 15th Week for Past Five Years

	1962	1961	1960	1959	1958
Paralytic	55	78	173	237	139
Total	81	123	239	334	250

The West South Central Region has accounted for the largest regional total during the past four weeks (See Table 1). Texas has reported four paralytic cases including two from Webb County in South Texas; a third Webb County case, as yet unreported, has also been recognized (See Section 2). Otherwise national incidence has been scattered.

2. REPORT - TEXAS

The paralytic case reported this week by Texas is from Webb County. This represents the third case (one fatality) in Webb County during 1962, all three with onset in March. The patients are Latin-American children residing in Laredo (population 60,678), the major city and county seat. A line listing is presented below:

Age	Sex	Onset Date	Vaccination Status	Remarks
19 mo.	M	March 15	0V	
5 yr.	M	March 23	1V	Fatality March 25
8 mo.	F	Late March	0V	

Thus, Webb County is the first county in the United States with as many as three cases in 1962. No laboratory information is yet available, but suitable specimens for virologic study are being sought.

3. 1962 POLIOMYELITIS REPORTED TO PSU

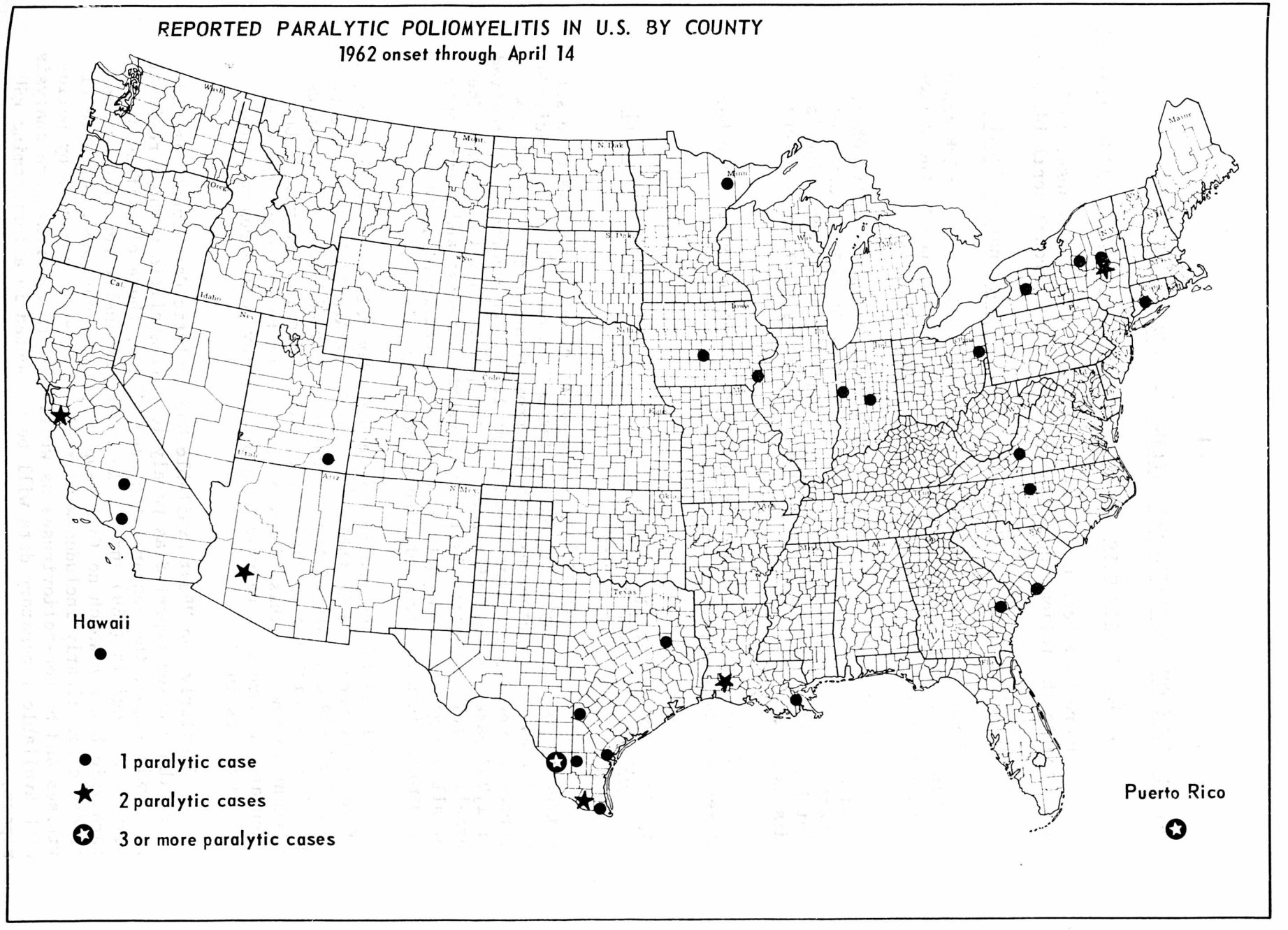
Of the 55 cases of paralytic poliomyelitis reported thus far in 1962, 37 had onset since January 1. Eighteen cases represent delayed reports with onset of illness in 1961. The map on page 3 depicts by county of origin the 37 paralytic cases with onset in 1962 (reported through April 14, 1962).

The only geographic concentration has appeared in southern Texas where 9 paralytic cases have occurred in six counties. Seven of the 9 cases were unvaccinated. All 3 cases in Webb County (Laredo) have had onset in March. No isolation of poliovirus has been reported as yet (See Section 2 of this report).

Two of the 5 cases reported from Puerto Rico have occurred in the municipality of Ponce. In addition, two suspect cases have been reported from Aguadilla in the western part of the island. Specimens are being collected for viral identification.

Poliovirus isolations have been reported from 8 of the 37 cases shown on the map.

COUNTY OF ORIGIN	ONSET	ISOLATION
Maricopa Co., Arizona	February 17	Type I
Maricopa Co., Arizona	February 17	Type I
Jeff Davis Co., Louisiana	January 14	Type I
Wyoming Co., New York	January 2	Type I
Montgomery Co., New York	January 20	Type I
Montgomery Co., New York	January 24	Type I
Mahoning Co., Ohio	February 23	Type III
San Juan Co., Utah	January 4	Type I


REPORTED PARALYTIC POLIOMYELITIS IN U.S. BY COUNTY
1962 onset through April 14
Hawaii
1 paralytic case
2 paralytic cases
3 or more paralytic cases
Puerto Rico

4. ROUTINE POLIOMYELITIS SURVEILLANCE - 1962

A. Cases With Onset Within 30 Days of Vaccination (Inactivated)

There have been no under-30-day cases (IPV) with onset in 1962 reported to the Poliomyelitis Surveillance Unit through April 14, 1962.

B. Cases With Onset Within 30 Days of Vaccination (Oral)

There has been one case of paralytic poliomyelitis with onset within 30 days of receiving oral poliovaccine reported to the Poliomyelitis Surveillance Unit through April 14, 1962.

This case is a $2\frac{1}{2}$ year old girl from Mahoning County, Ohio, with disease onset on February 23. She had received two doses of inactivated poliovaccine during 1960, type I oral poliovaccine in October, 1961 and type II on February 15, 1962, eight days before disease onset.

Laboratory study has yielded type III poliovirus. No other cases have been reported from this area.

5. 1961 POLIOMYELITIS REPORTED TO PSU - FINAL TABULATION OF AGE AND VACCINATION HISTORY.

During 1961, a total of 1,356 cases of poliomyelitis were submitted to the Poliomyelitis Surveillance Unit on preliminary individual case forms. This number exceeds the provisional total of 1,327 reported on weekly telegrams. Sixty-day follow-up reports were received on 1,283 cases, a full 95 percent of the preliminary PSU forms. The excellent follow-up appraisal indicates the interest and persistence of all who gather these data at State and local levels. State Epidemiologists particularly are to be congratulated.

Analysis of the preliminary and 60-day follow-up classification of cases is presented in table 5A. The "Best Available Paralytic Case Count" of 829 consists of the 778 cases with residual paralysis plus the 51 cases with the preliminary classification, "paralytic", but without follow-up. This figure is considered to represent the most accurate measure of paralytic damage caused by polioviruses in the United States in 1961

Similarly the "Best Available Nonparalytic Case Count" is made up of those cases reported as paralytic poliomyelitis without residual paralysis (136), the nonparalytic cases (172), those classified as aseptic meningitis (169) and the 16 cases originally reported as nonparalytic but for which no follow-up report was obtained. This total of 493 cases clearly includes a mixture of infections caused by polioviruses and by non-polioviruses as well. A more comprehensive analysis with available laboratory data will be presented in a forthcoming PSU report.

Table 5A

ANALYSIS OF PRELIMINARY AND
FINAL 60-DAY CLASSIFICATION
OF PSU FORMS - 1961

FINAL 60-DAY CLASSIFICATION	PRELIMINARY CLASSIFICATION			TOTAL
	PARALYTIC	NONPARALYTIC	UNSPECIFIED	
Paralytic:				
Residual Paralysis	756	17	5	778
No Residual Paralysis	128	8	-	136
Nonparalytic	-	167	5	172
Aseptic Meningitis	33	132	4	169
Not Polio	22	5	1	28
Total Follow-ups	939	329	15	1283
No Follow-up	51	16	6	73
TOTAL PSU FORMS	990	345	21	1356

The final case count is presented in Table 5B by age group and vaccination history. As in recent years, paralytic cases were concentrated in the preschool group whereas "nonparalytic" cases were distributed more evenly throughout childhood. Fifty-seven percent of paralytic cases were unvaccinated as opposed to 29 percent of "non paralytic" cases, and only 26 percent of paralytic cases had received three or more doses of vaccine as opposed to 53 percent of "nonparalytic" cases. Table 5 B is shown on page 6.

Table 5B

POLIOMYELITIS CASES BY PARALYTIC STATUS, AGE GROUP AND VACCINATION HISTORY REPORTED* IN THE UNITED STATES - 1961
Percent Distribution by Age and Doses of Vaccine**

Age Group	Paralytic: Doses of Vaccine 0	1	2	3	4+	Unk	TOTAL	Percent
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
Unk	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	

Age Group	Nonparalytic or Aseptic Meningitis Syndrome: Doses of Vaccine 0	1	2	3	4+	Unk	TOTAL	Percent
0-4	42	13	11	19	17	4	106	21.6
5-9	28	5	10	34	45	8	130	26.5
10-14	12	6	14	24	32	7	95	19.4
15-19	8	3	7	15	12	1	46	9.4
20-29	23	1	10	21	14	3	72	14.7
30-39	19	0	1	5	5	3	33	6.7
40+	4	0	0	2	2	0	8	1.6
Unk	0	1	0	2	0	0	3	-
TOTAL	136	29	53	122	127	26	493	100.0
PERCENT DOSES	29.1	6.2	11.3	26.1	27.2	-	100.0	

* Based upon cases reported to PSU corrected for 60-day follow-up; 6 cases unspecified as to paralytic status are excluded.

** Of those cases specified.

6. ENTEROVIRUS SURVEILLANCE

A total of 51 enterovirus isolates from 1962 specimens has been reported to the Poliomyelitis Surveillance Unit thus far. Of the 20 Coxsackie isolates included, 11 Coxsackie A isolates are reported from Hawaii and four Coxsackie B-5 from New Jersey. Several ECHO subtypes have been reported from California. Poliovirus type I continues the predominant poliovirus encountered. A listing of isolates is presented below.

ENTEROVIRUS ISOLATES REPORTED DURING 1962

State	Poliovirus I	Poliovirus II	Poliovirus III	ECHO*	Coxsackie	TOTAL	Reported by
Arizona	2	-	-	-	-	2	P. Hotchkiss & M. Goodwin
California	-	-	-	8	1	9	E. Lennette
Florida	2	-	1	2	2	7	J. Bond
Hawaii	-	-	-	-	11	11	K. Wilcox & J. Enright
Louisiana	2	-	-	2	-	5	G. Hauser
Maryland	-	-	1	-	-	1	C. Perry & C. Silverman
Massachusetts	-	-	-	1	-	1	R. MacCready and J. Daniels
Michigan	1	-	-	2	-	3	G. Agate
Missouri	-	-	-	-	1	1	I. C. Adams
New Jersey	-	-	-	1	5	6	W. Dougherty
New York	3	-	-	-	-	3	R. Albrecht
Ohio	1	-	-	-	-	1	C. Croft
Utah	1	-	-	-	-	1	R. Fraser & A. Jenkins
TOTAL	12	-	2	17	20	51	

* Specific types include two ECHO 4 from Florida, one from California, and one from Massachusetts; two ECHO 14 from Michigan; two ECHO 9 from Louisiana. Other scattered types include ECHO 2, 10, 11, 18, 22.

** Specific types include eleven Coxsackie A (various subtypes) from Hawaii, four Coxsackie B5 from New Jersey. Other scattered types are B2, B3, and B4.

7. FOREIGN REPORT - ISRAEL

A report on the incidence of paralytic poliomyelitis in Israel since the use of oral polivaccine in June, 1961, has been forwarded by Dr. Natan Goldblum of the Hebrew University - Hadassah Medical School in Jerusalem. The following data supplement the preliminary report of Israel's 1961 poliomyelitis epidemic which appeared in Poliomyelitis Surveillance Report No. 230 (July 21, 1961).

The monthly incidence of paralytic poliomyelitis in Israel since January, 1961 is as follows:

	Month of Onset	No. of Cases
1961:	January	6
	February	13
	March	26
	April	35
	May	68
Oral Vaccine →	June	35
	July	17
	August	5
	September	1
	October	1
	November	0
	December	0
1962:	January	0
	February	0
	March (1-22)	0

Type I oral Poliovaccine was fed during June to approximately 250,000 children from 4 days to 4½ years of age. Type II oral poliovaccine was fed to the same age group in October and November. The same age group plus infants born since June were refed in February, 1962.

Another mass feeding is planned in April with type I in May with type III. In addition, a feeding program has been initiated in February to feed type I to all newborns in the hospitals.

Figure 1 CURRENT U.S. POLIO INCIDENCE
COMPARED WITH YEARS 1957, 1959, and 1961

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

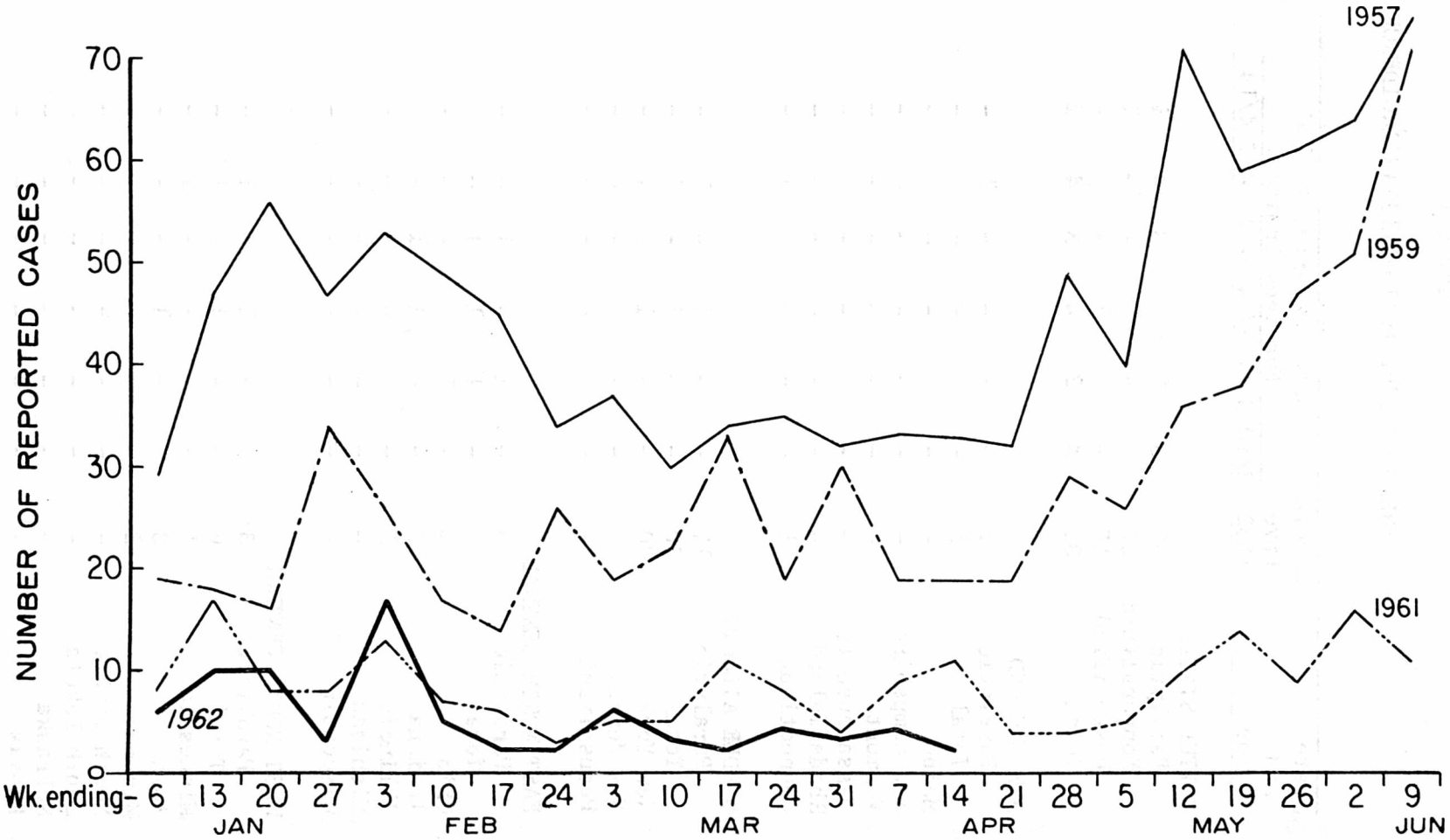


Table 1

TREND OF 1962 POLIOMYELITIS INCIDENCE

State and Region	Cumulative 1962	Cases Reported to CDC For Week Ending 3/10	3/17	3/24	3/31	4/7	4/14	Six Week Total	Comparable Six Weeks Totals in 1961	1960	1959
UNITED STATES											
Paralytic	55	3	2	3	3	4	1	16	38	55	99
Nonparalytic	11	-	-	-	-	-	1	1	9	9	27
Unspecified	15	-	-	1	-	-	-	1	1	6	16
Total	81	3	2	4	3	4	2	18	48	70	142
NEW ENGLAND											
Paralytic	1	-	-	-	-	1	-	1	1	1	3
Total	1	-	-	-	-	1	-	1	1	1	4
Maine	-	-	-	-	-	-	-	-	-	1	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	1	-	3
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
Connecticut	1	-	-	-	-	1	-	1	-	-	1
MIDDLE ATLANTIC											
Paralytic	17	-	-	1	-	1	-	2	6	6	6
Total	30	-	-	1	-	1	-	2	6	8	8
New York	30	-	-	1	-	1	-	2	1	3	8
New Jersey	-	-	-	-	-	-	-	-	3	3	-
Pennsylvania	-	-	-	-	-	-	-	-	2	2	-
EAST NORTH CENTRAL											
Paralytic	6	-	1	-	1	-	-	2	4	5	5
Total	8	-	1	1	1	-	-	3	5	7	11
Ohio	4	-	1	-	-	-	-	1	1	2	6
Indiana	3	-	-	1	1	-	-	2	2	-	1
Illinois	1	-	-	-	-	-	-	-	1	1	1
Michigan	-	-	-	-	-	-	-	-	-	4	2
Wisconsin	-	-	-	-	-	-	-	-	1	-	1
WEST NORTH CENTRAL											
Paralytic	3	-	-	1	-	1	-	2	2	2	9
Total	6	-	-	1	-	1	-	2	3	5	17
Minnesota	1	-	-	-	-	1	-	1	-	4	-
Iowa	3	-	-	1	-	-	-	1	1	1	-
Missouri	2	-	-	-	-	-	-	-	-	-	16
North Dakota	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	1
Nebraska	-	-	-	-	-	-	-	-	2	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-

Table 1 (Continued)

State and Region	Cumulative 1962	Cases Reported to CDC For Week Ending 3/10	3/17	3/24	3/31	4/7	4/14	Six Week Total	Comparable Six Weeks Totals in 1961	1960	1959
SOUTH ATLANTIC											
Paralytic	5	1	-	-	-	-	-	1	4	8	24
Total	6	1	-	-	-	-	1	2	6	9	31
Delaware	-	-	-	-	-	-	-	-	1	-	1
Maryland	-	-	-	-	-	-	-	-	-	1	-
D. C.	-	-	-	-	-	-	-	-	-	-	-
Virginia	1	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	1	1	2
North Carolina	1	-	-	-	-	-	-	-	1	1	5
South Carolina	1	-	-	-	-	-	-	-	1	-	2
Georgia	1	1	-	-	-	-	-	1	1	1	2
Florida	2	-	-	-	-	-	1	1	1	5	19
EAST SOUTH CENTRAL											
Paralytic	2	-	-	-	-	-	-	-	3	4	5
Total	3	-	-	-	-	-	-	-	4	4	11
Kentucky	-	-	-	-	-	-	-	-	3	3	2
Tennessee	1	-	-	-	-	-	-	-	-	-	5
Alabama	-	-	-	-	-	-	-	-	-	1	-
Mississippi	2	-	-	-	-	-	-	-	1	-	4
WEST SOUTH CENTRAL											
Paralytic	13	-	1	-	2	1	1	5	2	8	26
Total	15	-	1	-	2	1	1	5	6	9	31
Arkansas	-	-	-	-	-	-	-	-	-	-	5
Louisiana	4	-	1	-	-	-	-	1	1	1	8
Oklahoma	-	-	-	-	-	-	-	-	-	-	-
Texas	11	-	-	-	2	1	1	4	5	8	18
MOUNTAIN											
Paralytic	3	-	-	-	-	-	-	-	3	2	4
Total	5	-	-	-	-	-	-	-	3	4	8
Montana	2	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	1	-	-
Wyoming	-	-	-	-	-	-	-	-	-	1	1
Colorado	-	-	-	-	-	-	-	-	-	1	2
New Mexico	-	-	-	-	-	-	-	-	-	1	1
Arizona	2	-	-	-	-	-	-	-	-	-	2
Utah	1	-	-	-	-	-	-	-	2	1	2
Nevada	-	-	-	-	-	-	-	-	-	-	-
PACIFIC											
Paralytic	5	2	-	1	-	-	-	3	13	19	17
Total	7	2	-	1	-	-	-	3	14	23	21
Washington	-	-	-	-	-	-	-	-	1	2	2
Oregon	-	-	-	-	-	-	-	-	-	5	-
California	6	1	-	1	-	-	-	2	13	16	19
Alaska	-	-	-	-	-	-	-	-	-	-	-
Hawaii	1	1	-	-	-	-	-	1	-	-	-
TERRITORY											
Puerto Rico	4	1	-	-	1	2	-	4	1	39	-

Table 1 (Continued)

SUPPLEMENT TO CDC POLIOMYELITIS SURVEILLANCE REPORT NO. 254 , APRIL 20, 1962

U.S. Department of Health, Education, and Welfare

Public Health Service Bureau of State Services

COMMUNICABLE DISEASE CENTER
Atlanta 22, Georgia

POLIOMYELITIS IMMUNIZATION SURVEY
SYRACUSE, NEW YORK
NOVEMBER 7-9, 1961

Conducted by:

Dr. D.E. Bigwood, Jr., M.P.H., Commissioner of Health,
Syracuse Department of Health, Syracuse, New York
Dr. A.C. Silverman, Deputy Commissioner of Health,
Syracuse Department of Health, Syracuse, New York

Consultation and Assistance by:

Dr. Robert E. Serfling, Chief, Statistics Section, Epidemiology
Branch, Communicable Disease Center
Mrs. Ida L. Sherman, Assistant Chief, Statistics Section,
Epidemiology Branch, Communicable Disease Center

A poliomyelitis immunization survey of Syracuse, New York was conducted during the period November 7-9, 1961. For this survey the city was classified into three socioeconomic areas (upper, middle, and lower) using, with some re-grouping, a classification of census tracts developed by Dr. Charles V. Willie of Syracuse University. The classification of census tracts is shown on the attached map. The survey was planned with an area-probability design of 56 blocks arranged in 28 block-pairs. Primary blocks of each block-pair were allocated to census tracts in proportion to the number of housing units reported in the 1960 census. A secondary block for each block-pair was randomly selected from blocks contiguous to the primary block. Within each block, a systematic random sample was taken of 1 dwelling unit in 4 using a random starting point on each block.

A total of 56 blocks (Table 1) was included in the sample, approximately 1 in 28 of occupied blocks. Since the within-block sampling ratio was 1 housing unit in 4, an average of approximately 1 housing unit in 112 would be selected for interview.

A total of 576 household units was visited and of these units, 26 were vacant. Interviews were completed at 528 (96 percent) of the 550 occupied units. Sixty-eight percent were completed on first visit and an additional 28 percent by telephone and field callbacks. Approximately 2 percent refused to grant an interview and another 2 percent could not be reached during the survey.

The 528 completed interviews included a population of 1,742 persons. The composition of the sample population according to socioeconomic area by age is presented in Table 2.

The Appendix presents the Salk vaccination status of the sample population by socioeconomic area and age and shows corresponding sampling ratios. These ratios (based on sample populations of the sub-groups and the 1960 age distribution for the entire city) were used in calculating the population estimates presented in Table 3. Similarly Table 4 presents the sample distribution and population estimates of the number and percent of persons receiving Type I Sabin oral vaccine in late August. Table 5 shows Salk vaccination status of the sample population obtained in May 1959 during a previous survey. In order to facilitate comparison the percentages of Tables 3, 4, and 5 are summarized in Table 6 and Figure 1. The results presented show that between May 1959 and August 1961, small increases occurred in the population of children under 15 with three or more Salk vaccinations. Among older persons, the increase was somewhat greater, especially in the upper and lower socioeconomic areas.

Response to the Sabin Vaccine campaign was very good in all age and socioeconomic groups, with some 87 percent of all persons in the city under 40 years of age responding to the appeal to obtain the Sabin vaccine. A marked response was noted for the preschool children of the lower socioeconomic group. Of these children in May 1959, only 47 percent had received three or more Salk inoculations. In August 1961

the corresponding proportion (50 percent) was essentially unchanged. However, during the Sabin campaign, over 88 percent obtained the vaccine. Among the middle and upper socioeconomic groups, the proportion of pre-school children obtaining the oral vaccine was greater, but the percentage increase over the number having had three or more Salk vaccine doses was not as great as the lower socioeconomic group.

In the school age group, (5-14), which in general shows higher proportions with three or more Salk doses (reflecting the earlier campaigns among school children) the lower socioeconomic group with 63 percent having three or more Salk doses in 1959 increased slightly to 66 percent in 1961; the other two socioeconomic groups had higher proportions both in 1959 and 1961. During the oral vaccine campaign, however, the response in the lower socioeconomic group reached 96.5 percent. In the upper and middle socioeconomic groups, corresponding percentages were 94 and 93 percent respectively.

In the young adult age group (15-39),both the upper and lower socioeconomic groups had shown an increase since 1959, in the proportion reporting three or more doses of Salk vaccine, but the middle socioeconomic group remained at practically the same level in 1961 as in 1959. However, during the oral vaccine campaign, the response was similar in all three groups - upper, 85 percent, middle 84 percent, and lower 82 percent.

The response of the older members of the community was likewise noteworthy. In older persons (ages 40 and over) of all three socio-economic groups less than 10 percent had three or more Salk inoculations

as of August 1, 1961, but during the oral vaccine campaign, 40 percent of those in the lower socioeconcmic group, 35 percent of the middle and 31 percent of the upper socioeconomic group obtained the oral vaccine.

Table 7 shows the estimated number of doses of Salk vaccine obtained between August 1 and November 7-9. Almost 15,000 doses were utilized with the lower socioeconomic group obtaining relatively more than the middle and upper socioeconomic groups.

SUMMARY

Estimates derived from the survey show that an estimated 143,440 doses of oral vaccine and 15,000 doses of Salk vaccine were obtained by residents of Syracuse during the period August to November 1961. Response to the oral vaccine was city-wide, with the lower socioeconomic group showing a slightly better response than the middle and upper socioeconcmic groups: 68 percent responded as compared with 66 percent in the other two groups, yielding an average of 66.4 percent of persons in Syracuse responding to the appeals of the campaign.

This percentage is weighted by the large number of older citizens who did not obtain the vaccine. For ages under 15, the response was 91.3 percent city-wide, and for persons under 40 years of age, 87 percent.

Table 1. Schedule of Interviews with Outcome

Number of Blocks Scheduled				56
Number with household units			56	
Number without household units			0	
Number of Blocks in Syracuse				1 990
Number of blocks with household units				1 585
(Block Sampling ratio - - - - (1/28)				
Total Household Units Visited				576
(Within-block sampling ratio -(1/4)				
Vacant units			26	
Occupied units			550 (100.0%)	
Interviews completed		528 (96.0%)		
On first visit	372 (67.6%)			
By telephone	140 (25.5%)			
By revisit	16 (2.9%)			
	(96.0%)			
Interviews not completed		22 (4.0%)		
Not at home during survey	9 (1.6%)			
Refusals	10 (1.8%)			
Other reasons	3 (0.6%)			
	4.0%)			

Table 2. Composition of the Survey Sample*

Area	No. of Households	Total Persons	Under 5 Yrs.	5-14	15-39	40 and Over
Upper	103	336	32	62	95	147
Middle	277	912	107	162	278	365
Lower	148	494	61	113	149	171
Total	528	1 742	200	337	522	683

*Appendix shows in detail Census Tract, 1960 population and sample population.

Table 3. Estimated Number of Persons in Syracuse by Age, by Number of Salk Injections, and Percent of Total, as of August 1, 1961

Socioeconomic Area and Age	Total Est. Pop.	Number Salk Injections				Percent			
		0	1-2	3	4+	0	1-2	3+	Total
Upper									
Under 3 Mo.	231	-	-	-	-	-	-	-	-
3 mo.-4 Yrs.	4 039	252	884	757	2 146	6.2	21.9	71.9	100.0
5-14	6 578	-	-	743	5 835	-	-	100.0	100.0
15-39	13 898	1 463	1 171	4 828	6 436	10.5	8.4	81.0	99.9
40 and Over	16 447	14 321	895	336	895	87.1	5.4	7.5	100.0
Total	41 193	16 036	2 950	6 664	15 312	39.1	7.2	53.6	99.9
Middle									
Under 3 Mo.	659	-	-	-	-	-	-	-	-
3 mo.-4 Yrs.	11 547	1 155	2 194	3 695	4 503	10.0	19.0	71.0	100.0
5-14	18 804	1 161	812	6 500	10 331	6.2	4.3	89.5	100.0
15-39	39 733	11 577	5 431	10 576	12 149	29.1	13.7	57.2	100.0
40 and Over	47 018	41 865	1 804	1 803	1 546	89.0	3.8	7.1	99.9
Total	117 761	55 758	10 241	22 574	28 529	47.6	8.7	43.6	99.9
Lower									
Under 3 Mo.	319	-	-	-	-	-	-	-	-
3 Mo.-4 Yrs.	5 598	933	1 866	1 586	1 213	16.7	33.3	50.0	100.0
5-14	9 115	1 210	1 935	2 985	2 985	13.3	21.2	65.5	100.0
15-39	19 260	8 919	2 198	3 878	4 265	46.3	11.4	42.3	100.0
40 and Over	22 792	20 526	800	800	666	90.1	3.5	6.4	100.0
Total	57 084	31 588	6 799	9 249	9 129	55.6	12.0	32.4	100.0
City Total	216 038	103 382	19 990	38 487	52 970	48.1	9.3	42.6	100.0

Syracuse, N.Y. Survey
Nov. 7-9, 1962

Table 4. Estimated Number of Persons Receiving Oral Vaccine
August 29-31, 1961

Socioeconomic Area and Age	Sample Survey: Number Persons	Sample Survey: Number Receiving	Estimated Population	Estimated Persons Receiving	Percent
Upper					
Under 3 Mo.	-	-	231	-	*
3 mo.-4 Yrs.	32	32	4 039	4 039	100.0
5-14	62	58	6 578	6 153	93.5
15-39	95	81	13 898	11 850	85.3
40 and Over	147	45	16 447	5 035	30.6
Total	336	216	41 193	27 077	65.7
Middle					
Under 3 Mo.	7	1	659	94	*
3 Mo.-4 Yrs.	100	91	11 547	10 508	91.0
5-14	162	150	18 804	17 411	92.6
15-39	278	232	39 733	33 158	83.5
40 and Over	365	128	47 018	16 488	35.1
Total	912	602	117 761	77 659	65.9
Lower					
Under 3 Mo.	1	-	319	-	*
3 Mo.-4 Yrs.	60	53	5 598	4 945	88.3
5-14	113	109	9 115	8 792	96.5
15-39	149	122	19 260	15 770	81.9
40 and Over	171	69	22 792	9 197	40.4
Total	494	353	57 084	38 704	67.8
All Areas					
All Ages	1 742	1 171	216 038	143 440	66.4
Under 15 yrs.			56 890	51 942	91.3
Under 40 yrs.			129 781	112 720	86.9

*Percentages not calculated.

Syracuse, N.Y. Survey, Nov. 7-9, 1961

Table 5. Proportion of Persons in Survey Sample of May 1959, by Salk Vaccination Status*

Age	Socioeconomic Area	Number Persons	Number of Salk Injections						Percent With 3+
			0	1	2	3	4	Unknown	
Under 5 Years	Upper	28	3	1	5	18	1	-	67.9
	Middle	81	18	7	7	43	6	-	60.5
	Lower	45	14	2	8	20	1	-	46.7
5-14 Years	Upper	54	1	-	1	51	1	-	96.3
	Middle	135	6	1	9	113	4	2	86.7
	Lower	43	7	2	4	25	2	3	62.8
15-39 Years	Upper	63	11	-	9	40	1	2	65.1
	Middle	179	51	2	15	99	-	12	55.3
	Lower	84	32	5	11	25	-	11	29.8
40 and Over	Upper	78	69	2	1	6	-	-	7.7
	Middle	312	294	3	7	8	-	-	2.6
	Lower	59	58	-	-	1	-	-	1.7

*Data from Poliomyelitis Vaccination Survey Report, Syracuse, New York, 1959, Dr. R.G. Cornell, Consultant.

For the above table, Upper Socioeconomic Group includes Areas I and II, Middle, Areas III, IV and V, and Lower, Area VI, from Classification of Syracuse Areas by Dr. Charles V. Willie, Syracuse University.

Syracuse, N.Y. Survey

Table 6. Summary Table of Salk Vaccination Status, 1959 and 1961, and Proportion Obtaining Sabin Vaccine, Type III, August 1961

Age	Socioeconomic Area	Proportion with 3 or More Salk Injections		Proportion Obtaining Sabin Vaccine
		May 1959 (Table 5)	August 1, 1961 (Table 3)	August 29-31, 1961 (Table 4)
3 Mo.-5 Years	Upper	67.9	71.9	100.0
	Middle	60.5	71.0	91.0
	Lower	46.7	50.0	88.3
5-14 Years	Upper	96.3	100.0	93.5
	Middle	86.7	89.5	92.6
	Lower	62.8	65.5	96.5
15-39 Years	Upper	65.1	81.0	85.3
	Middle	55.3	57.2	83.5
	Lower	29.8	42.3	81.9
40 and Over	Upper	7.7	7.5	30.6
	Middle	2.6	7.1	35.1
	Lower	1.7	6.4	40.4

Syracuse, N.Y. Survey
Nov. 7-9, 1961

Table 7. Estimated Number of Salk Inoculations Given Between August 1, 1961 and November 7, 1961

Socioeconomic Area and Age	Salk Vaccine since August 1: Number of Persons in Sample Reporting that they received: 1 dose	2 doses	3 doses	Salk Vaccine: Estimated No. of Persons in Pop. Receiving: 1 dose	2 doses	3 doses	Estimated Total Doses Received	Estimated Total Population 1960	Doses per Person
Upper									
Under 3 Mo.	-	-	-	-	-	-	-	231	-
3 mo.-4 Yrs.	8	1	-	1 010	126	-	1 262	4 039	0.312
5-14	5	-	-	530	-	-	530	6 578	0.081
15-39	6	-	-	878	-	-	878	13 898	0.063
40 and Over	2	-	-	224	-	-	224	16 447	0.014
Total	21	1	-				2 894	41 193	0.070
Middle									
Under 3 Mo.	-	-	-	-	-	-	-	659	-
3 mo.-4 Yrs.	16	2	1	1 848	231	115	2 655	11 547	0.230
5-14	5	-	-	580	-	-	580	18 804	0.031
15-39	12	2	1	1 715	286	143	2 716	39 733	0.068
40 and Over	1	-	-	129	-	-	129	47 018	0.003
Total	34	4	2				6 080	117 761	0.052
Lower									
Under 3 Mo.	-	-	-	-	-	-	-	319	-
3 mo.-4 Yrs.	22	-	1	2 053	-	93	2 332	5 598	0.417
5-14	17	-	-	1 371	-	-	1 371	9 115	0.150
15-39	8	1	-	1 034	129	-	1 292	19 260	0.067
40 and Over	5	1	-	666	133	-	932	22 792	0.041
Total	52	2	1				5 927	57 084	0.104
TOTAL							14 901	216 038	

Syracuse, N.Y. Survey
Nov. 7-9, 1961

Appendix. Distribution of the Survey Sample, by Age, and Number of Salk Inoculations as of August 1, 1961

Socioeconomic Area and Age	No. of Persons in Sample	Number of Salk Inoculations							Estimated 1960 Population**	Sampling Ratio
		0	1	2	3	4+	Unknown* No.	Unknown* Status		
Upper										
Under 3 Mo.	-	-	-	-	-	-	-	-	231	
3 mo.-4 Yrs.	32	2	2	5	6	17	(1)	-	4 039	1/126.2
5-14	62	-	-	-	7	55	-	-	6 578	1/106.1
15-39	95	10	2	6	33	44	-	-	13 898	1/146.3
40 and Over	147	128	7	1	3	8	(2)	(5)	16 447	1/111.9
Total	336	140	11	12	49	124	-	-	41 193	1/123
Middle										
Under 3 Mo.	7	6	1	-	-	-	-	-	659	
3 mo.-4 Yrs.	100	10	6	13	32	39	-	-	11 547	1/115.5
5-14	162	10	3	4	56	89	(2)	(2)	18 804	1/116.1
15-39	278	81	13	25	74	85	(3)	(11)	39 733	1/142.9
40 and Over	365	325	6	8	14	12	-	(11)	47 018	1/128.8
Total	912	432	29	50	176	225	-	-	117 761	1/129
Lower										
Under 3 Mo.	1	1	-	-	-	-	-	-	319	
3 mo.-4 Yrs.	60	10	8	12	17	13	(3)	(1)	5 598	1/93.3
5-14	113	15	4	20	37	37	-	(3)	9 115	1/80.7
15-39	149	69	7	10	30	33	(4)	(10)	19 260	1/129.3
40 and Over	171	154	6	-	6	5	-	(7)	22 792	1/133.3
Total	494	249	25	42	90	88	-	-	57 084	1/116
City	1 742	821	65	104	315	437	-	-	216 038	1/124

*Persons with unknown vaccination status are included among persons with zero inoculations; persons with unknown number are included among persons with one inoculation.

**Estimated populations by age based on age Distribution of City of Syracuse as a whole.

Syracuse, N.Y. Survey
Nov. 7-9, 1961

SYRACUSE, N. Y., AND ADJACENT AREAS BY CENSUS TRACTS

Part 1.—Tracts in Syracuse city

MAP 1

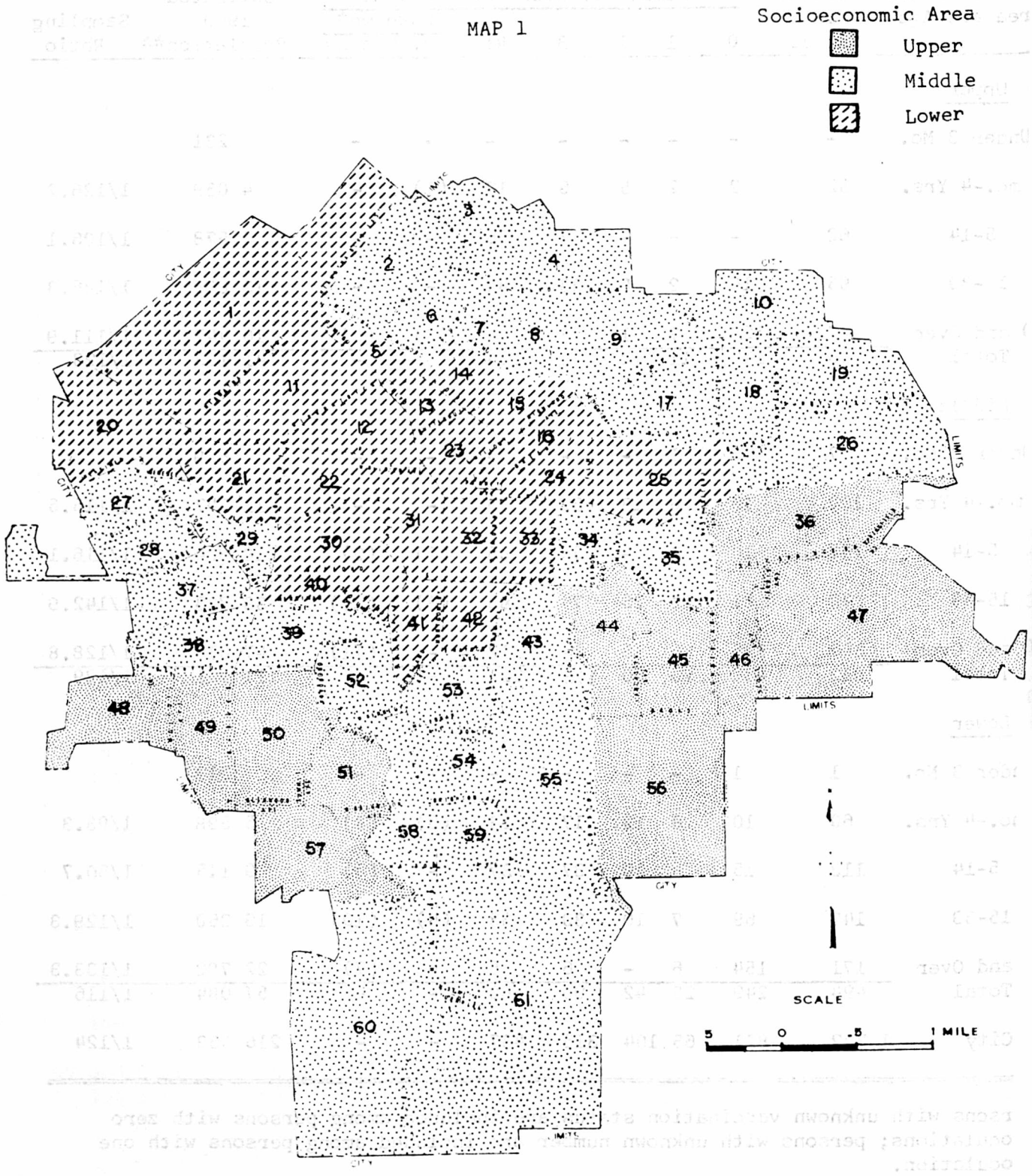
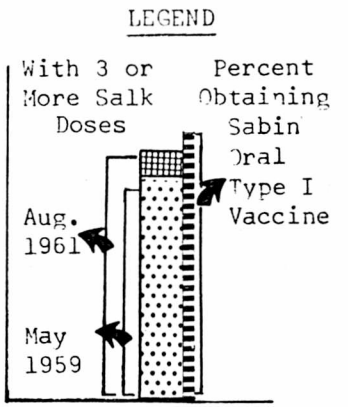
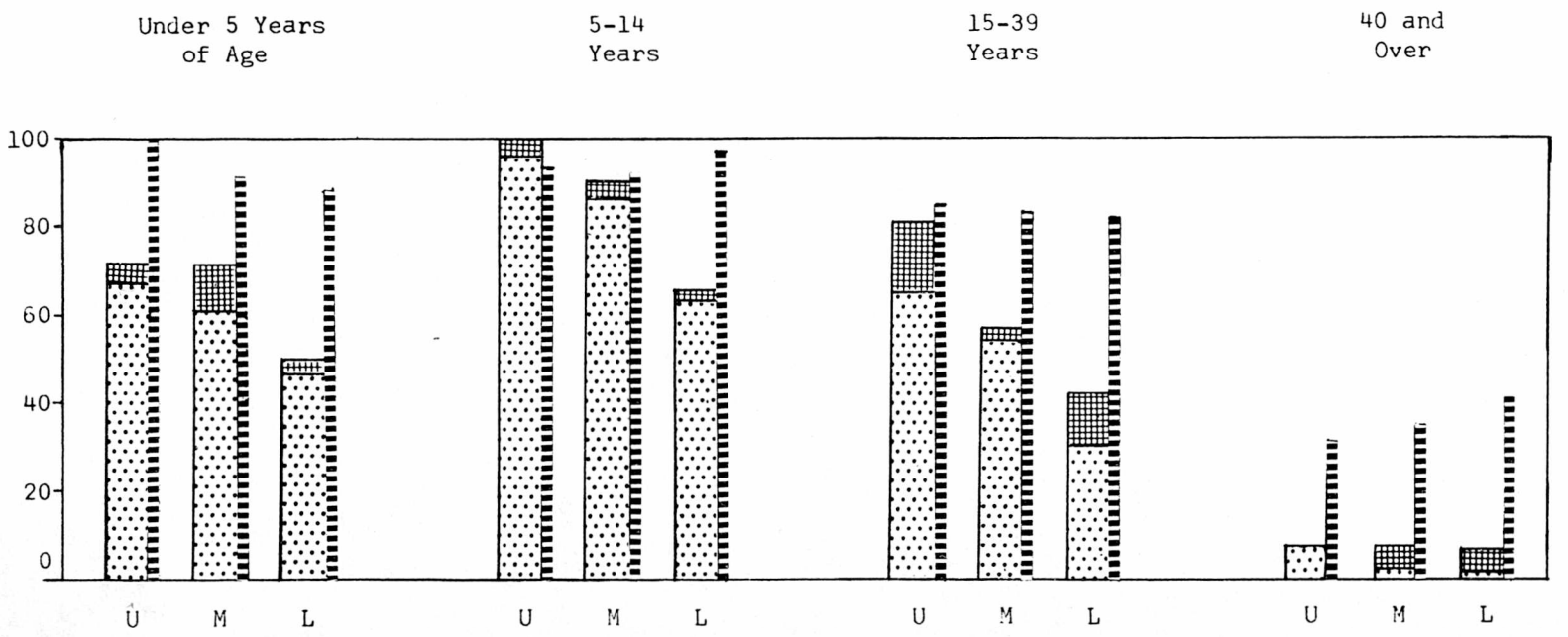


Figure 1. Syracuse, New York

Proportion of Persons With 3 or More Salk Inoculations as of May 1959 and August, 1961; and Proportion Obtaining Sabin Type I Oral Vaccine August 29-31, 1961





Socioeconomic Group, U - Upper; M - Middle; L- Lower.