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DHEW, USPHS, CDC
JUNE 3, 1955

SIXTH WEEKLY SUMMARY

The present summary includes data on poliomyelitis in: 1) vaccinated individuals, 2) in parents and siblings of vaccinated individuals, 3) in community contacts of vaccinated individuals and 4) current morbidity trends in poliomyelitis this year.

Poliomyelitis in Vaccinated Individuals

A total of 125 cases have been accepted through June 2. Of these, 70 are Cutter associated cases, the majority of which were reported from California and Idaho, with a scattering through the rest of the country. A total of 37 Lilly associated cases have been accepted from seven Southern States and one Northern State, with the greatest number reported from Texas.

Eleven Wyeth associated cases have been accepted from Pennsylvania, Ohio, Maryland and Delaware. Two Pittman-Moore associated cases from Nebraska and five Parke-Davis associated cases from Illinois, New York, and Oregon have been accepted.

It is of interest that 60 of 70 Cutter associated cases are paralytic, whereas only 12 of 37 Lilly associated cases are paralytic. It should be noted that for many years a large fraction of all non-paralytic cases has been reported from the South, where the bulk of Lilly vaccine was used this year. Of the 11 Wyeth associated cases, 7 are paralytic. Four of the five Parke-Davis associated cases are paralytic, neither of the two Pittman-Moore associated cases are paralytic.

Data on virus isolations are presented in Table 1. There are 26 instances of virus isolation reported in connection with Cutter associated cases. In 25 of these 26 instances type 1 virus has been isolated from the stool. In 6 of these 25 instances isolation has been reported from both the vaccinated case and contacts, in two instances from contacts of the case only, and in 17 instances from the vaccinated case only. Type 2 virus has been isolated from the stool of one non-paralytic case (PSU Case No. Cal-28).

Type 1 virus has been isolated from both patient and contact in one Wyeth associated case, and from the vaccinated patient only in two other Wyeth associated cases.

Type 2 virus has been isolated from both patient and contact of one Lilly associated case, and type 3 virus from one Lilly associated case and contact.

Virus isolations from familial contact cases (Table X1) are discussed below under the section on Poliomyelitis in Parents and Siblings of Vaccinated Individuals.

A comparison of expected and reported cases is presented in Table 2. Through the courtesy of the NFIP, information for each State was provided, including estimated populations in 1st and 2nd grades, estimated number of children inoculated in NFIP clinics through May 7, and manufacturer of the vaccine provided to each State. These data have been consolidated, giving an estimate of the number of inoculations given by each manufacturer. At present, estimates of inoculations given in NFIP Clinics after May 7, are not available. Therefore, 3 Parke-Davis associated cases inoculated after May 7, are not included in Table 2. All other cases accepted to date were inoculated prior to May 7.

The method used for calculation of "expected" cases is outlined in previous Weekly Summaries.

For the period April 16 through May 28, 7 cases were expected among 308,748 Cutter vaccinated children, whereas 36 have been reported. Expected cases among Lilly vaccinated children total 30 with 37 reported; expectancy was 2 with 2 cases reported among Pittman-Moore inoculated children, and expectancy was 3 with 2 cases reported among Parke-Davis inoculated children. Two cases were expected among the 775,920 Wyeth vaccinated children while 11 were reported.

It should be noted that 28 of the 36 Cutter associated cases inoculated in NFIP Clinics are paralytic, whereas there are only 12 paralytic cases among the 37 Lilly associated cases. Eight of eleven Wyeth associated cases are paralytic as are both Parke-Davis associated cases. Of the two Pittman-Moore associated cases, one is paralytic and one non-paralytic.

Poliomyelitis Among Parents and Siblings of Vaccinated Individuals

To date a total of 70 cases of this type have been accepted. Of these, 52 occurred in family contacts of Cutter vaccinated children with cases accepted from 15 States. Ten cases (from Maryland, Pennsylvania, Ohio and the District of Columbia) have occurred in contacts of Wyeth vaccinated children. Eight cases reported from five States occurred in family contacts of Lilly inoculated children. There are no accepted cases in family contacts of Pittman-Moore and Parke-Davis inoculated children.

Of the 68 cases for which data are available, 26 occurred in parents and 42 in siblings of vaccinated individuals. In 19 of the 45 cases where information was given, the vaccinated child had a minor illness several days to a week after inoculation.

Virus isolations have been reported in connection with 8 of these 70 cases. In all instances, virus was isolated from the stool and was identified as type 1 poliomyelitis virus. Of these 8 instances, 5 were reported in cases having family contact with a Cutter vaccinated child: in two of these cases, isolation was reported from both the unvaccinated case, and vaccinated contact; in two cases from the unvaccinated case only, and in one case from the vaccinated contact alone. The other three isolations were reported in cases giving a history of family contact with a Wyeth vaccinated child; in two of these from the unvaccinated cases only and in one from the vaccinated contact only.

Poliomyelitis in Community Contacts of Vaccinated Individuals

Seventeen cases of poliomyelitis among individuals having some degree of prior contact with a vaccinated child in their community have been accepted through June 2, 1955. These cases are now presented in a similar tabulation.

The 17 cases accepted to date have been reported from 10 States. Ten of these 17 gave a history of community contact with a Cutter vaccinated individual, five a history of contact with a Wyeth vaccinated individual, and two a history of contact with a Lilly vaccinated individual. Fifteen of the 17 cases occurred in children (age less than 18 years) and 2 in adults. In 8 of the 13, where information was available, one or more of the vaccinated contacts gave a history of illness following inoculation (usually including headache, fever or sore throat) and one of these eight was a paralytic polio case (PSU Case No. Ida-12). In the other five cases, the vaccinated child had been asymptomatic.

Of the 10 cases giving a history of contact with a Cutter vaccinated child, 9 were paralytic (two of these were fatal bulbar cases) and one non-paralytic. In the 9 cases where data are available, onset of illness in the polio cases occurred 18 to 41 days following vaccination of the contact.

Of the five cases giving a history of contact with a Wyeth vaccinated child, three were paralytic and two non-paralytic. Onset of illness in the polio case occurred 18 to 31 days following vaccination of the contact.

Both of the two cases giving a history of contact with a Lilly vaccinated child were paralytic and had onsets 22 and 24 days following vaccination of the contact.

Virus isolations have been reported in connection with two of these cases. Type 1 virus has been isolated from the stools of PSU Case No. Minn-C1 and 2 Cutter vaccinated playmates. Type 1 virus has been isolated from the Cutter vaccinated contact of PSU Case No. Md-C1.

Summary of Vaccine Associated Cases

Table 3 presents a compilation of all vaccine associated cases, tabulated by manufacturers and onset date.

Current Morbidity Trends

Current trends in the national incidence of poliomyelitis are presented in the accompanying figure and table.

Poliomyelitis incidence by week for the present calendar year with similar data for the three preceding years is presented in the figure. Data for total cases of poliomyelitis by week have been abstracted from Reports of the National Office of Vital Statistics. Poliomyelitis incidence for the month of January ran at a lower level than the preceding three years.

During February, March, and the first two weeks of April, incidence fell to a consistent low of approximately 50 cases each week. Incidence rose slightly during the week ending April 16, and then rapidly during the last two weeks of April. During the first week of May, there was no increase, but during the next two weeks incidence rose very sharply to outstrip the preceding three years.

During the week ending May 28, incidence fell off slightly to break the trend shown in the previous two weeks, so that incidence this week is approximately equal to that for the same week in 1954.

The slight decline at a time when a normal increase might be expected is accounted for by declines in incidence in Pennsylvania, Georgia, Colorado and California. Rises were recorded in New York, South Dakota and Idaho.

The trend of poliomyelitis by States for the six week period, April 16 through May 28, is presented in the accompanying table with comparable data for the three preceding years. Cases reported during this six week period for the current years exceed those for the preceding three years. In the Northeast incidence is generally low at this time of year, and is similar to that in previous years. In the North Central States incidence is running ahead of that for 1954, with the exception of Missour, Ohio, and North Dakota. In the South poliomyelitis incidence is running ahead of 1954 in ten States and behind 1954 in six States, including Florida and Texas, which together reported about half of the cases occurring in the South during this period in 1954. In the West, nine States are running ahead of 1954, notably Idaho with 62 cases in 1955, as compared to 4 for 1954. California with 179 cases reported this year in comparison to 184 for 1954, is the only Western State running behind 1954 reports.

(This Summary Report has been prepared by Dr. Neal Nathanson, Mr. Earl Diamond, and Dr. Alexander D. Langmuir. Special assistance in the calculations in Table 2 and on the figure and table describing current morbidity trends was provided by Dr. R. E. Serfling, Mrs. Ida Sherman, Mr. Jack Karush, and Dr. Jack Hall.)

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Table 1

Vaccinated Cases with Virus Isolation
(PSU Accepted Cases Through June 2, 1955)

Manufacturer		Isolation from Vaccinated patient only 1**	2	3	Isolation from Unvaccinated contact only 1	2	3	Isolation from both patient and contact 1	2	3	Total
Cutter	P*	17			2			4			23
	NP*		1					2			3
Lilly	P									1	1
	NP								1		1
Wyeth	p	2						1			3
	NP										
Parke-Davis	P										
	NP										
Pittman-Moore	P										
	NP										
Total											31

Table XI

Familial Contact Cases with Virus Isolation
(PSU Accepted Cases in Parents and Siblings of vaccinated Individuals, Through June 2, 1955)

Manufacturer		Isolation from Unvaccinated patient only 1	2	3	Isolation from Vaccinated Contact only 1	2	3	Isolation from both patient and contact 1	2	3	Total
Cutter	P	2			1			2			5
	NP										
Lilly	P										
	NP										
Wyeth	P	2			1						3
	NP										
Parke-Davis	P										
	NP										
Pittman-Moore	P										
	NP										
Total											8

* P - Paralytic NP - Non-paralytic
** Type of Poliomyelitis Virus

Table 2

Comparison of Expected* and Reported** Cases of Poliomyelitis Among Children Inoculated in NFIP Clinics from April 15 to May 7, 1955

(PSU Accepted Cases through June 2, 1955)

Vaccine Mfr.***	Number Vaccinated	Cases	Total Apr. 16 -May 14	Onset in Week Ending May 21	May 28	June 4	June 11	Total April 16 May 28
Cutter	308,748	Exp'd.	4	2	1	1	2	7
		Rep'd.	34	2	0	-	-	36
Lilly	2,513,962	Exp'd.	17	6	7	11	15	30
		Rep'd.	21	10	6	-	-	37
Parke-Davis	834,148	Exp'd.	2	0-1	0-1	2	1	3
		Rep'd.	1	1	0	-	-	2
Pittman-Moore	410,648	Exp'd.	1	0-1	0-1	1	1	2
		Rep'd.	2	0	0	-	-	2
Wyeth	775,920	Exp'd.	1	0-1	0-1	0-1	0-1	2
		Rep'd.	7	4	0	-	-	11

* Expected cases estimated from weekly 5-year medians of cases of poliomyelitis reported to National Office of Vital Statistics by the States.

** Reported Cases for ages 6, 7, or 8 having onsets between April 16 and June 4 and accepted by PSU. (Excluding those vaccinated after May 7, 1955)

*** Cutter vaccine used in Idaho, Nevada, Arizona, New Mexico, and Southern California.

LILLY vaccine was used in Texas, Oklahoma, Louisiana, Arkansas, Mississippi, Alabama, Tennessee, Florida, Georgia, South Carolina, North Carolina, Virginia, West Virginia, Indiana, Part of Ohio, and parts of California and Colorado.

PARKE-DAVIS vaccine was used in Michigan, Illinois, Iowa, Wyoming, Utah, and part of Colorado.

PITTMAN-MOORE vaccine was used in Kentucky, Missouri, Kansas and Nebraska.

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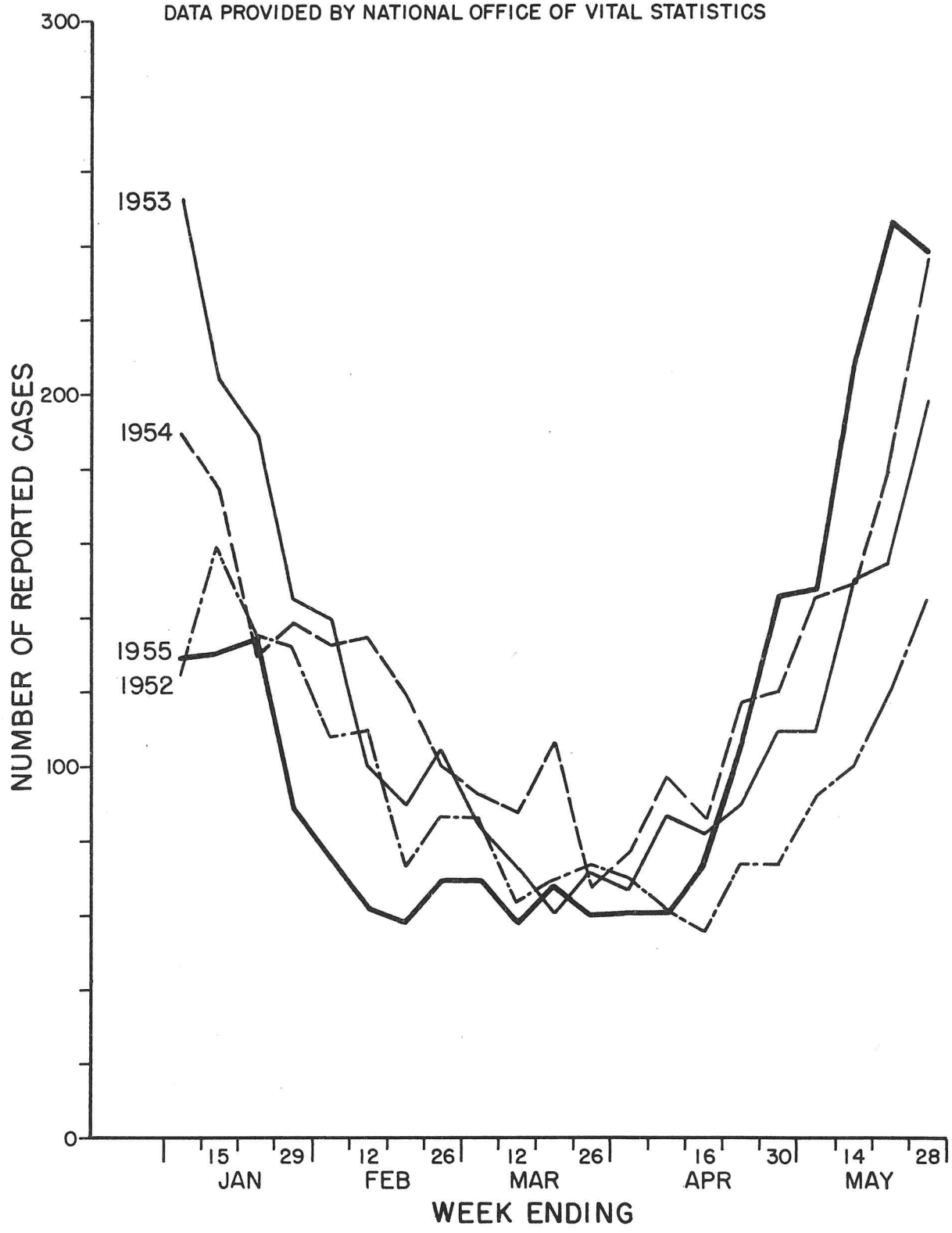
Table 3

Poliomyelitis Cases Associated with Vaccinated Persons
by Date of First Symptoms, and Manufacturer
(PSU Accepted Cases Through June 2, 1955)

Manufacturer		Onset in Week Ending 4-23	4-30	5-7	5-14	5-21	5-28	6-4	Total
Cases in Vaccinated Individuals									
Cutter	P	9	39	11	1	1			61
	NP	1	1	5	1	1			9
Lilly	P	2	4	1		4			12
	NP	1	3	4	6	6	5		25
Wyeth	P		1	2	2	3			8
	NP				2	1			3
Pittman-Moore	P				1				1
	NP				1				1
Parke-Davis	P				1	1	1	1	4
	NP						1		1
Cases in Family Contacts of Vaccinated Individuals									
Cutter	P	1	2	14	16	5	2		40
	NP		1	2	5	3	1		12
Lilly	P		2	2	2				6
	NP			1	1				2
Wyeth	P				1	5	2		8
	NP				1		1		2
Pittman-Moore	P								
	NP								
Parke-Davis	P								
	NP								
Cases in Community Contacts of Vaccinated Individuals									
Cutter	P				1	6	1	1	9
	NP					1			1
Lilly	P				2				2
	NP								
Wyeth	P			1	2				3
	NP				1	1			2
Pittman-Moore	P								
	NP								
Parke-Davis	P								
	NP								

CURRENT U.S. POLIO INCIDENCE COMPARED WITH YEARS 1952-1954

DATA PROVIDED BY NATIONAL OFFICE OF VITAL STATISTICS



DHEW - PHS - CDC

REV. - JUNE, 1955
ATLANTA, GA. - MAY, 1955

TREND OF 1955 POLIOMYELITIS INCIDENCE

STATE	Cases Reported to NOVS* During Week Ending: 4/23	4/30	5/7	5/14	5/21	5/28	Total	Comparable Totals in: 1954	1953	1952
United States	106	147	149	206	246	240	1094	953	817	609
North East										
Maine	-	-	-	-	-	-	-	-	5	2
New Hampshire	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	2	1	-	-	3	5	8	6
Rhode Island	-	1	-	1	1	-	3	-	-	-
Connecticut	-	-	3	-	-	-	3	1	4	1
New York	2	12	5	12	10	18	59	16	44	25
New Jersey	1	1	1	1	-	2	6	4	10	2
Pennsylvania	2	2	2	10	10	3	29	6	13	6
North Central										
Ohio	3	-	7	2	5	6	23	27	10	7
Indiana	-	-	3	7	2	1	13	5	16	5
Illinois	3	3	15	7	9	9	46	12	18	17
Michigan	1	6	1	10	5	4	27	24	13	9
Wisconsin	3	3	1	-	4	5	16	5	9	7
Minnesota	3	2	1	2	5	3	16	7	24	4
Iowa	1	4	3	3	4	6	21	6	12	9
Missouri	-	2	3	2	1	1	9	22	25	6
North Dakota	-	-	-	1	-	-	1	2	2	2
South Dakota	1	-	1	-	-	6	8	-	4	8
Nebraska	2	-	3	3	4	3	15	4	8	8
Kansas	-	3	2	2	-	3	10	7	10	3
South										
Delaware	1	1	-	2	2	5	11	-	-	1
Maryland	-	2	-	-	2	7	11	1	4	1
District of Col.	-	-	-	-	-	2	2	1	2	-
Virginia	1	1	2	4	5	4	17	8	9	3
West Virginia	1	3	1	4	3	2	14	12	13	8
North Carolina	1	1	-	4	2	4	12	8	14	4
South Carolina	3	4	-	1	4	1	13	11	3	2
Georgia	-	7	4	9	11	3	34	25	8	7
Florida	15	13	9	5	7	6	55	115	31	21
Kentucky	2	4	3	1	2	6	18	11	10	4
Tennessee	2	1	1	-	-	3	7	7	13	7
Alabama	-	-	1	1	3	3	8	41	34	2
Mississippi	1	1	1	8	3	4	18	24	20	26
Arkansas	2	-	1	2	4	2	11	31	12	6
Louisiana	6	6	11	4	10	11	48	31	18	33
Oklahoma	2	-	4	-	5	1	12	22	19	10
Texas	25	15	13	19	37	37	146	210	161	205

STATE	Cases Reported to NOVS* During Week Ending: 4/23	4/30	5/7	5/14	5/21	5/28	Total	1954	1953	1952
West										
Montana	-	1	-	-	3	1	5	2	1	-
Idaho	1	12	3	9	15	22	62	4	2	7
Wyoming	-	1	1	2	-	-	4	-	2	3
Colorado	-	2	-	3	12	5	22	5	13	3
New Mexico	-	-	3	1	1	-	5	2	1	3
Arizona	1	2	6	1	5	1	16	12	9	8
Utah	2	-	1	1	-	1	5	5	7	5
Nevada	-	-	1	5	2	-	8	6	-	-
Washington	-	2	2	4	4	5	17	14	10	10
Oregon	2	6	1	7	4	6	26	8	9	6
California	16	23	27	45	40	28	179	184	157	97

*National Office of Vital Statistics