

# Incidence Rates of Poliomyelitis in Japan

Compiled by Polio Association in Tokyo (President Mariko Koyama)  
Sources: White Papers from Ministry of Health and Welfare, and et al.  
A. Kawakita, *Infantile paralysis* (1961), Iwanami Paperback Edition

\*Disease Rate & \*Mortality Rate: 1/100,000

<sup>1</sup>Administration of Salk vaccine was started.

<sup>2</sup>Urgent administration of Sabin vaccine

<sup>3</sup>Official polio-surveillance first started from September 1, 1947

<sup>4</sup>Last patients from the wild-type virus in Japan

Year	No. of Patients	Disease Rate*	No. of Deceased	Mortality Rate*	Fatality Rate in Japan**
1947	275 (3)	--	1,009	--	--
1948	993	1.2	775	1	78.0
1949	3,127	3.8	1,074	1.3	34.3
1950	3,212	3.9	775	0.9	24.1
1951	4,233	5.0	570	0.7	13.5
1952	2,317	2.7	508	0.6	21.9
1953	2,286	2.6	441	0.5	19.3
1954	1,921	2.2	442	0.5	23.0
1955	1,314	1.5	314	0.4	23.9
1956	1,498	1.7	290	0.3	19.4
1957	1,718	1.9	255	0.3	14.8
1958 (1)	2,610	2.8	243	0.3	9.3
1959	2,917	3.1	201	0.2	6.9
1960	5,606	6.0	319	0.3	5.7
1961 (2)	2,436	2.6	188	0.2	7.7
1962	289	0.3	58	0.1	20.1
1963	139	0.1	27	0.05	19.4
1964	84	0.06	24	0.03	28.6
1965	76	0.05	28	0.05	36.8
1966	33	0.02	17	0.02	39.4
1967	26	0.02	16	0.02	15.4
1968	20	0.01	13	0.01	65.0
1969	16	0.01	12	0.01	75.0
1970	8	0.0	11	0.01	--

<b>Sub-total</b>	<b>37,154</b>		<b>7,610</b>		
1971	6	0.0	8	0.01	--
1972	7	0.0	1	0.0	14.3
1973	6	0.0	4	0.0	66.7
1974	4	0.0	2	0.0	50.0
1975	4	0.0	3	0.0	75.0
1976	0	0	0	0	0
1977	0	0	0	0	0
1978	0	0	0	0	0
1979	0	0	0	0	0
1980	2 (4)	0.0	0	0	0
1981	2	0.0	0	0	0
1982	1	0.0	0	0	0
1983	0	0	0	0	0
1984	0	0	0	0	0
1985	1	0.0	0	0	0
1986	0	0	0	0	0
1987	2	0.0	0	0	0
1988	0	0	0	0	0
1989	0	0	0	0	0
1990	0	0	0	0	0
1991	0	0	0	0	0
1992	0	0	0	0	0
1993	3	0.0	0	0	0
1994	1	0.0	0	0	0
1995	1	0.0	0	0	0
1996	0	0	0	0	0
1997	0	0	0	0	0
1998	0	0	0	0	0
<b>Totals</b>	<b>37,194</b>		<b>7,628</b>		

# Post-Polio Syndrome in Japan

*PHI thanks Kimiko Negayama of the Living Well with Polio Association (negayama@ruby.ocn.ne.jp).*

Source: *Epidemiology and Its Application* (IV), p. 387.

## **Post-Polio Syndrome: General Aspects with a Report of the First National Survey in Japan**

**Toshiko Nagashima, MD, Department of Neurology, Teine Keijinkai Hospital**

Delayed functional disabilities including severe fatigue, generalized joint or muscle pain and numbness, muscular wasting and weakness, and respiratory problems have been known as "post-polio syndrome (PPS)" to associate with acute poliomyelitis even decades after recovery. After the outbreak of worldwide polio epidemic in the 1940s and 1950s, numbers of PPS patients appeared in the United States since the 1980s. PPS had been unfamiliar in our country until 1989 when the first national survey was performed, and certain numbers of cases were identified. Subsequent inquiries from physicians and patients have succeeded thereafter. For the better understanding and more attention to this syndrome, general aspects of PPS based upon the results of the national survey are reviewed.

The first national case survey on PPS during 1989-1992 was addressed to 162 medical institutes. Among 170 recovered answers, 62 corresponding patients were encountered as PPS. The incidence was estimated as 0.12/10 population with case rates (PPS/polio survivors) 0.005. Clinical and epidemiological results were summarized as follows:

- Age on visit ranged from 27 to 66 years (mean:49y) with male to female ratio of 2:1.
- Polio infection was under 5 years (mean:3y), mostly during 1940s and 1950s with mild to moderate residual motor paresis and skeletal deformities.
- All were independent of ADL and engaged in certain occupations; having recent histories of trauma, surgical operation, physical and/or psychologic stress and weight gain in some.
- Signs of PPS manifested in the 40s (mean:45y), 40 years after polio, in the polio-affected or unaffected site(s) with the left leg predominancy.
- Pyramidal and bulbar signs were negative with localized fasciculation, paresthesia, myalgia, and occasional hypoventilation.
- Course after the onset are slowly progressive or stationally, with or without additional involvement of another site, getting partial recovery by rest and rehabilitation.

Our survey confirmed a certain number of PPS patients living in Japan. The results are essentially similar to those reported in US, except for the lower incidence of PPS in Japan. More careful examinations and active therapeutic approach for the patients, both physical and social, are proposed.

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**NOTE from Mariko Koyama, Chief, Japanese Polio Association and Yoshio Kuwashima, MD, Pathologist and Polio Survivor:**

*In an annual report of a disability published by the Ministry of Health and Welfare of Japan, registered number of the polio survivors was 43,000 in 1991 and 47,000 in 1996. However, the number was extracted from the officially registered disabilities only, thus, the number was not an overall one. Interestingly, while polio survivors are apparently decreasing in number, the statistics show gradual increase. We speculated that polio survivors are now gradually becoming disabled, probably due, at least in part, to PPS*