

# Tuberculosis Annual Report 2009

## Series 4. Elderly TB

Tuberculosis Surveillance Center, RIT, JATA

**Abstract** In 2009 the tuberculosis (TB) incidence rates of the elderly population aged 65\_74, 75\_84 and 85 or older were 26.5, 63.4 and 98.1 per 100,000 in Japan, respectively.

The TB incidence rate of those aged 65\_79 showed a substantial decrease compared to 2000, with the rate decrease of those aged 85 or older being less pronounced.

The proportion of TB cases aged 65 or older among all TB patients increased 1.6 times to 58.0% in 2009 from 36.8% in 1987; in particular, the proportion of those aged 80 or older increased 3.6 times to 28.8% from 7.9% in 1987. The proportion of elderly TB cases showed substantial differences between prefectures.

The proportion of extra-pulmonary TB among elderly female TB patients aged 65\_74 was 34.3% (22.4% for female TB patients aged 15\_64). The proportion of bacillary TB among elderly pulmonary TB (PTB) patients was larger than that of young patients, but the proportion of cavitory PTB among elderly PTB patients was smaller than that of young PTB patients. The proportion of TB patients whose cases did not include respiratory symptoms increased with age. Among this group, the proportions of those aged 65\_74, 75\_84 and 85 or older were 15.9%, 21.3% and 22.7%, respectively.

The elderly TB “patient’s delay” was shorter than young TB “patient’s delay”, although the “doctor’s delay” for elderly TB patients was longer than that for young TB patients. Most TB patients including elderly TB patients were detected upon their visit to a medical institution with some symptoms; in the case of elderly TB, more patients were detected as outpatients or inpatients for diseases other than TB.

The prognosis of newly notified TB patients in 2008 was followed up until the end of 2009. Among TB patients aged 65 or older, 27.6% died within one year and 15.5% died within 3 months. The proportion of death showed a substantial increase with age; the increase was particularly accelerated among those aged 75 years or older.

**.Key words:** Tuberculosis, Incidence, Elderly, Age, Trend, Epidemiological indicator, Death, Prefecture

Research Institute of Tuberculosis, JATA

Correspondence to: Tuberculosis Surveillance Center, Research Institute of Tuberculosis, JATA, 3-1-24, Matsuyama, Kiyose-shi, Tokyo 204-8533, Japan (E-mail: [tbsur@jata.or.jp](mailto:tbsur@jata.or.jp))

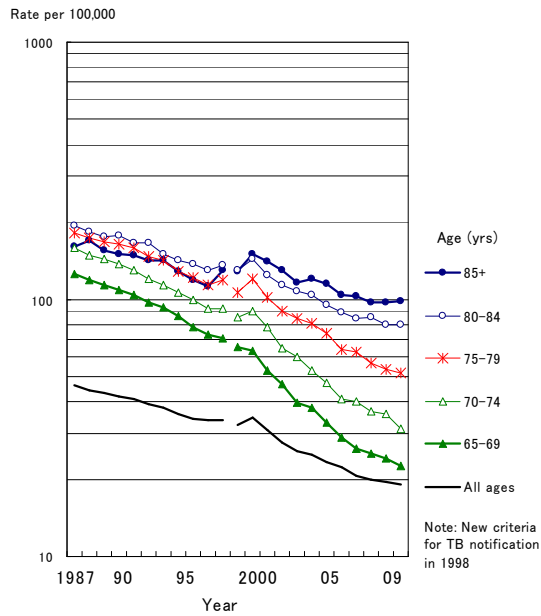


Fig.1 Trend of elderly TB notification rates, 1987-2009

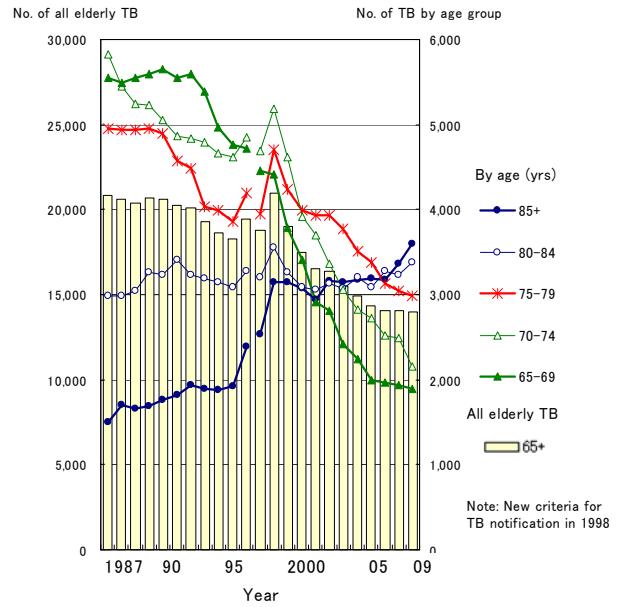


Fig.2 Trend of number of newly notified elderly TB cases, 1987-2009

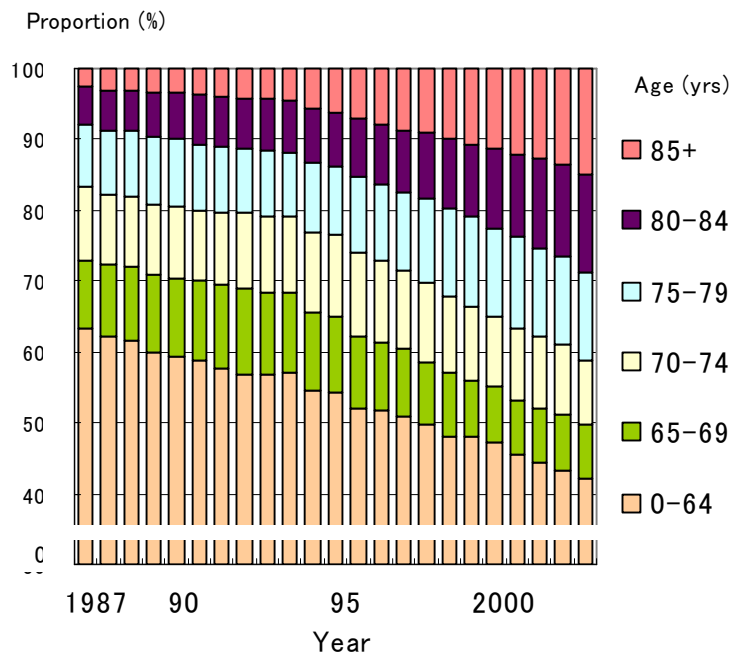


Fig. 3 Trend of proportion of elderly TB among newly notified TB cases of all ages, 1987-2009

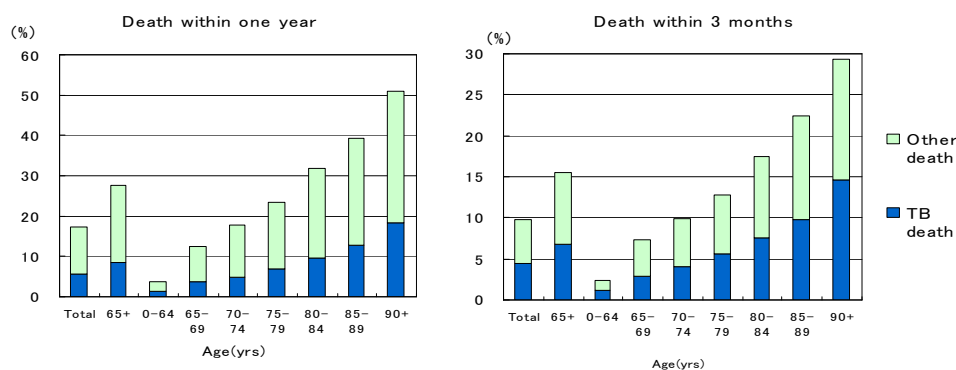


Fig.4 Proportion of death among newly notified TB patients in 2008 by age group, cause of death and duration till death

Table 1 Comparison of epidemiological indicators by sex and age group, 2009

		Age (yrs)				
		All ages	Younger		Elderly	
			15-64	65-74	75-84	85+
Number of newly notified TB patients (n)	Total	24,170	10,086	4,050	6,368	3,593
	Male	15,003	6,385	2,748	3,956	1,885
	Female	9,167	3,701	1,302	2,412	1,708
TB notification (incidence) rates per 100,000	Total	19.0	12.4	26.5	63.4	98.1
	Male	24.1	15.6	38.1	94.6	186.1
	Female	14.0	9.1	16.1	41.1	64.5
Proportion of extra-pulmonary TB among newly notified TB patients (%)	Total	21.8	17.3	25.4	25.7	22.7
	Male	18.4	14.4	21.2	22.0	19.8
	Female	27.2	22.4	34.3	31.7	26.0
Proportion of all bacillary TB among pulmonary TB (%)	Total	82.7	75.9	82.3	89.2	93.3
	Male	83.7	78.4	83.5	88.5	93.4
	Female	80.9	71.1	79.1	90.4	93.2
Proportion of sputum smear positive TB among pulmonary TB (%)	Total	51.2	44.4	50.8	57.5	61.9
	Male	52.3	47.5	52.8	56.7	60.2
	Female	49.1	38.3	45.6	59.0	64.0
Proportion of all cavitary TB among pulmonary TB (%)	Total	32.8	36.0	34.5	30.1	26.3
	Male	36.9	41.5	38.2	32.1	28.2
	Female	25.3	25.5	25.1	26.4	24.0
Proportion of far-advanced cavitary TB among pulmonary TB (%)	Total	1.9	2.5	2.0	1.4	0.7
	Male	2.3	3.2	2.2	1.5	0.7
	Female	1.2	1.3	1.6	1.3	0.6
Proportion of symptomatic TB among pulmonary TB (%)	Total	75.0	66.6	76.1	82.6	86.7
	Male	75.1	67.6	75.8	82.4	86.4
	Female	74.7	64.7	76.6	82.9	86.9
Proportion of only symptoms other than respiratory symptoms among symptomatic pulmonary TB (%)	Total	16.1	10.9	15.9	21.3	22.7
	Male	14.7	10.1	15.2	20.3	18.7
	Female	18.6	12.5	17.8	23.2	27.6
Proportion of patient's delay of 2 months or more among symptomatic pulmonary TB (%)*	Total	17.9	24.1	19.9	13.6	8.8
	Male	18.9	26.1	19.8	13.8	7.9
	Female	16.0	20.4	20.3	13.2	9.9
Proportion of doctor's delay of 1 month or more among symptomatic pulmonary TB (%)*	Total	20.4	17.2	23.7	22.2	22.0
	Male	19.4	15.5	22.6	22.2	21.2
	Female	22.3	20.4	26.4	22.4	22.9
Proportion of total delay of 3 months or more among symptomatic pulmonary TB (%)*	Total	18.2	22.9	21.4	15.4	9.5
	Male	18.5	23.6	21.2	14.8	8.3
	Female	17.8	21.5	21.9	16.4	10.8
Proportion of TB detected as outpatient from other diseases among newly notified TB (%)	Total	9.2	4.9	13.8	13.3	9.0
	Male	9.7	4.9	13.8	14.7	10.0
	Female	8.3	4.8	13.7	11.0	8.0
Proportion of TB detected as inpatient from other diseases among newly notified TB (%)	Total	11.4	4.2	12.3	16.8	21.0
	Male	11.1	4.5	12.1	16.7	19.8
	Female	11.9	3.6	12.9	17.1	22.2

Subjects: \* Excluding cases of unknown delay

Table 2 Number and proportion of elderly TB by prefecture and city, 2009

65+ (yrs)			85+ (yrs)		
Area	<i>n</i>	%	Area	<i>n</i>	%
Japan	14,011	58.0	Japan	3,593	14.9
Shizuoka city	94	78.3	Shizuoka city	38	31.7
Tottori	71	78.0	Niigata city	32	29.4
Ishikawa	131	75.7	Akita	33	26.4
Toyama	121	75.6	Tottori	23	25.3
Kochi	106	74.1	Toyama	40	25.0
Yamagata	107	73.8	Shimane	32	24.2
Shimane	97	73.5	Nagano	58	23.9
Gifu	327	73.0	Kochi	34	23.8
Kumamoto	245	72.7	Ishikawa	41	23.7
Niigata city	79	72.5	Niigata	41	23.7
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Saitama	460	46.6	Tokyo 23wards	243	9.8
Chiba city	97	46.0	Aomori	23	9.7
Tokyo 23wards	1,047	42.4	Chiba	86	9.6
Chiba	373	41.5	Kawasaki city	29	8.8
Kawasaki city	136	41.3	Osaka city	107	8.1

Descending order by proportion of elderly TB patients