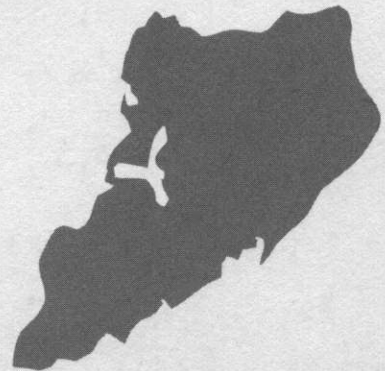


A Report to the Mayor and the Citizens of the City of New York

Tuberculosis in New York City 1970



Tuberculosis in New York City

1970

**A Report to the Mayor
and the Citizens of the City of New York**

Acknowledgements are extended to:

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Notes:

1. Except where indicated, tuberculosis case rates and death rates given for the years 1961 through 1969 are based on population estimates.

2. Definition of ethnic groups:

Puerto Rican - a person who was either born in Puerto Rico or whose mother was born in Puerto Rico -- irrespective of racial characteristics.

Nonwhite - a person who is not white and not Puerto Rican as defined above. Well over 90% of this group is black.

White - a person who is white and not Puerto Rican as defined above.



DEPARTMENT OF HEALTH
125 WORTH ST., NEW YORK, N. Y. 10013

October 1971

TO THE MAYOR AND THE CITIZENS OF THE CITY OF NEW YORK:

We are pleased to present our third annual review of Tuberculosis in New York City.

In 1970 the Department of Health noted sizeable declines in both the number of newly reported active tuberculosis cases and in the number of individuals with reactivated disease.

However, we cannot afford to rest upon our laurels. Even though overall tuberculosis rates for the City are down gratifyingly, eight of our thirty health districts account for more than one half of our cases. Predictably, these health districts encompass our most socially and economically deprived communities. When the new active tuberculosis rate in Central Harlem is seven times the national rate, eleven times the upstate rate and even four times the rate of the City itself, it is clear that more intensive efforts in such areas are mandated.

We thus feel that tuberculosis incidence reflects the major socio-economic problems of our City; we reason that tuberculosis control provides the prism through which to examine the relationship of the tuberculosis program to the delivery of all health care in underprivileged areas. The Bureau is committed to innovate and develop new methods by which to deliver preventive medical care to our ghettos. We aim to provide more efficient and imaginative ambulatory services at the local level with less dependence on hospitalization or extensive travel by the tuberculosis patients.

Annually, forty million dollars of taxpayers' money continues to be spent for our New York City Tuberculosis Program even though we have the scientific knowledge and technology necessary for the control of this disease.

Hopefully with the continuing implementation of the recommendations promulgated by the Mayor's 1968 New York City Task Force on Tuberculosis, the emotional, physical, and financial drains imposed on the patient, his family, his community, and his city will become a thing of the past.

Lee B. Reichman, M.D., F.P.H.
Director
Bureau of Tuberculosis
Department of Health

Mary C. McLaughlin, M.D., M.P.H.
Commissioner of Health

SUMMARY OF THE REPORT

Tuberculosis rates in New York City in 1970 continued their steady decline. During the year, 2,590 new active cases were reported as compared to 2,951 cases in 1969. In 1970, the new active case rate was 32.8 per 100,000 population, as compared with 36.4 per 100,000 population in 1969.

Tuberculosis rates decreased among all ethnic groups.

The age group with the highest tuberculosis new case rate is that from 35 to 44. Sixty-four per cent of all new patients were over 35. The median age of new patients was highest among whites and lowest among Puerto Ricans. The most rapid decline in tuberculosis rates in recent years remains in children under 15.

About two-thirds of all new patients were male.

New case rates for the entire city and for each borough have decreased. Eight of the City's thirty health districts accounted for more than one half of the cases. In only three districts the case rate has increased over 1969. As in the past, the rates are higher in areas with high population density and low income. In 1970 rates ranged from 135.1 per 100,000 population in Central Harlem to 7.2 per 100,000 population in Flushing.

The majority of the new cases in 1970 were reported by hospitals, with substantial numbers being reported by Health Department chest clinics.

Analysis given of the service statistics shows an increasing trend toward outpatient care and a decline in hospitalization. Chest clinic tuberculosis records show that 57,708 individuals were served in 1970 with a total of 396,576 visits. This group included patients with active disease, their contacts and associates and others with tuberculous infection. Inpatient care was provided in municipal hospitals to 3,091 tuberculosis patients for a total of 271,313 patient-days in 1970.

Reactivations showed a marked decrease in 1970; 476 patients whose disease had become inactive showed reactivation during 1970, as compared with 652 in 1969.

Tuberculosis killed 386 New Yorkers, a rate of 4.9 per 100,000 population in 1970 as compared with 418, a rate of 5.2 per 100,000 in 1969.

Some large cities surpass New York in tuberculosis rates based on population but New York still has the largest total tuberculosis problem of any American city.

MAJOR TRENDS IN NEW ACTIVE CASES AND DEATHS

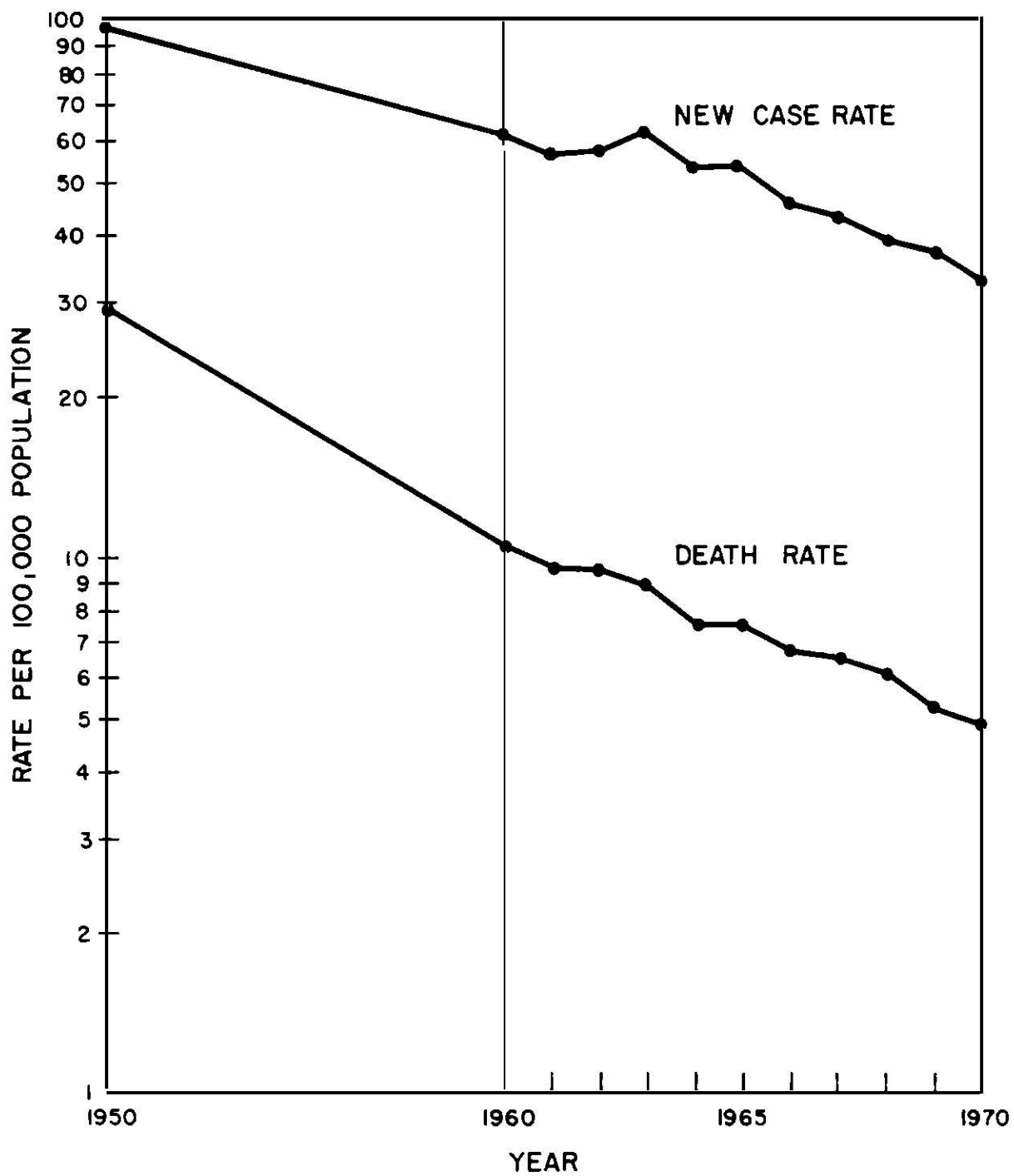
The numbers and rates of new active cases of tuberculosis and deaths from tuberculosis have declined substantially since 1960, despite minor reverses. Deaths have decreased at a more rapid rate than have new cases (Table 1, Figure 1).

Table 1
NEWLY REPORTED CASES OF ACTIVE TUBERCULOSIS AND DEATHS
DUE TO TUBERCULOSIS, NUMBERS AND RATES
New York City, 1950 and 1960 through 1970

Year	New Active Cases Reported	Deaths	Population (in 1000's)	Rate per 100,000	
				New Cases	Deaths
1950	7,717	2,321	7,903	97.6	29.4
1960	4,699	810	7,782	60.4	10.4
1961	4,360	738	7,782	56.0	9.5
1962	4,437	740	7,780	57.0	9.5
1963	4,891	683	7,780	62.9	8.8
1964	4,207	581	7,840	53.7	7.4
1965	4,242	592	7,960	53.3	7.4
1966	3,663	537	8,040	45.6	6.7
1967	3,542	525	8,125	43.6	6.5
1968	3,224	485	8,110	39.7	6.0
1969	2,951	418	8,110	36.4	5.2
1970	2,590	386	7,896	32.8	4.9

Figure 1

RATES OF NEWLY REPORTED ACTIVE TUBERCULOSIS CASES AND DEATHS
New York City, 1950 to 1970

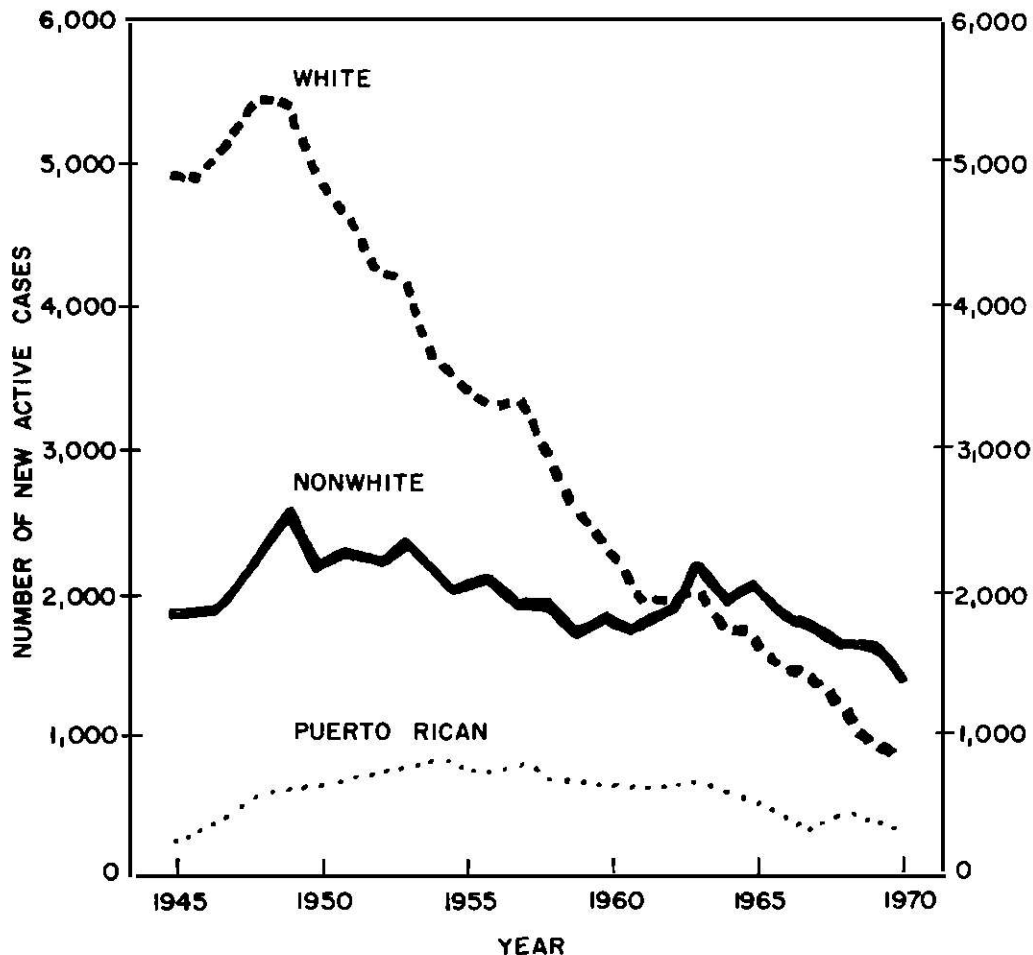


WHO ARE THE NEW PATIENTS?ETHNIC GROUPS

Tuberculosis occurs among people of all ethnic backgrounds. Ethnic group data, in combination with other epidemiologic information, are of major importance in defining the population segments most in need of tuberculosis services.

Since 1945, marked changes have occurred in the ethnic makeup of New York City. An ethnic analysis of tuberculosis patients over the past 25 years reflects these changes (Table 2, Figure 2). In 1945, whites represented 90 per cent of the population and accounted for 70 per cent of the new active tuberculosis cases reported.

Figure 2
ANNUAL TOTALS
OF NEWLY REPORTED ACTIVE TUBERCULOSIS CASES
BY ETHNIC GROUP AND YEAR
New York City, 1945 to 1970



Nonwhites and Puerto Ricans represented 10 per cent of the total population and accounted for 30 per cent of the new active cases of tuberculosis. In 1970, whites made up 67 per cent of the population and accounted for 32 per cent of the new active cases of tuberculosis. Nonwhites and Puerto Ricans represented 33 per cent of the population and accounted for 68 per cent of the new cases.

However, the new active case rates from 1945 to 1970 are a more important reflection of tuberculosis incidence within ethnic groups (Figure 3). The rates have declined for all ethnic groups since 1953. The reduction has been greatest among the nonwhites and Puerto Ricans.

Figure 3
NEWLY REPORTED ACTIVE TUBERCULOSIS CASE RATES
BY ETHNIC GROUP AND YEAR
New York City, 1945 to 1970

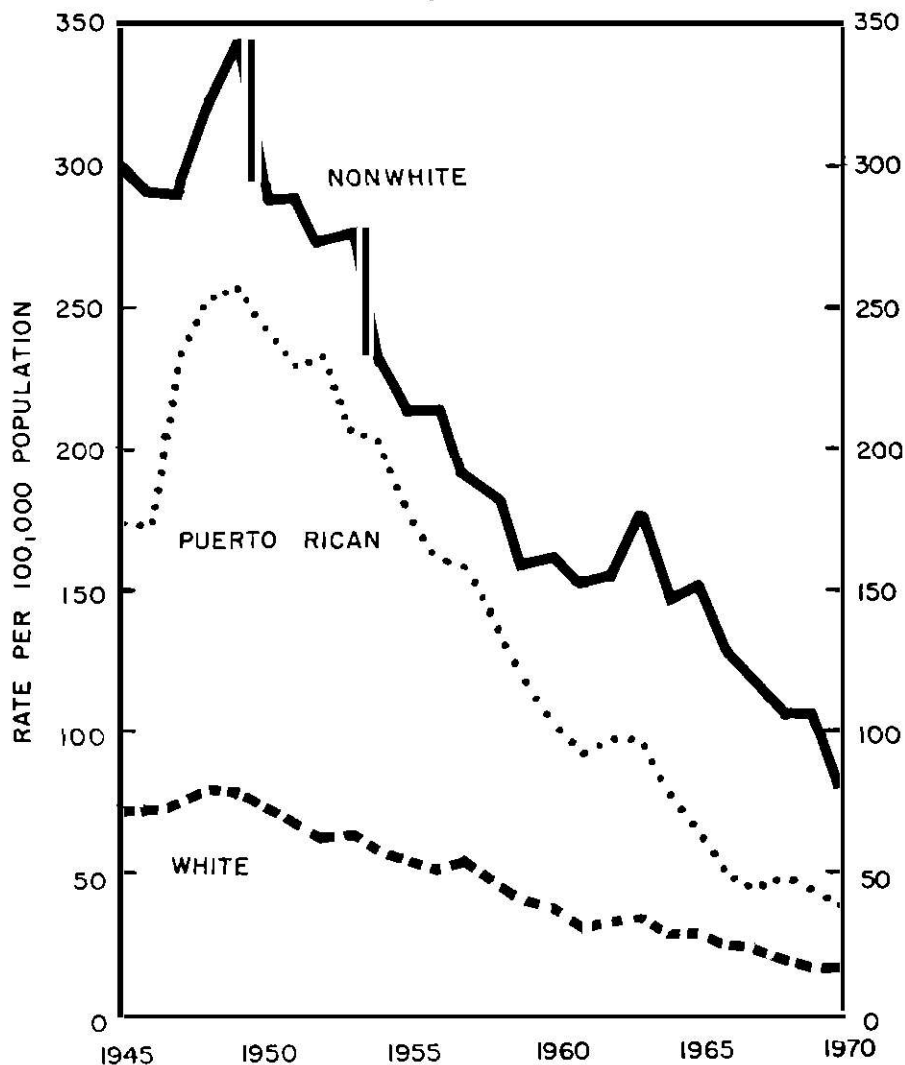


Table 2

NEWLY REPORTED CASES OF ACTIVE TUBERCULOSIS, NUMBERS AND RATES BY ETHNIC GROUP
New York City, 1945 to 1970

Year	New Active Cases*				Total
	Total	White	Non-White	Puerto Rican	
1945	7,062	4,930	1,850	282	7,684
1946	7,123	4,930	1,880	313	7,728
1947	7,599	5,174	1,961	464	7,772
1948	8,306	5,482	2,276	548	7,815
1949	8,567	5,431	2,536	600	7,859
1950	7,717	4,915	2,192	610	7,903
1951	7,583	4,633	2,290	660	7,891
1952	7,282	4,253	2,279	750	7,879
1953	7,349	4,209	2,395	745	7,867
1954	6,582	3,672	2,105	805	7,854
1955	6,214	3,430	2,025	759	7,843
1956	6,137	3,305	2,077	755	7,831
1957	6,117	3,377	1,940	800	7,818
1958	5,482	2,901	1,901	680	7,806
1959	4,924	2,526	1,721	677	7,794
1960	4,699	2,263	1,803	633	7,782
1961	4,360	1,983	1,772	605	7,782
1962	4,437	1,936	1,859	642	7,780
1963	4,891	2,029	2,186	676	7,780
1964	4,207	1,705	1,924	578	7,840
1965	4,242	1,712	2,031	499	7,960
1966	3,663	1,448	1,810	405	8,040
1967	3,542	1,427	1,740	375	8,125
1968	3,224	1,178	1,610	436	8,110
1969	2,951	971	1,587	393	8,110
1970	2,590	828	1,460	302	7,896

*New active cases of unknown ethnic group have been prorated according to the known ethnic distribution.

**1970 populations are estimates.

Population (in 1000's)**			Rates per 100,000				Year
White	Non-White	Puerto Rican	Total	White	Non-White	Puerto Rican	
6,902	619	163	91.9	71.4	298.9	173.0	1945
6,901	646	181	92.2	71.4	291.0	172.9	1946
6,900	674	198	97.8	75.0	290.9	234.3	1947
6,897	702	216	106.3	79.5	324.2	253.7	1948
6,895	731	233	109.0	78.8	346.9	257.5	1949
6,894	759	250	97.6	71.3	288.8	244.0	1950
6,810	795	286	96.1	68.0	288.0	230.8	1951
6,726	830	323	92.4	63.2	274.6	232.2	1952
6,642	866	359	93.4	63.4	276.6	207.5	1953
6,558	901	395	83.8	56.0	233.6	203.8	1954
6,473	938	432	79.2	53.0	215.9	175.7	1955
6,390	973	468	78.4	51.7	213.5	161.3	1956
6,305	1,009	504	78.2	53.6	192.3	158.7	1957
6,221	1,045	540	70.2	46.6	181.9	125.9	1958
6,137	1,080	577	63.2	41.2	159.4	117.3	1959
6,053	1,116	613	60.4	37.4	161.6	103.3	1960
5,984	1,152	646	56.0	33.1	153.8	93.6	1961
5,913	1,198	669	57.0	32.7	155.2	96.0	1962
5,843	1,237	700	62.9	34.7	176.7	96.6	1963
5,817	1,280	737	53.7	29.3	149.6	78.4	1964
5,843	1,345	772	53.3	29.3	151.0	64.6	1965
5,829	1,399	812	45.6	24.8	129.4	49.9	1966
5,817	1,463	845	43.6	24.5	118.9	44.4	1967
5,734	1,500	876	39.7	20.5	107.3	49.8	1968
5,734	1,500	876	36.4	16.9	105.8	44.9	1969
5,279	1,807	810	32.8	15.7	80.8	37.3	1970

WHO ARE THE NEW PATIENTS?AGE AND SEX GROUPS

In recent years, most patients with new active tuberculosis have been men over 35. True to this pattern, approximately 64 per cent of the new active tuberculosis cases reported in 1970 were found among people over 35, and 65 per cent of the patients were male (Table 3).

Nonwhite and Puerto Rican patients with new active tuberculosis were generally younger than the whites. For the white males the median age was 56, while for the nonwhite and Puerto Rican males it was 39 and 33 respectively. Among women, the median age was 47 for whites and 35 for both nonwhites and Puerto Ricans.

The numbers and rates of new active cases have declined markedly in all age groups between 1960 and 1970 despite occasional minor increases (Table 4).

Table 3

NEWLY REPORTED CASES OF ACTIVE TUBERCULOSIS,
ALL FORMS, BY AGE, SEX AND ETHNIC GROUP
New York City, 1970

Sex and Ethnic Group	Total	5-Year Intervals					
		0-4	5-9	10-14	15-19	20-24	25-29
Total	2,590	87	59	31	78	211	226
Male	1,676	56	34	15	43	104	114
White	493	4	4	1	7	15	19
Nonwhite	757	30	19	11	21	54	67
Puerto Rican	144	10	5	3	11	17	12
Not reported	282	12	6	0	4	18	16
Female	914	31	25	16	35	107	112
White	196	2	5	1	3	22	12
Nonwhite	461	16	14	10	18	48	64
Puerto Rican	106	6	1	2	7	16	12
Not reported	151	7	5	3	7	21	24

A major focus of the New York City tuberculosis control program continues to be on children under 15 years of age. The incidence of tuberculous disease among these children is a good indicator of the current impact of a control program. The rapid decline of tuberculosis among children under 15 is a major accomplishment of New York City's tuberculosis program.

It is estimated that nearly 1.5 million New Yorkers are infected with the tubercle bacillus, and each is at variable risk of developing active tuberculosis. However, many of these persons were infected years ago, and the fact that fewer and fewer children are becoming infected is a further sign of progress in tuberculosis control.

AGE GROUPS						
10 year intervals					Not reported	Sex and Ethnic Group
30-34	35-44	45-54	55-64	65 & over		
232	500	430	341	385	10	Total
136	327	314	256	272	5	Male
18	75	87	111	151	1	White
73	169	153	85	73	2	Nonwhite
21	28	15	14	8	0	Puerto Rican
24	55	59	46	40	2	Not reported
96	173	116	85	113	5	Female
17	31	22	29	51	1	White
60	96	68	28	37	2	Nonwhite
9	18	16	10	9	0	Puerto Rican
10	28	10	18	16	2	Not reported

Table 4

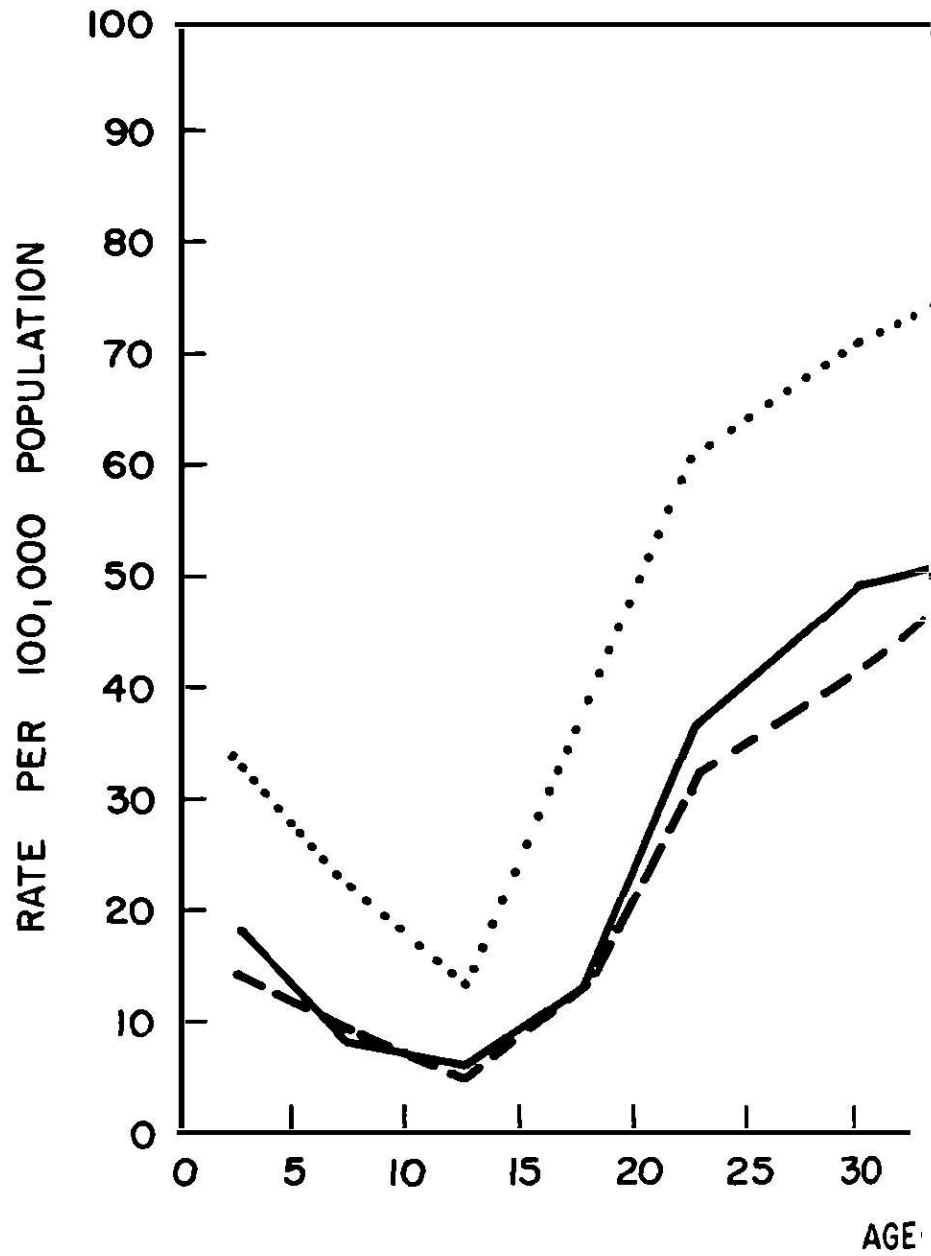
NEWLY REPORTED ACTIVE TUBERCULOSIS CASES AND CASE RATES BY AGE GROUP
New York City, 1960, 1969 and 1970

Age Group	1960		New Cases Reported
	New Cases Reported	Rates per 100,000 population	
0-4	234	34.1	121
5-9	133	22.3	60
10-14	77	13.4	42
15-19	172	35.3	85
20-24	294	60.9	225
25-34	756	71.6	519
35-44	840	78.4	564
45-54	766	70.6	476
55-64	688	74.1	406
65 and over	671	82.4	433
Not reported	68	-	20
Total	4,699	60.4	2,951

1969		1970		Age Group
Rates per 100,000 Estimated Population	New Cases Reported	Rates per 100,000 Population		
18.6	87	14.2		0-4
8.7	59	9.4		5-9
6.2	31	5.0		10-14
13.2	78	13.0		15-19
36.3	211	32.5		20-24
49.4	458	42.8		25-34
53.4	500	54.8		35-44
46.2	430	45.9		45-54
48.9	341	38.5		55-64
50.3	385	40.8		65 and over
-	10	-		Not reported
36.4	2,590	32.8		Total

Figure 4

NEWLY REPORTED ACTIVE TUBERCULOSIS CASE RATES BY AGE
New York City, 1960, 1969 and 1970



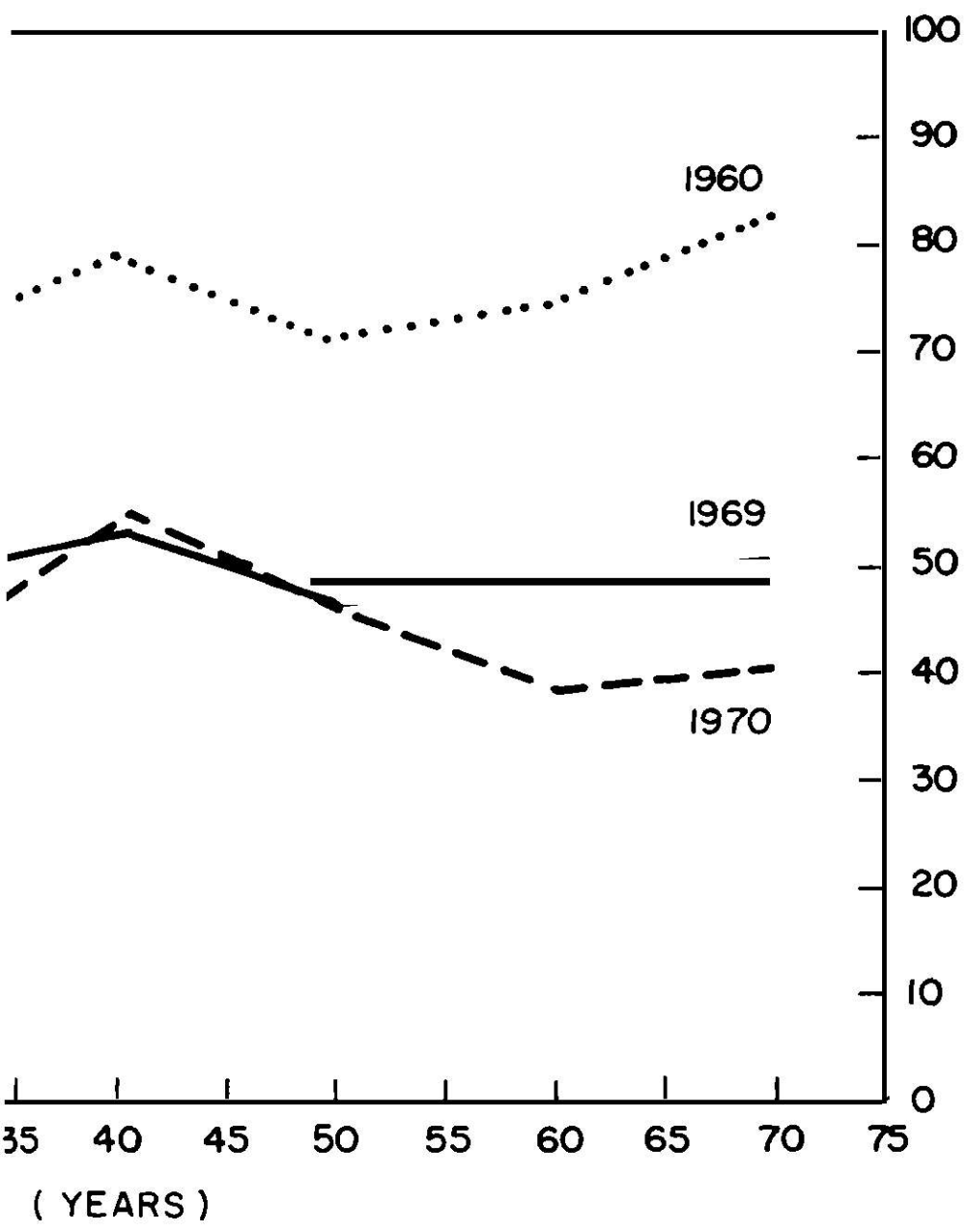


Figure 5

NEWLY REPORTED ACTIVE TUBERCULOSIS CASE RATES BY AGE
 UNDER 15 AND 15 AND OVER
 New York City, 1958 to 1970

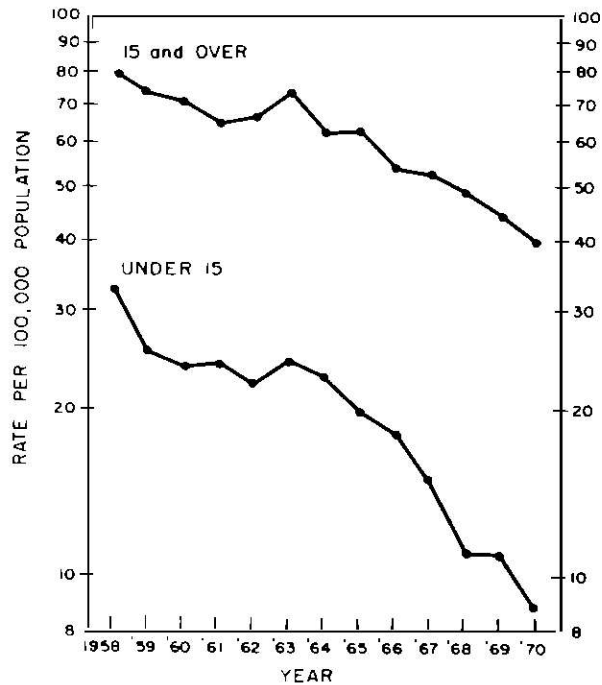


Table 5

NEWLY REPORTED ACTIVE TUBERCULOSIS CASES BY AGE: UNDER 15, AND 15 AND OVER
 NUMBERS AND RATES
 New York City, 1958 to 1970

Year	Number of New active cases reported				Population in thousands			Rate per 100,000 population		
	Total	Under 15 yrs. of age	15 yrs. of age & over	Age not avail- able	Total	Under 15 yrs. of age	15 yrs. of age & over	Total	Under 15 yrs. of age	15 yrs. of age & over
1958	5,482	600	4,763	119	7,806	1,816	5,990	70.2	33.0	79.5
1959	4,924	461	4,360	103	7,794	1,838	5,956	63.2	25.1	73.2
1960	4,699	444	4,187	68	7,782	1,859	5,923	60.4	23.9	70.7
1961	4,360	457	3,833	70	7,782	1,878	5,904	56.0	24.3	64.9
1962	4,437	421	3,926	90	7,780	1,898	5,882	57.0	22.2	66.7
1963	4,891	474	4,319	98	7,780	1,917	5,863	62.9	24.7	73.7
1964	4,207	439	3,680	88	7,740	1,936	5,904	53.7	22.7	62.3
1965	4,242	389	3,773	80	7,740	1,956	6,004	53.3	19.9	62.8
1966	3,663	355	3,246	62	8,040	1,975	6,065	45.6	18.0	53.5
1967	3,542	296	3,215	31	8,125	1,995	6,130	43.6	14.8	52.4
1968	3,224	225	2,968	31	8,110	2,014	6,096	39.8	11.2	48.7
1969	2,951	223	2,708	20	8,110	2,014	6,096	36.4	11.1	44.4
1970	2,590	177	2,403	10	7,896	1,872	6,024	32.8	9.4	39.9

WHERE ARE THE NEW PATIENTS?

Knowledge of the relative tuberculosis rates in New York City's boroughs and health districts helps the City's tuberculosis control program to concentrate its resources in the areas of greatest need. For this reason, Tables 6 and 7 are among the most valuable analyses provided by this annual report.

The new active tuberculosis case rate for New York City, 32.8 per 100,000 population, is a weighted average of the rates for the City's 30 health districts. These district rates range from Central Harlem's 135.1 per 100,000 to Flushing's 7.2 per 100,000. The districts of Central Harlem, Lower East Side, Bedford, Morrisania, Mott Haven, Tremont, Lower West Side and Riverside, with a total of 1,348 new active cases, account for 52 per cent of the new active case reports in the entire city in 1970.

Underscoring the above figures is the fact that the city rate is nearly twice the national rate (18.3 per 100,000 population) and three times the upstate New York rate (11.9 per 100,000 population). The rate in Central Harlem (135.1 per 100,000 population) is seven times the national rate and eleven times the upstate rate. It is obvious that such high-incidence areas must have top priority in tuberculosis control activities.

Throughout the city only about four per cent of the new active cases of tuberculosis were reported by private physicians. This shows a decrease of one per cent from the previous year. For many years the vast majority of tuberculosis patients have been found and treated through public facilities. In Queens and Richmond however, the percentage of new cases reported by private physicians has been much higher, double the citywide proportion in Queens and four times the citywide proportion in Richmond (Table 8).

NEW ACTIVE TUBERCULOSIS CASES REPORTED
BY BOROUGH AND HEALTH DISTRICT OF RESIDENCE
NUMBERS AND RATES
New York City, 1960, 1969 and 1970

Health District	Number			Rate per 100,000 pop.		
	1960	1969	1970	1960	1969	1970
New York City	4,669	2,951	2,590	60.0	37.4	32.8
Manhattan	2,141	1,045	957	126.1	67.9	62.2
Central Harlem	581	280	247	249.6	153.2	135.1
East Harlem	168	107	78	94.5	68.2	49.7
Kips Bay-Yorkville	74	42	30	34.4	18.3	13.1
Lower East Side	562**	232**	225**	206.7	93.0	90.2
Lower West Side	325	151	141	123.7	59.6	55.6
Riverside	275	132	128	102.4	59.9	58.1
Washington Heights	156	101	108	57.9	40.8	43.6
Bronx	690	519	510	48.4	35.3	34.6
Fordham-Riverdale	48	32	33	20.7	13.1	13.6
Morrisania	198	171	153	75.4	65.3	58.4
Mott Haven	234	136	129	104.6	64.0	60.7
Pelham Bay	43	39	32	23.3	18.9	15.5
Tremont	114	84	118	43.3	32.4	45.6
Westchester	53	57	45	20.5	19.7	15.6
Brooklyn	1,359	998	796	51.7	38.4	30.6
Bay Ridge	58	38	23	20.0	14.0	8.4
Bedford	291	213	207	101.5	77.0	74.9
Brownsville	163	154	140	54.6	48.3	43.9
Bushwick	130	123	78	60.0	53.5	33.9
Flatbush	85	84	60	17.9	17.2	12.3
Fort Greene	213	152	109	98.9	76.4	54.8
Gravesend	66	61	40	22.3	19.3	12.7
Red Hook-Gowanus	136	63	55	83.9	44.7	39.0
Sunset Park	81	53	38	42.0	28.7	20.6
Williamsburg-Greenpoint	136	57	46	70.6	32.4	26.2
Queens	466	348	287	25.8	17.5	14.4
Astoria-Long Island City	70	44	32	27.4	17.6	12.8
Corona	70	66	62	32.1	25.8	24.2
Flushing	84	45	35	18.6	9.3	7.2
Jamaica East	121	99	82	41.4	28.8	23.8
Jamaica West	75	57	50	24.3	15.8	13.9
Maspeth-Forest Hills	46	37	26	16.3	12.5	8.8
Richmond	43	41	40	19.4	13.9	13.5

* 1969 rates are based on 1970 Census of Population

** 1960 includes an indeterminate number of homeless men, 1969 includes 98 homeless men, and 1970 includes 102 homeless men.

Table 7

NEW ACTIVE TUBERCULOSIS CASE RATES
 BY HEALTH DISTRICT RANK, 1970
 New York City, 1960, 1969 and 1970

Health District Ranked According to 1970 rates	1970		1969*		1960	
	Rank No.	Rate per 100,000 population	Rank No.	Rate per 100,000 population	Rank No.	Rate per 100,000 population
NEW YORK CITY		32.8		37.4		60.0
Central Harlem	1	135.1	1	153.2	1	249.6
Lower East Side	2	90.2**	2	93.0**	2	206.7**
Bedford	3	74.9	3	77.0	6	101.5
East Haven	4	60.7	7	64.0	4	104.6
Morrisania	5	58.4	5	65.3	10	75.4
Riverside	6	58.1	11	59.9	5	102.4
Lower West Side	7	55.6	9	59.6	3	123.7
Fort Greene	8	54.8	4	76.4	7	98.9
East Harlem	9	49.7	8	68.2	8	94.5
Tremont	10	45.6	14	32.4	15	43.3
Brownsville	11	43.9	10	48.3	14	54.6
Washington Heights	12	43.6	13	40.8	13	57.9
Red Hook-Gowanus	13	39.0	12	44.7	9	83.9
Bushwick	14	33.9	6	53.5	12	60.0
Williamsburg-Greenpoint	15	26.2	16	32.4	11	70.6
Corona	16	24.2	18	25.8	19	32.1
Jamaica East	17	23.8	15	28.8	17	41.2
Sunset Park	18	20.6	17	28.7	16	42.0
Westchester	19	15.6	19	19.7	25	20.5
Pelham Bay	20	15.5	20	18.9	22	23.3
Jamaica West	21	13.9	25	15.8	21	24.2
Fordham-Riverdale	22	13.6	27	13.1	24	20.7
Richmond	23	13.5	26	13.9	27	19.4
Kips Bay-Yorkville	24	13.1	23	18.3	18	34.4
Astoria-Long Island City	25	12.8	22	17.6	20	27.4
Gravesend	26	12.7	21	19.3	23	22.3
Flatbush	27	12.3	24	17.2	29	17.9
Maspeth-Forest Hills	28	8.8	29	12.5	30	16.3
Bay Ridge	29	8.4	28	14.0	26	20.0
Flushing	30	7.2	30	9.3	28	18.6

* 1969 rates are based on 1970 Census of Population

** 1970 includes an indeterminate number of homeless men, 1969 includes 98 homeless men, and 1970 includes 102 homeless men.

Table 8

NEWLY REPORTED CASES OF ACTIVE TUBERCULOSIS
 BY SOURCE OF REPORT, NUMBERS AND PERCENTAGES OF TOTAL
 NEWLY REPORTED CASES BY BOROUGH
 New York City, 1970

Source of Report	New York City		Manhattan		Bronx	
	Number	Percent	Number	Percent	Number	Percent
Private Physicians	101	3.9	30	3.1	12	2.3
Health Department Chest Clinics	679	26.2	212	22.2	155	30.4
Hospitals and Non-Health Department Chest Clinics	1,790	69.1	707	73.9	338	66.3
Other	20	0.8	8	0.8	5	1.0
Total	2,590	100.0	957	100.0	510	100.0

Brooklyn		Queens		Richmond		Source of Report
Number	Percent	Number	Percent	Number	Percent	
27	3.4	26	9.0	6	15.0	Private Physicians
216	27.1	84	29.3	12	30.0	Health Department Chest Clinics
550	69.1	173	60.3	22	55.0	Hospitals and Non-Health Department Chest Clinics
3	0.4	4	1.4	0	-	Other
796	100.0	287	100.0	40	100.0	Total

WHAT ABOUT SOCIAL FACTORS?

Tuberculosis occurs in and is a threat to all population groups and areas of New York City, but poor socio-economic conditions facilitate the spread of tuberculous infection and breakdown with disease. The relationship between environment and disease becomes evident when tuberculosis rates are compared with population density and median income.

Each of the City's 30 health districts was rated as high, medium or low for population density and income respectively. The average new active tuberculosis case rate was then computed for groups of health districts with like population and income characteristics (Table 9). The districts with high population density and low median income had the highest tuberculosis case rates.

The Task Force on Tuberculosis in New York City recommended an aggressive attack on tuberculosis, especially in clearly identified poverty areas where the problem is concentrated. "This action," the Task Force report states, "could go a long way toward stamping out tuberculosis in New York City, before the many anti-poverty programs are able to reach their maximum effectiveness. The Task Force... believes that substantial gains can be made now, irrespective of the presence of adverse socio-economic factors."

The Bureau of Tuberculosis Control is redirecting its priorities toward these high-incidence areas.

Table 9

HEALTH DISTRICT RATES FOR NEWLY REPORTED ACTIVE TUBERCULOSIS CASES
GROUPED BY INCOME* AND POPULATION DENSITY**
New York City, 1970

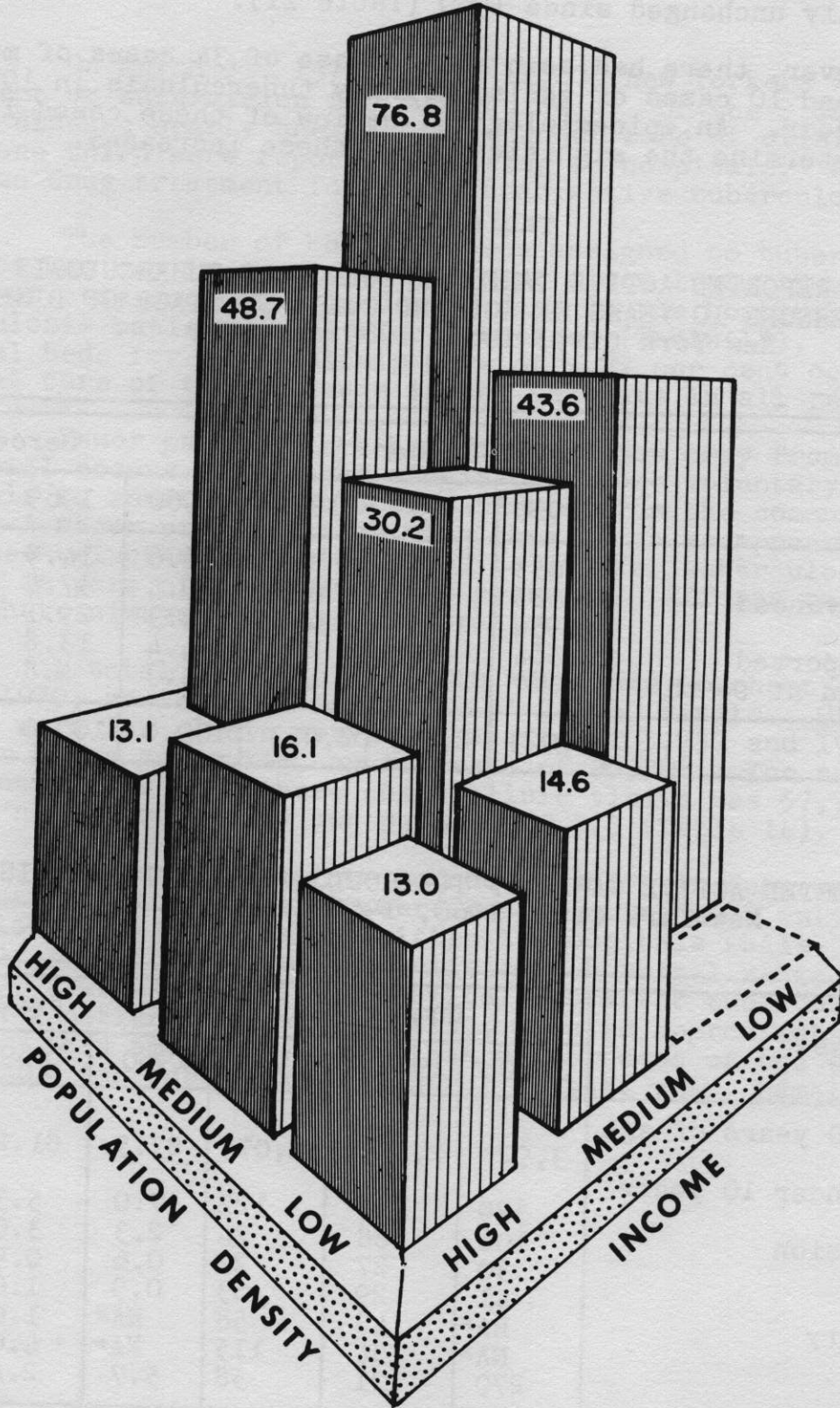
Number of Health Districts	Group	Population**	Newly Reported Active Tuberculosis Cases	Rate per 100,000 Population
6	Low Income - High Density	1,326,255	1,019	76.8
4	Low Income - Medium Density	847,879	370	43.6
0	Low Income - Low Density	-	-	-
3	Medium Income - High Density	726,509	354	48.7
4	Medium Income - Medium Density	983,654	297	30.2
3	Medium Income - Low Density	744,814	109	14.6
1	High Income - High Density	229,096	30	13.1
2	High Income - Medium Density	527,989	85	16.1
7	High Income - Low Density	2,509,367	326	13.0
30	New York City - Total	7,895,563	2,590	32.8

* Based on 1960 Census of Population

** Based on 1970 Census of Population

Figure 6

NEWLY REPORTED ACTIVE TUBERCULOSIS CASE RATES
PER 100,000 POPULATION, IN HEALTH DISTRICTS
GROUPED BY INCOME AND POPULATION DENSITY
New York City, 1970



STAGE AND TYPE OF TUBERCULOSIS

The distribution of new active cases of pulmonary tuberculosis by extent of disease is essentially the same in 1970 as it was in 1960 (Table 10): In fact the distribution has changed very little since 1940.

The distribution of new active cases by type of disease is also essentially unchanged since 1960 (Table 11).

However, there had been an increase of 34 cases of military tuberculosis and 10 cases of genito-urinary tuberculosis in 1970 over the previous year. An epidemiological review of these cases is in progress to determine the significance of these increases.

Table 10

NEWLY REPORTED ACTIVE CASES OF PULMONARY TUBERCULOSIS
AMONG PERSONS 10 YEARS OF AGE AND OVER, BY STAGE OF DISEASE
New York City, 1960, 1969 and 1970

Stage	Number			Percent		
	1960	1969	1970	1960	1969	1970
Minimal	653	357	313	16.6	14.9	15.1
Moderately Advanced	1,585	896	803	40.4	37.4	38.8
Far Advanced	954	698	604	24.3	29.1	29.1
Extent Not Reported	564	330	230	14.4	13.8	11.1
First Reported at Death	167	116	123	4.3	4.8	5.9
Total	3,923	2,397	2,073	100.0	100.0	100.0

Table 11

NEWLY REPORTED ACTIVE CASES OF TUBERCULOSIS BY TYPE OF DISEASE
New York City, 1960, 1969 and 1970

Type of Disease	Number			Percent		
	1960	1969	1970	1960	1969	1970
Pulmonary, 10 years of age and over	3,923	2,397	2,073	83.5	81.2	80.0
Pulmonary, under 10 years of age	329	157	122	7.0	5.3	4.7
Pleural Effusion	106	88	74	2.3	3.0	2.9
Meningeal	30	27	27	0.6	0.9	1.0
Miliary	41	29	63	0.9	1.0	2.5
Genito-Urinary	NA*	48	58	NA*	1.6	2.2
Lymph Nodes	NA*	134	115	NA*	4.6	4.5
Other	270	71	58	5.7	2.4	2.2
Total	4,699	2,951	2,590	100.0	100.0	100.0

* NA - not available

WHAT IS THE CITY'S TUBERCULOSIS WORK LOAD?

On March 31, 1971 nearly 11,000 New Yorkers were under treatment or supervision for tuberculosis. Of the 3,045 who had active disease nearly one half were under care of clinics while about one third were reported as being in hospitals. Nearly 7,000 required drug treatment for other than active tuberculosis (Table 12).

The number of hospital beds assigned to tuberculosis patients has declined over 60 per cent since 1960. The average length of stay and total number of days in the hospital for tuberculosis patients have also decreased (Table 13). Although hospital beds for tuberculosis have only 77 per cent occupancy, hospital care of tuberculosis is not adequate in all respects.

Fewer patients are hospitalized now away from home but this still occurs. The need remains for more voluntary general hospitals to admit tuberculosis patients from the communities they serve. A major problem in getting them to do so appears to be the continued reluctance of Blue Cross to pay for tuberculosis hospitalization as part of their standard contract. Efforts to change this stance have always met with frustration.

A total of 396,576 visits were made to chest clinics during 1970, an increase over 1969 of 22,659 visits. Of these 204,263 were for clinic services, a drop of 3,737 and 192,313 were for X-ray screening, an increase of 26,396. The number of individuals served by these chest clinic visits was 57,708 with an average number of visits per patient of 3.5 (Table 14).

Statistics continue to show a shift in tuberculosis care from inpatient to outpatient services. During 1970 only 3,091 tuberculosis patients were admitted to hospitals while 57,708 were cared for in clinics showing a clinic-to-hospital ratio of nearly 19 to 1. (Tables 13 and 14) Hospital costs for tuberculosis patients, based on a patient-day cost of \$130, totaled approximately \$35,000,000 in 1970. This amounts to more than 85 per cent of the entire expenditure for tuberculosis control in that year, namely \$40,000,000.

Table 12

CENSUS OF CASES OF TUBERCULOSIS ON HEALTH DISTRICT ROSTERS
AS OF MARCH 31, 1971 BY TYPE OF CURRENT CARE

Health District	TOTAL		ACTIVE		
		Total Active	Hospital or institution	Clinic supervision	Private Physician
NEW YORK CITY	10,563	3,045	1,002*	1,447	120
Manhattan	4,133	1,174	448	432	25
Central Harlem	968	364	112	145	0
East Harlem	269	77	31	39	2
Kips Bay-Yorkville	77	22	5	6	10
Lower East Side (Res.)	443	129	55	53	5
Lower East Side (Homeless Men)	1,316	166	92	29	0
Lower West Side	464	168	87	45	3
Riverside	442	198	45	90	4
Washington Heights	154	50	21	25	1
Bronx	2,333	649	147	404	19
Fordham-Riverdale	199	52	3	35	4
Morrisania	495	140	37	94	0
Mott Haven	501	176	48	120	3
Pelham Bay	195	34	7	19	3
Tremont	619	194	34	113	5
Westchester	324	53	18	23	4
Brooklyn	3,280	921	291	478	33
Bay Ridge	125	15	2	7	2
Bedford	799	206	69	110	1
Brownsville	492	175	61	91	5
Bushwick	358	100	21	61	3
Flatbush	262	58	10	28	13
Fort Greene	359	136	52	63	1
Gravesend	194	44	4	35	3
Red Hook-Gowanus	257	85	42	24	1
Sunset Park	209	41	9	24	1
Wmsbrg.-Greenpoint	225	61	21	35	3
Queens	668	267	75	129	35
Astoria-L.I. City	192	52	10	30	4
Corona	89	61	30	19	11
Flushing	50	34	18	12	3
Jamaica East	78	37	11	22	3
Jamaica West	147	54	14	31	7
Maspeth-Forest Hills	112	29	7	15	7
Richmond	149	34	20	4	8

* Includes approximately 250 people probably under clinic supervision; discrepancy is due to lag in reporting hospital discharges.

INACTIVE PULMONARY,
TREATMENT REQUIRED

Care pending	Lost to Supervision	Total quiescent	Childhood	Cavitary	Non-cavitary
273	203	564	101	640	6,213
149	120	197	19	173	2,570
82	25	102	6	83	413
5	0	20	7	5	160
1	0	3	2	0	50
0	16	3	0	20	291
28	17	8	0	4	1,138
5	28	14	0	37	245
27	32	34	4	22	184
1	2	13	0	2	89
51	28	83	14	141	1,446
9	1	3	0	6	138
9	0	27	2	52	274
4	1	24	6	17	278
5	0	4	0	10	147
18	24	14	5	31	375
6	2	11	1	25	234
68	51	245	60	276	1,778
1	3	9	1	30	70
17	9	64	17	62	450
13	5	27	17	21	252
9	6	39	11	37	171
1	6	18	1	17	168
20	0	21	2	23	177
1	1	10	1	12	127
2	16	22	5	18	127
2	5	21	4	45	98
2	0	14	1	11	138
3	4	32	5	47	317
2	0	16	2	13	109
0	1	0	0	0	28
0	1	0	0	1	15
0	1	4	2	1	34
1	1	9	1	16	67
0	0	3	0	16	64
2	0	7	3	3	102

Table 13
MUNICIPAL TUBERCULOSIS CARE HOSPITAL UNITS
New York City, 1960, 1969 and 1970

	1960	1969	1970
Number of Hospitals with Tuberculosis Beds	8	9	9
Tuberculosis Bed Complement as of End of Year	2,422	1,045	975
Percent Occupancy	90%	77%	77%
Average Length of Stay (Days) for Tuberculosis Patients	117	75	87
Number of Patient Days for Tuberculosis Patients	799,695	306,187	271,313
Average Daily Tuberculosis Patient Census for the Year	2,184	800	747
Number of Tuberculosis Patient Admissions	6,760	3,487	3,091

Table 14

SERVICE STATISTICS FOR CHEST CLINICS
UNDER SUPERVISION OF THE DEPARTMENT OF HEALTH
New York City, 1970

VISITS TO CHEST CLINICS

For Regular service	204,263	
For X-ray only	<u>192,313</u>	<u>396,576</u>

NUMBER OF INDIVIDUALS GIVEN REGULAR SERVICE DURING THE YEAR		<u>57,708</u>
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CASES UNDER SUPERVISION AT END OF YEAR:

Pulmonary Tuberculosis in Adults:

Active	1,427	
Quiescent	656	
Activity Undetermined	236	

Inactive:

Treatment recommended	5,371	
Treatment not recommended	<u>10,921</u>	
Total		18,611

Childhood Pulmonary Tuberculosis (active and inactive)		1,163
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Nonpulmonary Tuberculosis (active and inactive)		2,444
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Nontuberculous Thoracic Conditions		3,591
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Diagnosis Pending		1,041
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Contacts and Associates		10,169
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Persons other than Contacts and Associates with Recent Tuberculous Infections		<u>3,687</u>
		<u>40,706</u>

WHAT ARE THE RESULTS OF THE TREATMENT OF NEW CASES?

A sample of new cases of tuberculosis reported in 1967 was followed and their status in 1970 is shown in Table 15.

After three years, 76 per cent of the patients were living and the status of their disease was known. This percentage shows a decline of 4.2 per cent from the previous year, when 80.2 per cent of the patients were known to be living. The decline in the percentage of living patients is probably due to an increased percentage of patients who died from causes other than tuberculosis, from 1.6 per cent in 1969 to 5.8 per cent in 1970.

Table 15

STATUS IN 1970* OF NEW LIVING ACTIVE CASES OF
PULMONARY TUBERCULOSIS REPORTED IN 1967, BY INITIAL DIAGNOSIS,
NUMBERS AND PERCENTAGES, NEW YORK CITY

Status as of October 31, 1970

Initial Diagnosis	Total Cases		Living					
			All Living		With Active Tuberculosis		With Non-active Tuberculosis**	
	No.	Perc.	No.	Perc.	No.	Perc.	No.	Perc.
NEW LIVING ACTIVE	555	100.0	422	76.0	49	8.8	373	67.2
Minimal	96	100.0	77	80.2	13	13.5	64	66.7
Moderate	202	100.0	158	78.2	14	6.9	144	71.3
Far Advanced	135	100.0	92	68.2	9	6.7	83	61.5
Stage not Reported	122	100.0	95	77.9	13	10.7	82	67.2

*Based on an approximate 20 per cent sample, stratified by health district, of all new active cases of adult pulmonary tuberculosis reported during the calendar year 1967, exclusive of those first reported at death.

**Includes 14 quiescent cases.

Fourteen per cent had died in 1970, about 4 per cent from tuberculosis. Nearly 10 per cent of the total sample were lost to follow up.

Among the patients who were known to be living and under supervision in 1970, about 88 per cent had inactive tuberculosis and 12 per cent still had active disease.

Treatment was verified as successful in 72 per cent of the sample. It is probable that treatment was also successful in some of the patients lost to supervision (Table 15).

Died during period 1967 to 1970

All Deaths		With Active TB				With Inactive Tuberculosis		Status Unknown		Initial Diagnosis
		From Tuberculosis		From Other Causes		No.	Perc.	No.	Perc.	
No.	Perc.	No.	Perc.	No.	Perc.					No.
78	14.1	21	3.8	32	5.8	25	4.5	55	9.9	New Living Active
9	9.4	3	3.1	3	3.1	3	3.2	10	10.4	Minimal
23	11.4	4	2.0	10	4.9	9	4.5	21	10.4	Moderate
30	22.2	10	7.4	12	8.9	8	5.9	13	9.6	Far Advanced
16	13.1	4	3.3	7	5.7	5	4.1	11	9.0	Stage not Reported

DO ALL FORMER PATIENTS STAY WELL?

Not all persons stay well after treatment for tuberculosis, as evidenced by 476 former patients who were reported in 1970 as having reactivated disease. Although some of these patients had received their care before anti-tuberculosis drugs were discovered, others had received drugs, but reactivated their disease probably as the result of not having taken drugs faithfully.

Reactivated cases constituted a group about one-sixth as large as the total number of new active cases reported during 1970. This ratio varies among the health districts, ranging from 28.3 per cent in the Lower East Side to 3.0 per cent in Pelham Bay (Table 16).

The number of reactivated cases reported in 1970 represents an impressive decline of 27 per cent from the 652 reactivations reported in 1969.

Table 16

REACTIVATED TUBERCULOSIS CASES AND NEWLY REPORTED ACTIVE CASES
BY HEALTH DISTRICT - NEW YORK CITY, 1970

Health District	Total	Newly Reported Active Cases	Reactivated Cases Identified
NEW YORK CITY	3,066	2,590	476
Manhattan	1,188	957	231
Central Harlem	300	247	53
East Harlem	94	78	16
Kips Bay-Yorkville	34	30	4
Lower East Side	314	225	89
Lower West Side	177	141	36
Riverside	152	128	24
Washington Heights	117	108	9
Bronx	567	510	57
Fordham-Riverdale	36	33	3
Morrisania	169	153	16
Mott Haven	149	129	20
Pelham Bay	33	32	1
Tremont	130	118	12
Westchester	50	45	5
Brooklyn	934	796	138
Bay Ridge	28	23	5
Bedford	253	207	46
Brownsville	149	140	9
Bushwick	87	78	9
Flatbush	67	60	7
Fort Greene	129	109	20
Gravesend	48	40	8
Red Hook-Gowanus	63	55	8
Sunset Park	50	38	12
Williamsburg-Greenpoint	60	46	14
Queens	332	287	45
Astoria-L.I. City	40	32	8
Corona	71	62	9
Flushing	37	35	2
Jamaica East	98	82	16
Jamaica West	54	50	4
Maspeth-Forest Hills	32	26	6
Richmond	45	40	5

Table 17

PATIENTS WITH REACTIVATED TUBERCULOSIS BY AGE, SEX AND ETHNIC GROUP
New York City, 1970

Sex and Ethnic Group	Total	Age Group			
		0-14	15-34	35-44	45-54
Total	476	0	59	105	135
Male	354	0	31	73	100
White	157	0	6	18	39
Nonwhite	157	0	20	44	51
Puerto Rican	23	0	4	8	5
Not Reported	17	0	1	3	5
Female	122	0	28	32	35
White	25	0	3	5	6
Nonwhite	67	0	19	18	22
Puerto Rican	25	0	4	9	7
Not Reported	5	0	2	0	0

55-64	65-74	75 and over	Not Reported	Sex and Ethnic Group
101	47	23	6	Total
86	42	16	6	Male
51	28	12	3	White
27	9	4	2	Nonwhite
4	2	0	0	Puerto Rican
4	3	0	1	Not Reported
15	5	7	0	Female
7	3	1	0	White
4	1	3	0	Nonwhite
2	0	3	0	Puerto Rican
2	1	0	0	Not Reported

WHO DIED OF TUBERCULOSIS?

Tuberculosis killed 386 New Yorkers in 1970.

Despite the successes which have been achieved through the use of anti-tuberculosis drugs, deaths from tuberculosis occurred in every health district of the city in 1970. These deaths range from a high of 41 persons in Central Harlem to a low of 2 persons in the Pelham Bay district of the Bronx (Table 18).

Most of the persons who died of tuberculosis lived in areas of high tuberculosis prevalence, high population density and low income. While some persons who died of tuberculosis had not sought medical attention, others died with drug resistant organisms or as the result of heavy lung damage which had occurred prior to the diagnosis of their disease.

DEATHS FROM TUBERCULOSIS BY HEALTH DISTRICT
New York City, 1960, 1969 and 1970

Health District	Number of Deaths			Rates per 100,000 pop.		
	1960	1969	1970	1960	1969*	1970*
NEW YORK CITY	795	418	386	10.2	5.3	4.9
Manhattan	388	128	118	22.8	8.3	7.7
Central Harlem	97	44	41	41.7	24.1	22.4
East Harlem	30	8	10	16.9	5.1	6.4
Kips Bay-Yorkville	19	5	11	8.8	2.2	4.8
Lower East Side	85	18	14	31.3	7.2	5.6
Lower West Side	95	19	19	36.2	7.5	7.5
Riverside	39	14	14	14.5	6.4	6.4
Washington Heights	23	20	9	8.5	8.1	3.6
Bronx	98	52	67	6.9	3.5	4.6
Fordham-Riverdale	11	7	9	4.7	2.9	3.7
Morrisania	26	22	22	9.9	8.4	8.4
Mott Haven	29	8	11	13.0	3.8	5.2
Pelham Bay	7	5	2	3.8	2.4	1.0
Tremont	19	8	16	7.2	3.1	6.2
Westchester	6	2	7	2.3	0.7	2.4
Brooklyn	209	142	126	8.0	5.4	4.8
Bay Ridge	8	7	8	2.8	2.6	2.9
Bedford	48	32	32	16.7	11.6	11.6
Brownsville	11	15	12	3.7	4.7	3.8
Bushwick	20	12	5	9.2	5.2	2.2
Flatbush	19	14	11	4.0	2.9	2.2
Fort Greene	33	27	19	15.3	13.6	9.5
Gravesend	10	6	11	3.4	1.9	3.4
Red Hook-Gowanus	17	10	11	10.5	7.1	7.8
Sunset Park	15	6	5	7.8	3.2	2.7
Williamsburg-Greenpoint	28	13	12	14.5	7.4	6.8
Queens	92	62	49	5.1	3.1	2.5
Astoria-Long Island City	14	9	6	5.5	3.6	2.4
Corona	8	11	7	3.7	4.3	2.7
Flushing	16	7	11	3.5	1.4	2.3
Jamaica East	24	14	15	8.2	4.1	4.4
Jamaica West	15	10	3	4.9	2.8	0.8
Maspeth-Forest Hills	15	11	7	5.3	3.7	2.4
Richmond	8	3	6	3.6	1.0	2.0
NON-RESIDENTS	NA**	12	7	-	-	-
RESIDENTS OF INSTITUTION	NA	7	4	-	-	-
RESIDENCE UNKNOWN	NA	12	9	-	-	-

*Based on 1970 Census.

**Not available.

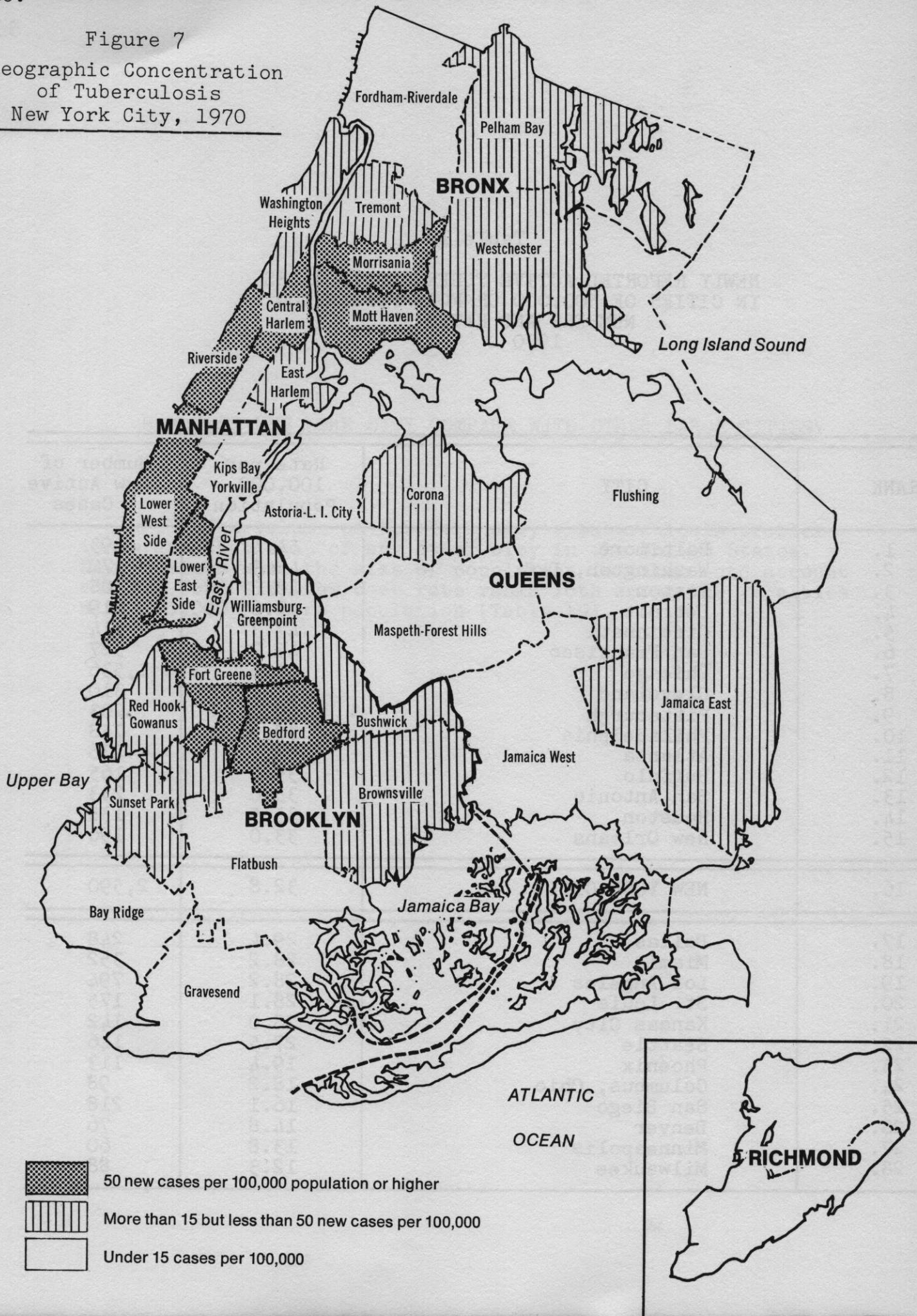
HOW DOES NEW YORK CITY COMPARE WITH OTHER LARGE CITIES?

The volume of New York City's tuberculosis problem is larger than that of any other city in the United States. Nevertheless when the size of population is taken into account the New York City new case rate ranks 16th among the 28 cities with 500,000 or more population (Table 19).

Table 19
 NEWLY REPORTED ACTIVE TUBERCULOSIS CASES
 IN CITIES OF 500,000 OR MORE POPULATION
 NUMBERS AND RATES
 1970

RANK	CITY	Rate per 100,000 Population	Number of New Active Cases
1.	Baltimore	54.4	493
2.	Washington, D.C.	48.9	370
3.	Boston	48.0	308
4.	Detroit	47.6	719
5.	Cincinnati	47.3	214
6.	San Francisco	45.7	327
7.	Chicago	45.6	1,536
8.	Cleveland	41.3	310
9.	Pittsburgh	39.0	203
10.	Philadelphia	38.9	758
11.	Atlanta	38.3	236
12.	Buffalo	35.7	165
13.	San Antonio	35.6	233
14.	Houston	35.5	138
15.	New Orleans	33.0	196
16.	NEW YORK CITY	32.8	2,590
17.	Dallas	29.4	248
18.	Miami	28.2	352
19.	Los Angeles	28.2	794
20.	St. Louis	28.1	175
21.	Kansas City	28.0	142
22.	Seattle	27.5	146
23.	Phoenix	19.4	113
24.	Columbus, Ohio	18.2	98
25.	San Diego	16.1	218
26.	Denver	14.8	76
27.	Minneapolis	13.8	60
28.	Milwaukee	12.3	68

Figure 7
 Geographic Concentration
 of Tuberculosis
 New York City, 1970



RETURN TO
MARIE DORSHVILLE



CHRISTMAS SEALS FIGHT
Tuberculosis...Emphysema...Air Pollution
IT'S A MATTER OF LIFE AND BREATH

TUBERCULOSIS & RESPIRATORY DISEASE ASSOCIATION of NEW YORK
(Headquarters of the Emphysema Control Campaign)

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New York, N.Y. 10010**