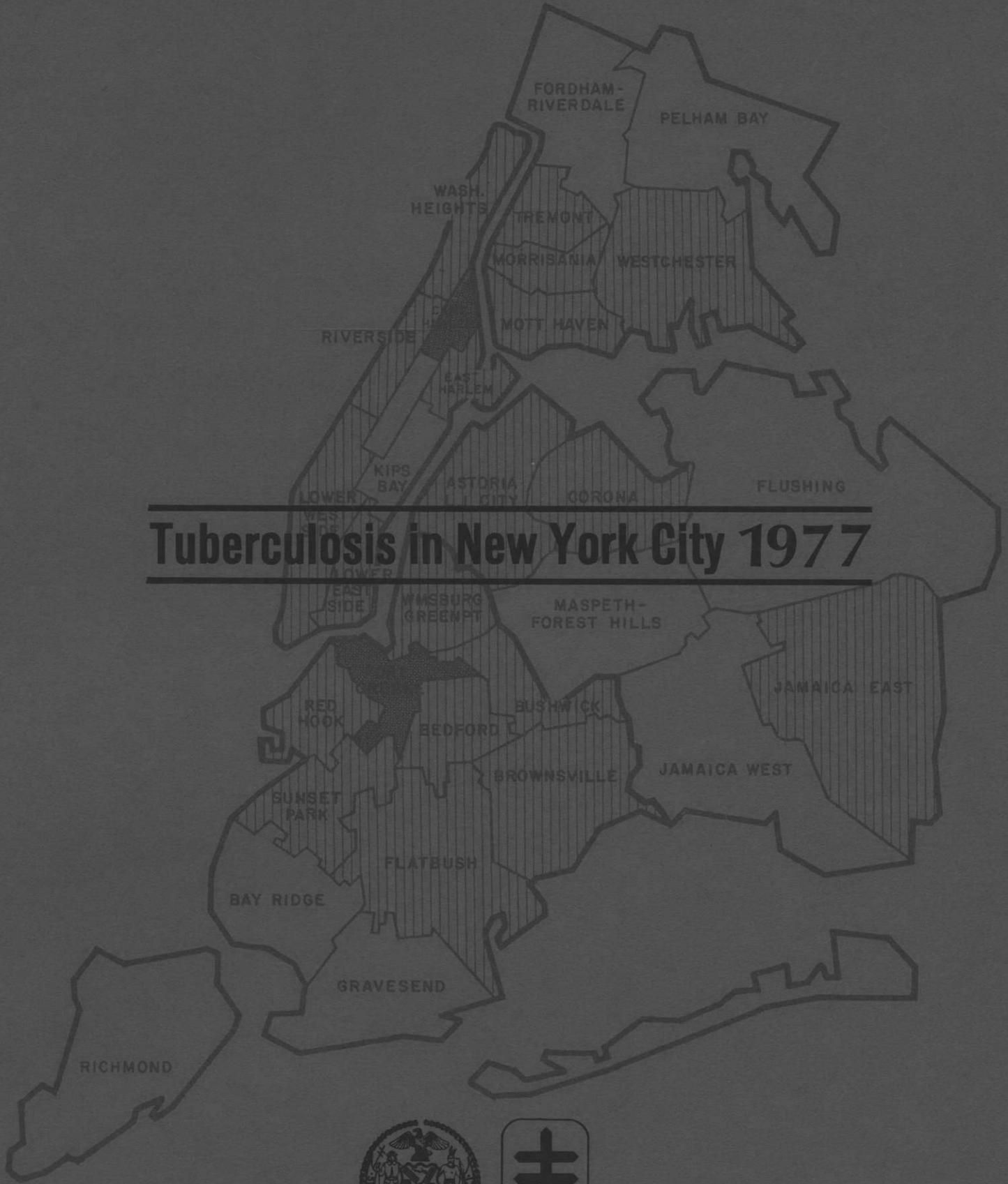


# A Report to the Mayor and the Citizens of the City of New York



## Tuberculosis in New York City 1977



Acknowledgments are extended to:

Bureau of Health Statistics and Analysis

Mr. V. Di Fava, Senior Statistician for statistical compilation. Mr. Jon Jensen, illustrative work, the late Mr. J. Kirschenbaum, Principal Statistician whose continuous assistance and advice the Division of Tuberculosis will greatly miss.

Division of Tuberculosis Control

Special reference made to Mr. Dan Ruggiero, for the many hours he spent compiling the contents and organizing the material with staff members of the Division of Tuberculosis.

New York Lung Association

The New York Lung Association which made the printing of this report possible.

Notes:

1. Tuberculosis case rates and death rates for the years 1960 and 1970 are based on actual census figures. The rates for the other years are based on population estimates for those years.

2. Department of Health 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 percent of this group is black.

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

\*Classification of Tuberculosis

- 0. No tuberculosis exposure, not infected.
  - I. Tuberculosis exposure, no evidence of infection.
  - II. Tuberculosis: infected, without disease.
  - III. Tuberculosis: infected, with disease.
- Tuberculosis Suspect: may be used until diagnostic procedures are complete but not for more than three months.

\*Summarized from DIAGNOSTIC STANDARDS AND CLASSIFICATION OF TUBERCULOSIS AND OTHER MYCOBACTERIAL DISEASES, AMERICAN LUNG ASSOCIATION, NEW YORK 1974.



## DEPARTMENT OF HEALTH

125 WORTH ST., NEW YORK, N. Y. 10013

Telephone:

December 1978

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

We are pleased to present this annual review of tuberculosis in New York City for the year 1977.

Estimates suggest that one million New York City residents are currently infected with tuberculosis. As the racial and ethnic balance of the City continues to change this figure will no doubt get larger. The influx of people from areas of the world that still have a very high incidence will contribute heavily to the problem.

Although there has been a decline in cases over the past years, 1,605 newly diagnosed cases were reported in 1977. It is anticipated that a similar number will be reported for 1978.

It is important to note that tuberculosis is nearly always a durable disease. Of the top 20 causes of death in the United States, it is the only one that is almost completely understood. We know its pathogenesis, we know how it is transmitted, and we know how to prevent the infected individual from breaking down with disease. No new discoveries are needed to prevent most of New York's cases of tuberculosis.

It is also worthy to remember that the prevention and cure of tuberculosis in New York City continues to be a major task, requiring the expenditure of millions of dollars of taxpayer's money each year.

It is hoped that by maintaining a sustained control effort we will make further inroads into this disease and that we will bring about its practical eradication.

Reinaldo A. Ferrer, M.D., M.P.H.

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## SUMMARY OF THE REPORT

From 1973 to 1976 the incidence of tuberculosis in New York City has remained relatively stable. During this time period some slight increases and declines were noted mostly in 1975 and 1976. These were mainly due to the New Diagnostic Standards which were revised in 1974 and were instituted in New York City in 1975-76. The nature of this change increased the morbidity. Cases that were previously not counted such as reactivation under the old standard were now counted as cases.

In 1977 there were 1,605 newly reported tuberculosis cases. This is a 25.6% decrease from the 2,156 cases reported in 1976. This decrease can be attributed to better scrutinization and verification of reported tuberculosis cases. The case rate decreased from 27.3 in 1976 to 21.1 per 100,000 population in 1977.

The 35 to 54 year groups has the highest case rate. This group comprises 65% of all the new patients over the age of 35 (excluding 84 cases where the ages are unknown).

The median age of new patients was highest among whites and lowest among Puerto Ricans. Class III tuberculosis decreased in all ethnic groups

As in previous years certain health districts account for a major portion of the number of reported cases. Out of 30 Health Districts in New York City, 9 had more than 60 cases each. These 9 Districts accounted for over 50% of all newly reported tuberculosis cases. This concentration of tuberculosis is no doubt a result of high population density, low income and other socio-economic factors that exist. This becomes apparent when we note that in 1977 Central Harlem had a case rate of 64.2 per 100,000 and Maspeth-Forest Hills had 4.5 per 100,000 population.

Changes in the distribution of tuberculosis among the poor have been noted in various districts throughout the City. An increase in new cases was noted in the Mott Haven district of the Bronx, and the Fort Greene district in Brooklyn. Districts such as the Lower East and West Side of Manhattan, Bedford in Brooklyn and Jamaica East in Queens showed a marked decline in the number of tuberculosis cases reported. The remaining districts either showed insignificant changes or remained the same.

Health Department Chest Clinic records show that 74,666 individuals were served in 1977 with a total of 187,126 visits. These visits included 337 new patients with tuberculosis disease. The remaining balance is made up of contacts and reactors as well as individuals who come to the clinic for skin tests or x-rays upon referral by physicians or the Health agencies.

In-patient care was provided for 1,100 TB patients in 1977. Municipal hospitals admitted 464, while voluntary hospitals admitted 636.

Of the 28 American cities with a population of 250,000 or more, 27 surpassed New York in tuberculosis rates but in gross number New York City still has the largest number of tuberculosis in the United States.

### Trends in New TB Cases and Deaths

The numbers and rates of new cases of tuberculosis and tuberculosis deaths have declined gradually since 1950 (except for the years 1975 and 1976). The increase for the years 1975 and 1976 may be due to the introduction of new classification in 1975 (see introductory page). The year 1977 shows a drop to 1,605 cases.

Death rates have decreased at a more rapid rate than new case rates with the exception of 1977 (Table 1, Fig. 1) when the death rate was 2.3 per 100,000 population. This is an acceptable death rate comparatively speaking, but in view of the medical and epidemiological tools that are presently available for the diagnosis and treatment of tuberculosis this rate can be further reduced.

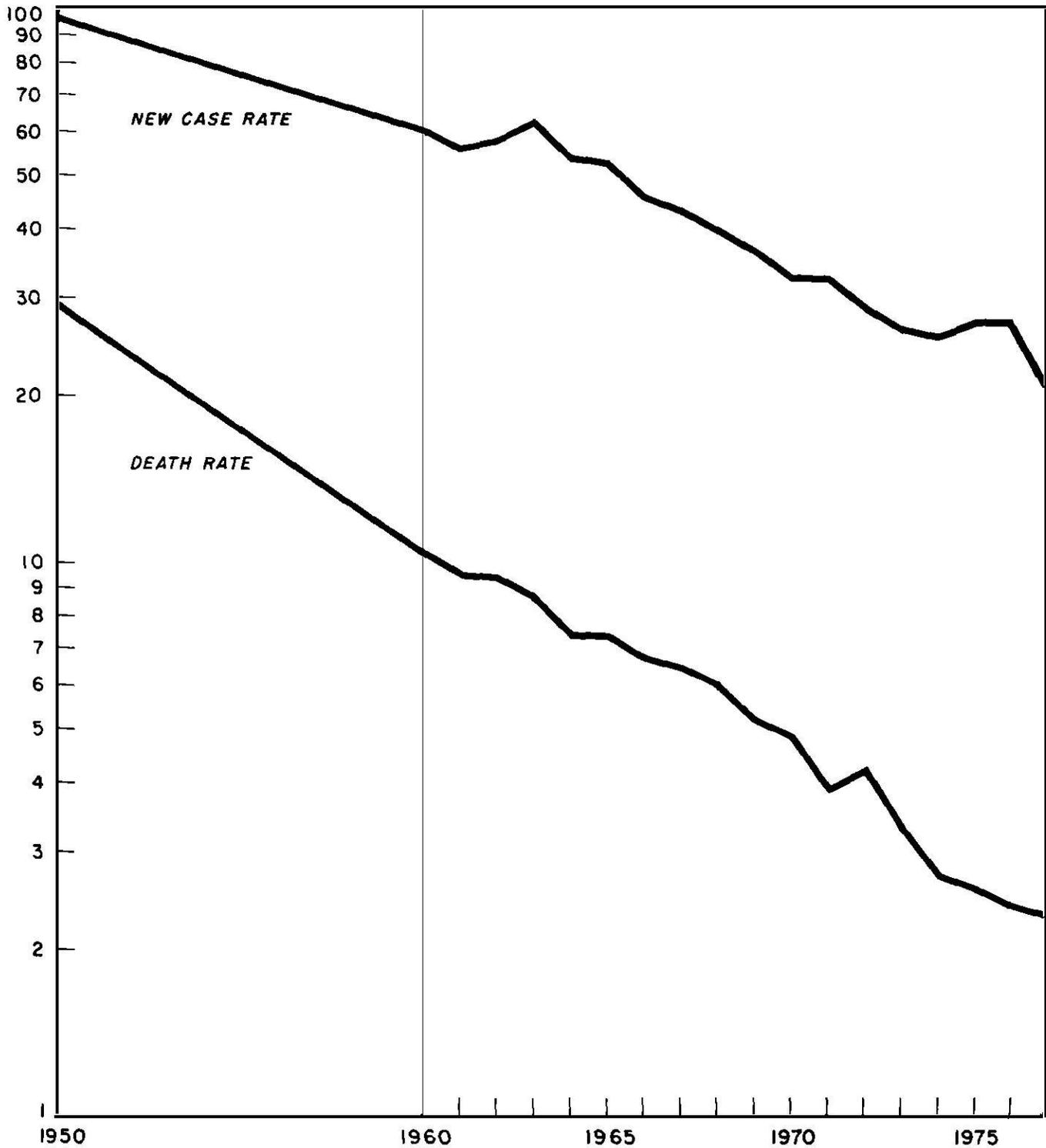
TABLE 1  
NEWLY REPORTED CASES OF ACTIVE TUBERCULOSIS AND DEATHS  
DUE TO TUBERCULOSIS, NUMBERS AND RATES  
NEW YORK CITY, 1950 AND 1960 THROUGH 1977

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
1971	2,572	310	7,896	32.6	3.9
1972	2,275	331	7,896	28.8	4.2
1973	2,101	262	7,896	26.6	3.3
1974	2,022	215	7,896	25.6	2.7
1975	2,151	208	7,896	27.2	2.6
1976	2,156	187	7,896	27.3	2.4
1977	1,605	175	7,615	21.1	2.3

FIGURE 1

**RATES of NEWLY REPORTED  
TUBERCULOSIS CASES and DEATHS  
NEW YORK CITY, 1950 - 1977**

RATE PER 100,000 POPULATION



### Tuberculosis Among Ethnic Groups

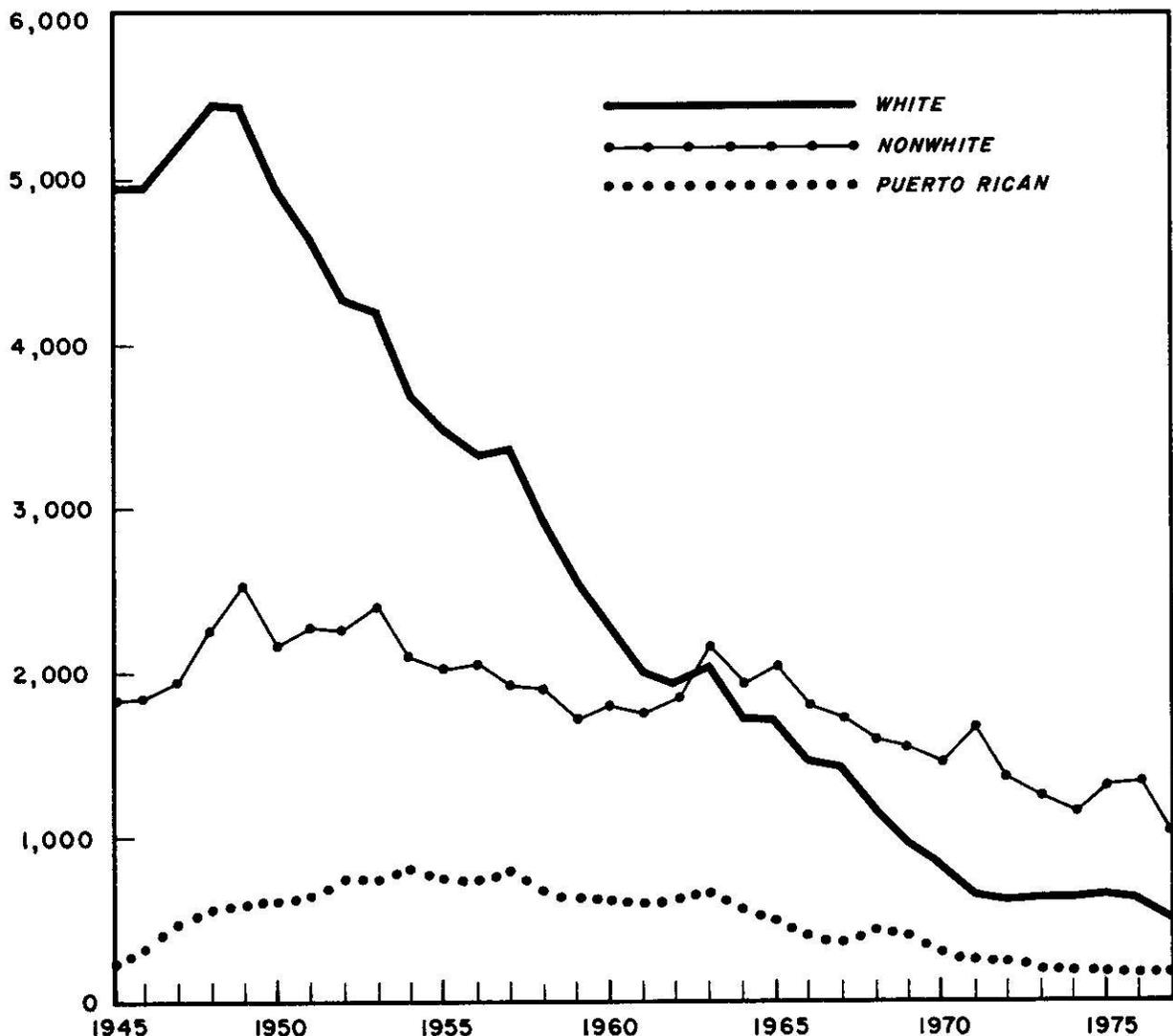
Tuberculosis is a non-discriminatory disease. It transcends geographical boundaries and is found among all races and ethnic groups throughout the world. The prevalence of tuberculosis among the various ethnic groups in New York City is no exception.

Data on ethnic distribution of tuberculosis and other epidemiological parameters that provide major indicators for defining population groups who are in greater need of medical service for the treatment of tuberculosis, is illustrated in Figure 2.

FIGURE 2

#### ANNUAL TOTALS OF NEWLY REPORTED TUBERCULOSIS CASES BY ETHNIC GROUP and YEAR NEW YORK CITY, 1945 - 1977

NUMBER OF NEW CASES

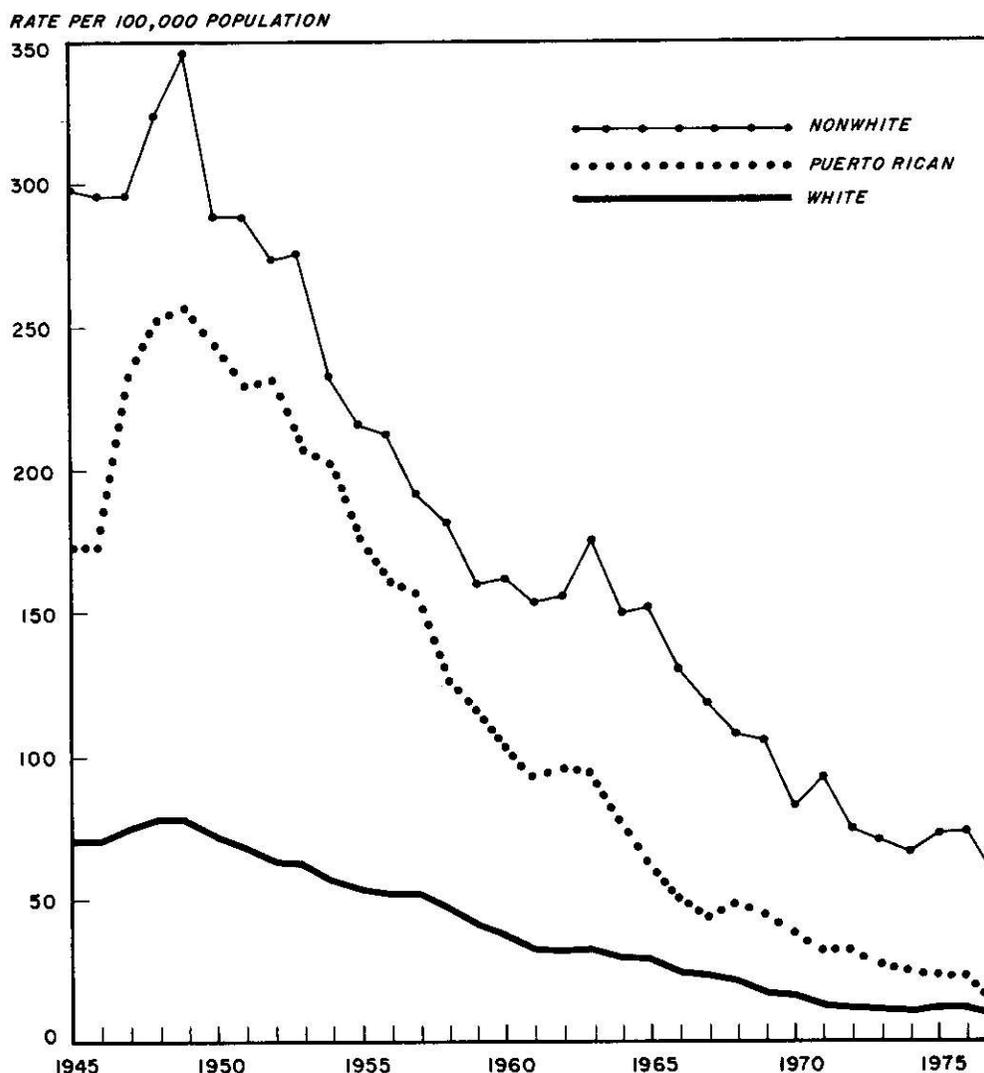


Marked changes have occurred in the ethnic composition of New York City. In 1945 whites represented 90% of the population and accounted for 70% of the new active tuberculosis cases reported, non-whites and Puerto Ricans represented 10% of the total population and accounted for 30% of the new active cases of tuberculosis. In 1977 whites made up 67% of the population and accounted for 31.1% of the new cases of tuberculosis. Non-whites and Puerto Ricans represented 33% of the population and accounted for 69% of the new cases.

However, the new tuberculosis case rates from 1945 to 1977 are a more important reflection of the incidence of tuberculosis within ethnic groups. Since 1953 the rates have declined for all ethnic groups. The decline in newly reported cases per 100,000 population has been the greatest among the non-whites and Puerto Ricans (Figure 3).

FIGURE 3

**NEWLY REPORTED TUBERCULOSIS CASE RATES  
BY ETHNIC GROUP and YEAR  
NEW YORK CITY, 1945 - 1977**



### The Distribution of Tuberculosis by Age and Sex

In recent years most patients with Class III tuberculosis have been men over the age of 35. The same holds true in 1977, 64% of the Class III tuberculosis cases was found among males over the age of 35. (See Table 2).

Non-white and Puerto Rican patients with Class III tuberculosis were generally younger than the whites. The median age for white males was 58, while for the non-white and Puerto Rican males the median age was 43, and 38 respectively. Among women the median age was 59 for whites, 41 for non-whites and 44 for Puerto Ricans. The numbers and rates of new active cases have declined since 1960 and 1977 for all age groups. (See Table 3).

In analyzing Table 3, one might initially interpret that tuberculosis is a disease of the older age groups and hence make the assumption that the disease in time will become extinct on its own. This conclusion would be erroneous. As long as there are cases of tuberculosis amongst the population each age group will be equally prone to infection and disease, hence continuous tuberculosis control is necessary.

A major indicator of the success of tuberculosis control is how low the incidence of disease and the prevalence of infection is amongst children. The former parameter for the age group under 15 is known and shown in Table 4, and Figure 5. The latter parameter is not known as no recent surveys have been carried out. Table 4, and Figure 5 show a gradual decline in Class III tuberculosis rates under the age of 15 as well as above the age of 15 and if vigilant control efforts are continued this number may decline further.

TABLE 2  
Newly Reported Cases\* Of Tuberculosis, All Forms, By Age, Sex, And Ethnic Group  
New York City, 1977

SEX AND ETHNIC GROUP	Total	AGE GROUPS											65 And Over	Not Reported
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-44	45-54	55-64	302		
GRAND TOTAL	1,605	16	17	18	50	106	118	137	274	282	201	302	84	
MALE TOTAL	996	12	7	5	25	56	69	94	172	178	134	193	51	
White	272	2	1	0	1	12	11	15	29	46	49	91	15	
Black	402	5	4	3	14	18	38	45	87	85	48	44	11	
Puerto Rican	48	2	1	0	0	2	3	7	13	8	6	5	1	
Oriental	52	0	0	0	3	7	1	6	6	2	8	16	3	
Other	57	2	0	1	2	5	10	9	9	9	4	4	2	
Not Reported	165	1	1	1	5	12	6	12	28	28	19	33	19	
FEMALE TOTAL	609	4	10	13	25	50	49	43	102	104	67	109	33	
White	136	0	0	1	3	13	2	5	19	16	19	52	6	
Black	258	3	4	7	15	23	24	22	48	62	25	21	4	
Puerto Rican	35	0	2	1	1	1	3	2	8	8	2	4	3	
Oriental	17	0	0	1	1	3	1	0	2	1	3	3	2	
Other	48	0	1	0	3	4	8	7	8	6	5	4	2	
Not Reported	115	1	3	3	2	6	11	7	17	11	13	25	16	

\* Verified Case - New Case Of TB As Demonstrated By Positive Bacteriology Or By Means Of Clinical, Radiological Or Tuberculin Test Evidence Or Clinical History

TABLE 3

NEWLY REPORTED CASES OF TUBERCULOSIS WITH DISEASE,  
NUMBERS AND RATES BY ETHNIC GROUP

New York City, 1945 - 1977

Year	NEW ACTIVE CASES				POPULATION	
	Total	White	Non-White	Puerto Rican	Total	White
1945	7,062	4,930	1,850	282	7,684	6,902
1946	7,123	4,930	1,880	313	7,728	6,901
1947	7,599	5,174	1,961	464	7,772	6,900
1948	8,306	5,482	2,276	548	7,815	6,897
1949	8,567	5,431	2,536	600	7,859	6,895
1950	7,717	4,915	2,192	610	7,903	6,894
1951	7,583	4,633	2,290	660	7,891	6,810
1952	7,282	4,253	2,279	750	7,879	6,726
1953	7,349	4,209	2,395	745	7,867	6,642
1954	6,582	3,672	2,105	805	7,854	6,558
1955	6,214	3,430	2,025	759	7,843	6,473
1956	6,137	3,305	2,077	755	7,831	6,390
1957	6,117	3,377	1,940	800	7,818	6,305
1958	5,482	2,901	1,901	680	7,806	6,221
1959	4,924	2,526	1,721	677	7,794	6,137
1960	4,699	2,263	1,803	633	7,782	6,053
1961	4,360	1,983	1,772	605	7,782	5,984
1962	4,437	1,936	1,859	642	7,780	5,913
1963	4,891	2,029	2,186	676	7,780	5,843
1964	4,207	1,705	1,924	578	7,840	5,817
1965	4,242	1,712	2,031	499	7,960	5,843
1966	3,663	1,448	1,810	405	8,040	5,829
1967	3,542	1,427	1,740	375	8,125	5,817
1968	3,224	1,178	1,610	436	8,110	5,734
1969	2,951	971	1,587	393	8,110	5,734
1970	2,590	828	1,460	302	7,896	5,279
1971	2,572	626	1,693	253	7,896	5,279
1972	2,275	600	1,350	265	7,896	5,279
1973	2,101	626	1,270	205	7,896	5,279
1974	2,022	640	1,179	203	7,896	5,279
1975	2,151	658	1,297	196	7,896	5,279
1976	2,156	643	1,316	197	7,896	5,279
1977	1,605	494	1,010	101	7,615	5,091

IN 1,000 'S)		RATES PER 100,000				Year
Non-White	Puerto Rican	Total	White	Non-White	Puerto Rican	
619	163	91.9	71.4	298.9	173.0	1945
646	181	92.2	71.4	291.0	172.0	1946
674	198	97.8	75.0	290.9	234.3	1947
702	216	106.3	79.5	324.2	253.7	1948
731	233	109.0	78.8	346.9	257.5	1949
759	250	97.6	71.3	288.8	244.0	1950
795	286	96.1	68.0	288.0	230.8	1951
830	323	92.4	63.2	274.6	232.2	1952
866	359	93.4	63.4	276.6	207.5	1953
901	395	83.8	56.0	233.6	203.8	1954
938	432	79.2	53.0	215.9	175.7	1955
973	468	78.4	51.7	213.5	161.3	1956
1,009	504	78.2	53.6	192.3	158.7	1957
1,045	540	70.2	46.6	181.9	125.9	1958
1,080	577	63.2	41.2	159.4	117.3	1959
1,116	613	60.4	37.4	161.6	103.3	1960
1,152	646	56.0	33.1	153.8	93.6	1961
1,198	669	57.0	32.7	155.2	96.0	1962
1,237	700	62.9	34.7	176.7	96.6	1963
1,286	737	53.7	29.3	149.6	78.4	1964
1,345	772	53.3	29.3	151.0	64.6	1965
1,399	812	45.6	24.8	129.4	49.9	1966
1,463	845	43.6	24.5	118.9	44.4	1967
1,500	876	39.7	20.5	107.3	49.8	1968
1,500	876	36.4	16.9	105.8	44.9	1969
1,807	810	32.8	15.7	80.8	37.3	1970
1,807	810	32.6	11.9	93.7	31.2	1971
1,807	810	28.8	12.5	74.7	32.7	1972
1,807	810	26.6	11.8	70.3	25.3	1973
1,807	810	25.6	12.1	65.2	25.1	1974
1,807	810	27.2	12.5	71.8	24.2	1975
1,807	810	27.3	12.2	72.8	24.3	1976
1,743	781	21.1	9.7	57.9	12.9	1977

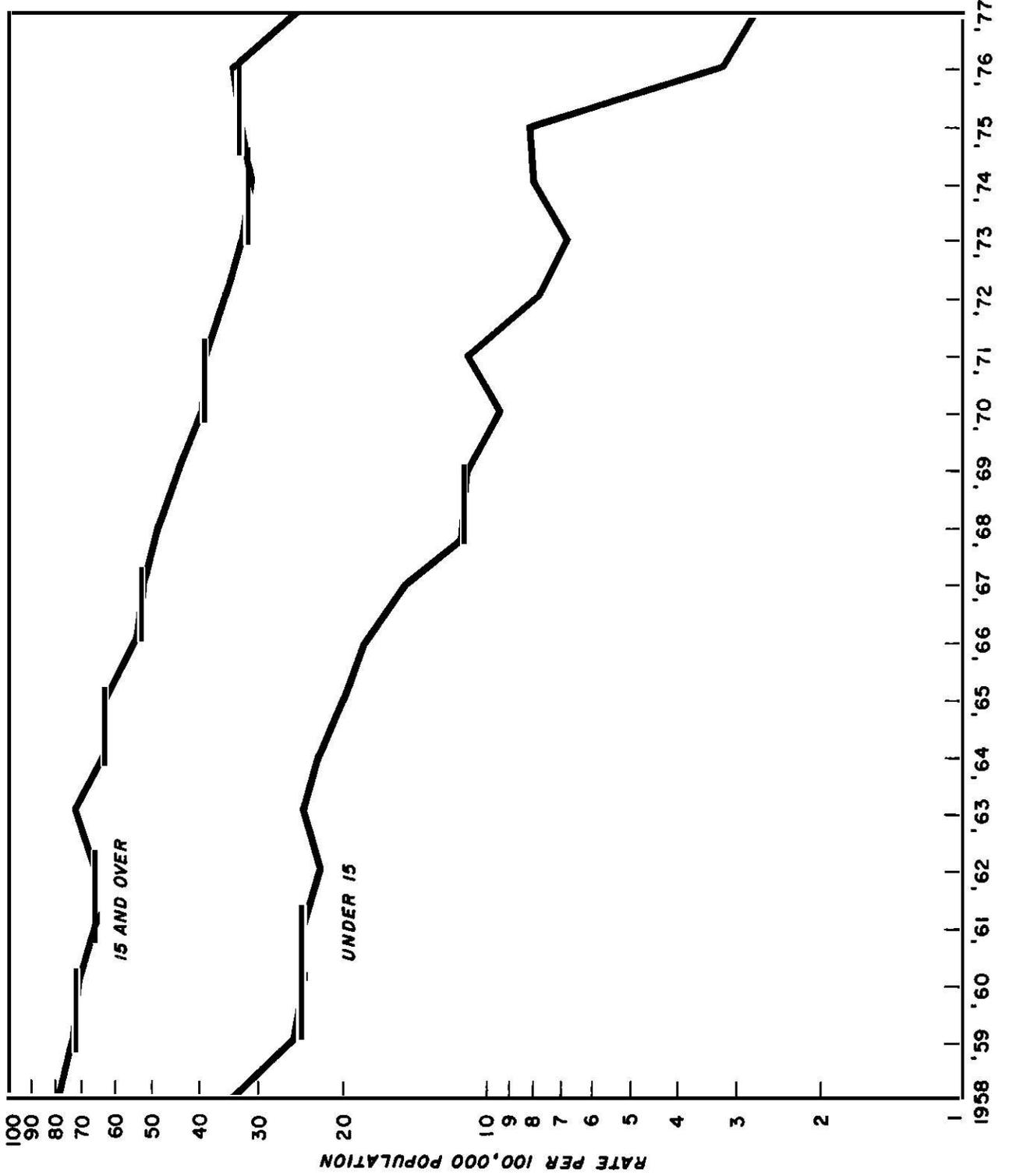
TABLE 4

NEWLY REPORTED TUBERCULOSIS CASES WITH DISEASE BY AGE:  
 UNDER 15 AND 15 AND OVER, NUMBERS AND RATES  
 New York City, 1958 - 1977

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	Not Report- ed	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	7,840	1,936	5,904	53.7	22.7	62.3
1965	4,242	389	3,773	80	7,960	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
1971	2,572	209	2,363	0	7,896	1,872	6,024	32.6	11.2	39.2
1972	2,275	147	2,128	0	7,896	1,872	6,024	28.8	7.8	35.3
1973	2,101	128	1,973	0	7,896	1,872	6,024	26.6	6.8	32.8
1974	2,022	151	1,871	0	7,897	1,872	6,024	25.6	8.1	31.0
1975	2,151	154	1,997	0	7,897	1,872	6,024	27.2	8.2	33.2
1976	2,156	60	2,091	5	7,897	1,872	6,024	27.3	3.2	34.7
1977	1,605	51	1,470	84	7,615	1,805	5,810	21.7	2.8	25.3

FIGURE 5

**NEWLY REPORTED TUBERCULOSIS CASE RATES by AGE  
UNDER 15 and 15 and OVER  
NEW YORK CITY, 1958 - 1977**



### Where Are the New Patients?

Knowledge of the relative tuberculosis rates in New York City's boroughs and health districts enables the City's Tuberculosis Control Program to concentrate its resources in the areas of the greatest need. For this reason Tables 5 and 6 are among the most valuable analyses provided by this report. (See Map, Fig. 8).

The Class III tuberculosis rate for New York City, 21.1 per 100,000 population is a weighted average of the rate for the City's 30 health districts. These districts range from Central Harlem's 64.2 per 100,000 to Maspeth-Forest Hills 4.5 per 100,000. The districts of Central Harlem, Fort Greene, Lower East Side, Bedford, Brownsville, Lower West Side and Mott Haven with a total of 651 Class III tuberculosis cases, account for 40.5% of the new case reports in the entire City in 1977.

Underscoring the above figures is the fact that the city-wide rate of 21.1 per 100,000 is nearly 2 times the national rate of 13.9 per 100,000. The Central Harlem district with a rate of 64.2 per 100,000 is 3 times the national rate and 8 times the New York State (excluding New York City) rate.

TABLE 5  
New Tuberculosis Case Rates  
By Health District Rank, 1977  
New York City, 1960, 1970 And 1977

HEALTH DISTRICT RANKED ACCORDING 1977 RATES	1977		1970		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		21.1		32.8		60.0
Central Harlem	1	64.2	1	135.1	1	249.6
Fort Greene	2	53.6	8	54.8	7	98.9
Lower East Side	3	43.9	2	90.2	2	206.7
Bedford	4	42.8	3	74.9	6	101.5
Lower West Side	5	36.0	7	55.6	3	123.7
Riverside	6	35.2	6	58.1	5	102.4
Mott Haven	7	33.3	4	60.7	4	104.6
East Harlem	8	32.3	9	49.7	8	94.5
Brownsville	9	30.5	11	43.9	14	54.6
Washington Heights	10	28.7	12	43.6	13	57.9
Bushwick	11	26.7	14	33.9	12	60.0
Williamsburg-Greenpoint	12	25.6	15	26.2	11	70.6
Red Hook-Gowanus	13	24.8	13	39.0	9	83.9
Morrisania	14	24.6	5	58.4	10	75.4
Tremont	15	23.8	10	45.6	15	43.3
Sunset Park	16	20.3	18	20.6	16	42.0
Corona	17	17.6	16	24.2	19	32.1
Jamaica East	18	17.2	17	23.8	17	41.2
Flatbush	19	15.8	27	12.3	29	17.9
Astoria-Long Island City	20	15.7	25	12.8	20	27.4
Westchester	21	15.2	19	15.6	25	20.5
Pelham Bay	22	11.9	20	15.5	22	23.3
Bay Ridge	23	10.6	29	8.4	26	20.0
Kips Bay-Yorkville	24	9.7	24	13.1	18	34.4
Gravesend	25	9.6	26	12.7	23	22.3
Jamaica West	26	9.4	21	13.9	21	24.2
Fordham-Riverdale	27	9.3	22	13.6	24	20.7
Richmond	28	7.0	23	13.5	27	19.4
Flushing	29	6.6	30	7.2	28	18.6
Maspeth-Forest Hills	30	4.5	28	8.8	30	16.3

NEWLY REPORTED TUBERCULOSIS CASES WITH DISEASE  
BY BOROUGH AND HEALTH DISTRICT OF RESIDENCE  
NUMBERS AND RATES

TABLE 6

New York City, 1960, 1970, 1977

HEALTH DISTRICT	NUMBER			RATE PER 100,000 POP.		
	1960	1970	1977	1960	1970	1977
NEW YORK CITY	4,699	2,590	1,605	60.0	32.8	21.1
MANHATTAN	2,141	957	503	126.1	62.2	34.6
Central Harlem	581	247	102	249.6	135.1	64.2
East Harlem	168	78	43	94.5	49.7	32.3
Kips Bay-Yorkville	74	30	22	34.4	13.1	9.7
Lower East Side	562	225	104	206.7	90.2	43.9
Lower West Side	325	141	89	123.7	55.6	36.0
Riverside	275	128	75	102.4	58.1	35.2
Washington Heights	156	108	68	57.9	43.6	28.7
BRONX	690	510	260	48.4	34.6	18.8
Fordham-Riverdale	48	33	23	20.7	13.6	9.3
Morrisania	198	153	52	75.4	58.4	24.6
Mott Haven	234	129	57	104.6	60.7	33.3
Pelham Bay	43	32	27	23.3	15.5	11.9
Tremont	114	118	57	43.3	45.6	23.8
Westchester	53	45	44	20.5	15.6	15.2
BROOKLYN	1,359	796	599	51.7	30.6	24.2
Bay Ridge	58	23	28	20.0	8.4	10.6
Bedford	291	207	110	101.5	74.9	42.8
Brownsville	163	140	92	54.6	43.9	30.5
Bushwick	130	78	55	60.0	33.9	26.7
Flatbush	85	60	76	17.9	12.3	15.8
Fort Greene	213	109	97	98.9	54.8	53.6
Gravesend	66	40	30	22.3	12.7	9.6
Red Hook-Gowanus	136	55	33	83.9	39.0	24.8
Sunset Park	81	38	36	42.0	20.6	20.3
Williamsburg-Greenpoint	136	46	42	70.6	26.2	25.6
QUEENS	466	287	220	25.8	14.4	11.2
Astoria-Long Island City	70	32	38	27.4	12.8	15.7
Corona	70	62	45	32.1	24.2	17.6
Flushing	84	35	32	18.6	7.2	6.6
Jamaica East	121	82	57	41.4	23.8	17.2
Jamaica West	75	50	36	24.3	13.9	9.4
Maspeth-Forest Hills	46	26	12	16.3	8.8	4.5
RICHMOND	43	40	23	19.4	13.5	7.0

Do All Former Patients Stay Well?

Not all patients stay well after treatment for tuberculosis as evidenced by 101 former patients who were reported in 1977 as having reactivated their disease. Reactivation is defined as occurring in a patient known to have had tuberculosis who:

1. Received interrupted therapy.
2. Received treatment for insufficient time.
3. Was lost to supervision outright for over a year.
4. Received an adequate amount of chemotherapy but broke down after one year from the date of discharge.

Table 7 shows that there were more males than females reactivated during 1977, and that more non-whites than whites reactivated, for this same period. The age group ranged from 15-74 years of age with the median age being .52.

Some of these patients probably had their disease arrested in the pre-chemotherapy era but most of them fall in age groups that had chemotherapy available to them and they probably did receive some drugs. The reactivation results from a failure to give or take adequate medication. Primary drug resistance is believed to occur only sporadically but no real data is available in this area. Secondary drug resistance is usually associated with poor compliance on the part of the patient.

TABLE 7

PATIENTS WITH REACTIVATED TUBERCULOSIS BY AGE, SEX AND ETHNIC GROUP  
New York City, 1977

SEX AND ETHNIC GROUP	Total	AGE GROUPS							Not Reported	SEX AND ETHNIC GROUP
		0-14	15-34	35-44	45-54	55-64	65-74	75 And Over		
Total	101	0	5	19	32	24	15	5	1	Total
Male	71	0	2	12	22	18	12	4	1	Male
White	23	0	0	2	6	5	7	3	0	White
Nonwhite	34	0	1	8	15	7	2	1	0	Nonwhite
Puerto Rican	3	0	1	0	0	2	0	0	0	Puerto Rican
Not Reported	11	0	0	2	1	4	3	0	1	Not Reported
Female	30	0	3	7	10	6	3	1	0	Female
White	6	0	0	0	2	2	1	1	0	White
Nonwhite	18	0	2	6	5	3	2	0	0	Nonwhite
Puerto Rican	1	0	0	0	0	1	0	0	0	Puerto Rican
Not Reported	5	0	1	1	3	0	0	0	0	Not Reported

In 1976 there were 192 newly reported cases that were previously known and probably previously treated. This constituted 9% of all newly reported cases for 1976. In 1977 there were only 101 reactivated cases which equals 6% of all newly reported cases for 1977. This decrease was experienced in all boroughs and is a positive note in the area of patient compliance (See Table 8).

### Who Dies Of Tuberculosis?

Tuberculosis deaths occurred in every health district in the City. The Central Harlem and Lower West Side districts had the largest number of deaths, 21 and 19 respectively. Seventeen (17) of the people who died of tuberculosis lived in areas of high tuberculosis prevalence, high population density and low income areas. Those who died of tuberculosis did not seek medical attention or sought attention but too late. Lower West Side's death rate shows an increase which is misleading. This rate is a result of working with small numbers. The actual increase in the number of deaths is 2 individuals (See Table 9).

TABLE 8

REACTIVATED TUBERCULOSIS CASES AND NEWLY REPORTED CASES WITH DISEASE  
BY HEALTH DISTRICT - NEW YORK CITY, 1977

HEALTH DISTRICT	Total	Newly Reported Cases With Disease	Reactivated Cases Identified
NEW YORK CITY	1,605	1,504	101
<b>MANHATTAN</b>	503	475	28
Central Harlem	102	96	6
East Harlem	43	40	3
Kips Bay-Yorkville	22	22	0
Lower East Side	104	95	9
Lower West Side	89	82	7
Riverside	75	72	3
Washington Heights	68	68	0
<b>BRONX</b>	260	238	22
Fordham-Riverdale	23	21	2
Morrisania	52	48	4
Mott Haven	57	51	6
Pelham Bay	27	24	3
Tremont	57	52	5
Westchester	44	42	2
<b>BROOKLYN</b>	599	562	37
Bay Ridge	28	28	0
Bedford	110	101	9
Brownsville	92	86	6
Bushwick	55	48	7
Flatbush	76	71	5
Fort Greene	97	91	6
Gravesend	30	27	3
Red Hook-Gowanus	33	33	0
Sunset Park	36	36	0
Williamsburg-Greenpoint	42	41	1
<b>QUEENS</b>	220	208	12
Astoria-Long Island City	38	35	3
Corona	45	43	2
Flushing	32	31	1
Jamaica East	57	52	5
Jamaica West	35	34	1
Maspeth-Forest Hills	13	13	0
<b>RICHMOND</b>	23	21	2

DEATHS FROM TUBERCULOSIS BY HEALTH DISTRICT  
TABLE 9 New York City, 1960, 1970 and 1977

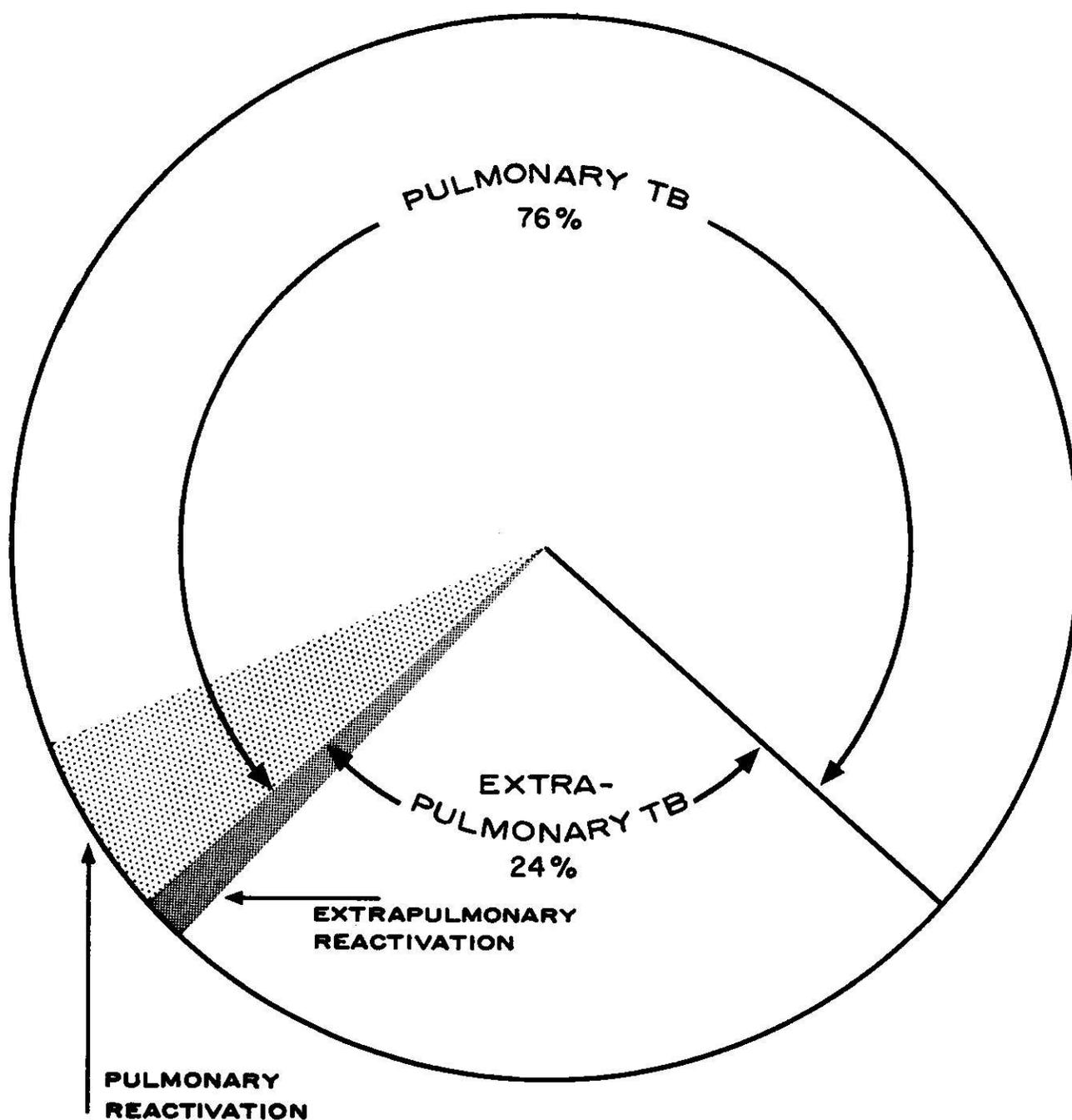
Health District	Number of Deaths			Rates per 100,000 pop.		
	1960	1970	1977	1960	1970	1977
<b>NEW YORK CITY</b>	<b>795</b>	<b>386</b>	<b>176</b>	<b>10.2</b>	<b>4.9</b>	<b>2.3</b>
<b>Manhattan</b>	<b>388</b>	<b>118</b>	<b>72</b>	<b>22.8</b>	<b>7.7</b>	<b>5.0</b>
Central Harlem	97	41	21	41.7	22.4	13.2
East Harlem	30	10	4	16.9	6.4	3.0
Kips Bay-Yorkville	19	11	2	8.8	4.8	0.9
Lower East Side	85	14	9	31.3	5.6	3.8
Lower West Side	95	19	19	36.2	7.5	7.7
Riverside	39	14	8	14.5	6.4	3.8
Washington Heights	23	9	9	8.5	3.6	3.8
<b>Bronx</b>	<b>98</b>	<b>67</b>	<b>21</b>	<b>6.9</b>	<b>4.6</b>	<b>1.5</b>
Fordham-Riverdale	11	9	2	4.7	3.7	0.8
Morrisania	26	22	1	9.9	8.4	0.5
Mott Haven	29	11	5	13.0	5.2	2.9
Pelham Bay	7	2	3	3.8	1.0	1.3
Tremont	19	16	3	7.2	6.2	1.2
Westchester	6	7	7	2.3	2.4	2.4
<b>Brooklyn</b>	<b>209</b>	<b>126</b>	<b>48</b>	<b>8.0</b>	<b>4.8</b>	<b>1.9</b>
Bayridge	8	8	6	2.8	2.9	2.3
Bedford	48	32	4	16.7	11.6	1.6
Brownsville	11	12	8	3.7	3.8	2.6
Bushwick	20	5	5	9.2	2.2	2.4
Flatbush	19	11	6	4.0	2.2	1.2
Fort Greene	33	19	7	15.3	9.5	3.9
Gravesend	10	11	2	3.4	3.4	0.6
Red Hook-Gowanus	17	11	5	10.5	7.8	3.8
Sunset Park	15	5	1	7.8	2.7	0.6
Williamsburg-Greenpoint	28	12	4	14.5	6.8	2.4
<b>Queens</b>	<b>92</b>	<b>49</b>	<b>21</b>	<b>5.1</b>	<b>2.5</b>	<b>1.1</b>
Astoria-Long Island City	14	6	4	5.5	2.4	1.6
Corona	8	7	3	3.7	2.7	1.2
Flushing	16	11	5	3.5	2.3	1.0
Jamaica East	24	15	3	8.2	4.4	0.9
Jamaica West	15	3	5	4.9	0.8	1.3
Maspeth-Forest Hills	15	7	1	5.3	2.4	0.3
<b>Richmond</b>	<b>8</b>	<b>6</b>	<b>3</b>	<b>3.6</b>	<b>2.0</b>	<b>0.9</b>
NON-RESIDENTS	NA	7	3	-	-	NA
RESIDENTS OF INSTITUTIONS	NA	4	3	-	-	NA
RESIDENCE UNKNOWN	NA	9	5	-	-	NA

### Types Of Tuberculosis Disease Reported

Out of 1605 cases reported in 1977, 1212 or 76% of the cases were diagnosed as having pulmonary disease with 101 or 8.3% being reactivation. The remaining 393 or 24% of the cases were extrapulmonary disease with 12 or 3.0% of these cases being reactivation (See Table 10, Figure 6).

FIGURE 6

### ANNUAL DISTRIBUTION of TUBERCULOSIS 1977 PULMONARY, EXTRAPULMONARY and REACTIVATION



Source of Report

In 1977, 70% of all TB cases were reported by hospitals and other non-Health Department Clinics. This represents a 9.9% increase over 1976. Health Department Chest Clinics reported 21.4% of all TB cases. This signifies a 14.1% decrease from the previous year. Private physicians reported 7.6% of the cases which represents a 3.7% increase over 1976. The remaining health related facilities reported 1% of the total cases represent a 0.6% increase from 1976 (see Table 11).

These drastic changes in the reporting trends of TB cases may be a result of the extensive cutbacks in the TB Control Budget. There seems to be some evidence that hospitals, non-Health Department Clinics, and private physicians are treating an increased number of tuberculosis patients.

TABLE 10  
Tuberculosis Case Count  
By *SITE* and Bacteriologic Status

Predominant Site	Total Cases	Bacteriologic Status		
		Positive	Negative	Not Done/Unknown
Pulmonary	1,373	1,136	117	120
Extrapulmonary:	232	150	36	46
Pleural	46	18	17	11
Lymphatic	71	48	8	15
Bone and/or Joint	24	15	3	6
Genitourinary	36	33	0	3
Miliary	21	12	4	5
Meningeal	14	10	1	3
Peritoneal	11	8	2	1
Other	9	6	1	2
Site Not Stated	0	0	0	0
<b>TOTAL ALL SITES</b>	<b>1,605</b>	<b>1,286</b>	<b>153</b>	<b>166</b>

NOTE THE FOLLOWING FOR TABLE 10

The figure under the category of Pulmonary TB the total number of cases reads 1373. In this total are included 161 cases which also have Extra Pulmonary disease when 161 cases are taken from the pulmonary category and added to the Extra Pulmonary category the figures would read 1,212 for pulmonary and 393 for Extra Pulmonary.

TABLE 11

NEWLY REPORTED CASES OF TUBERCULOSIS,  
 BY SOURCE OF REPORT, NUMBERS AND PERCENTAGES OF TOTAL  
 NEWLY REPORTED CASES BY BOROUGH  
 New York City, 1977

SOURCE OF REPORT	NEW YORK CITY		MANHATTAN		BRONX		BROOKLYN		QUEENS		RICHMOND		SOURCE OF REPORT
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Private Physicians	122	7.6	37	7.4	16	6.2	35	5.8	32	14.6	2	8.7	Private Physicians
Health Department Chest Clinics	344	21.4	77	15.3	67	25.7	140	23.4	56	25.4	4	17.4	Health Department Chest Clinics
Hospitals And Non-Health Department Chest Clinics	1,123	70.0	386	76.7	176	67.7	416	69.5	128	58.2	17	73.9	Hospitals And Non-Health Department Chest Clinics
Other	16	1.0	3	0.6	1	0.4	8	1.3	4	1.8	0	-	Other
Total	1,605	100.0	503	100.0	260	100.0	599	100.0	220	100.0	23	100.0	Total

How Does New York City Compare With Other Large Cities?

New York's tuberculosis problem is greater than that of any other city in the United States with a total of 1,605 newly reported cases. However, when the size of the population is taken into account, New York City's rate ranks 28th among the 28 cities with 250,000 or more population (Figure 7).

FIGURE 7

**NEWLY REPORTED TUBERCULOSIS CASES  
IN CITIES OF 250,000 OR MORE POPULATION  
NUMBERS AND RATES  
1977**

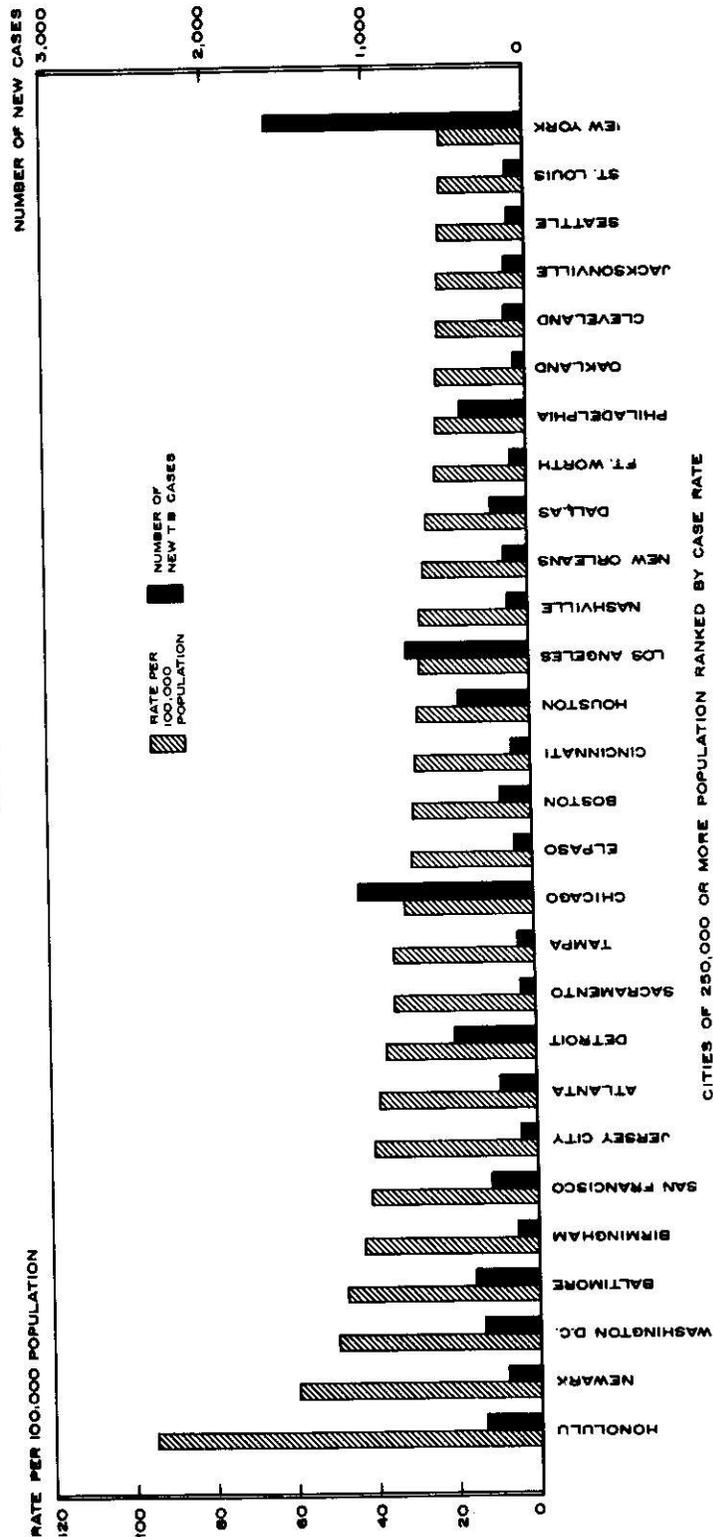
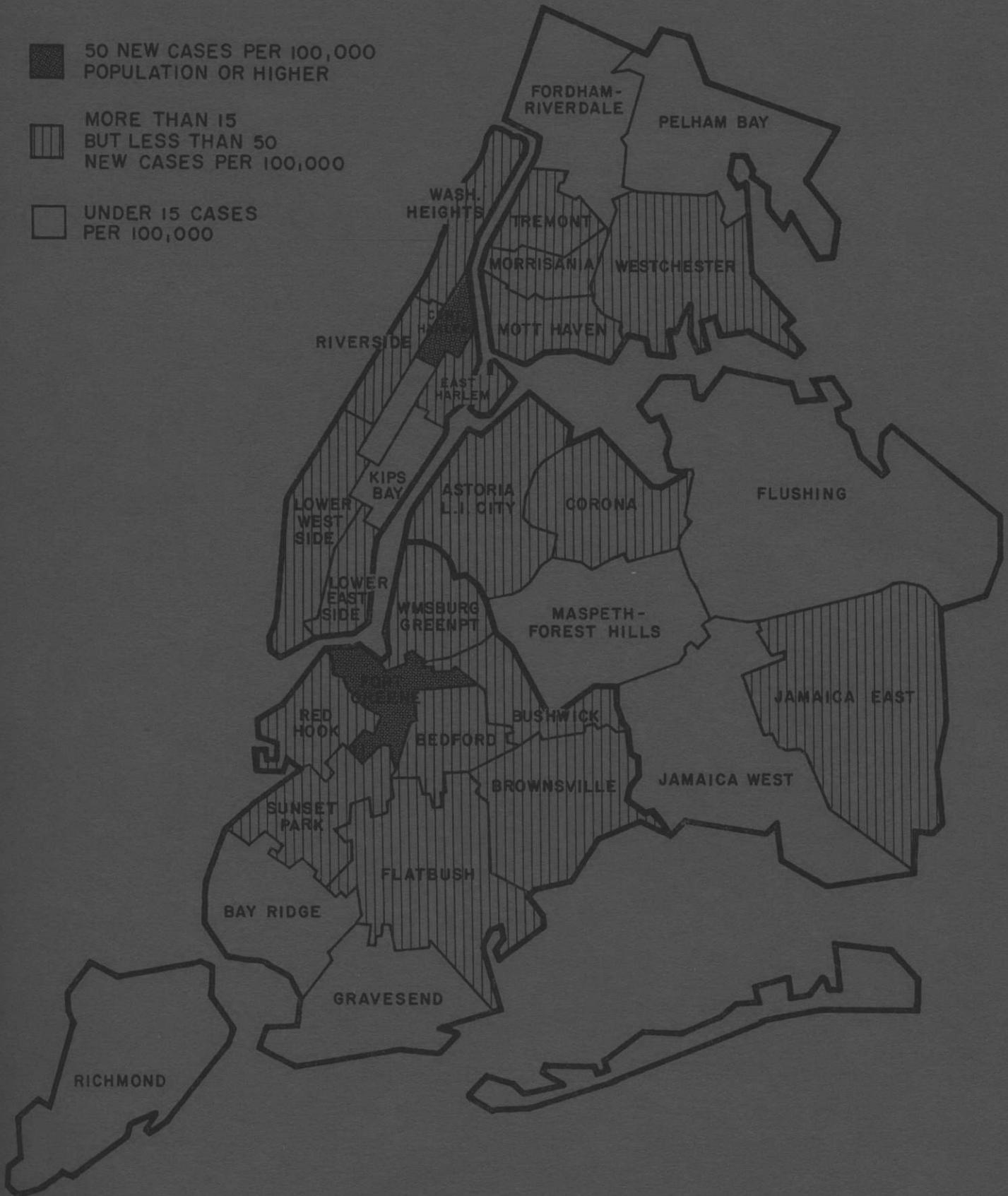


FIGURE 8

# GEOGRAPHIC CONCENTRATION OF TUBERCULOSIS NEW YORK CITY, 1977

-  50 NEW CASES PER 100,000 POPULATION OR HIGHER
-  MORE THAN 15 BUT LESS THAN 50 NEW CASES PER 100,000
-  UNDER 15 CASES PER 100,000



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