

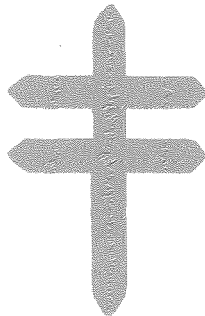
OCT 13 1970
CANADIANA

PROVINCE OF BRITISH COLUMBIA

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DIVISION
OF
TUBERCULOSIS CONTROL
HEALTH BRANCH
DEPARTMENT OF HEALTH SERVICES AND HOSPITAL INSURANCE

PART II - EPIDEMIOLOGY SECTION

ANNUAL REPORT
FOR THE YEAR
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F O R E W O R D

This section of the Annual Report presents the statistical information that shows the changing tuberculosis problem and analyzes some of the trends that are becoming apparent. It is compiled from information provided through the Tuberculosis Case Register of the Division of Tuberculosis Control and from other information supplied to the Division of Vital Statistics from clinics and health units.

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GENERAL PROVINCIAL STATISTICS

SECTION "A" (Tables 1 - 12)

The mortality from tuberculosis is low, as with the modern treatment tuberculosis is no longer a fatal disease. The incidence of active tuberculosis (cases reported in 1969) is still high (25.4 per 100,000) and is almost the same as in 1968 (25.9 per 100,000) but is lower than in 1966 and 1967 (30.6 and 31.1 per 100,000 respectively). While tuberculosis affects all ages and both sexes the rates are higher among middle-aged and elderly men.

TABLE 1. - TUBERCULOSIS MORTALITY BY AGE GROUP AND SEX
 BRITISH COLUMBIA, 1969 AND AVERAGE 1965-1969
 (Rate Per 100,000 Population)

Year	Age Group and Sex																		
	0-9		10-19		20-29		30-39		40-49		50-59		60-69		70 & Over		TOTAL		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1965-1969																			
Total	2	1	-	-	2	3	3	10	15	3	20	17	52	9	72	16	166	59	
Average Rate.	*	*	-	-	*	*	*	1.7	2.5	*	4.1	3.1	15.8	3.2	23.6	4.5	3.3	1.2	
1969																			
Total	1	-	-	-	-	-	1	-	3	-	3	1	7	1	8	4	23	6	
Rate	0.5	-	-	-	-	-	0.7	-	2.4	-	3.0	1.0	10.5	1.5	13.5	5.7	2.2	0.6	

* Less than 0.01 per 100,000 population

There were 29 deaths assigned to tuberculosis in 1969 in British Columbia. 20 - 69% of them occurred in people over 60 years of age. All but 3 of those 29 deaths were due to Pulmonary Tuberculosis; 2 were due to Tuberculous Meningitis, and 1 to Disseminated Tuberculosis.

TABLE 2. - INCIDENCE OF ACTIVE TUBERCULOSIS, BY AGE GROUP AND SEX
 BRITISH COLUMBIA, 1969
 (Rates per 100,000 Population¹)

Age Group	Males				Females				Total			
	Bacillary Cases		All Active Cases		Bacillary Cases		All Active Cases		Bacillary Cases		All Active Cases	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
0 - 4 . .	5	5.5	9	9.9	3	3.5	12	13.9	8	4.5	21	11.9
5 - 14 . .	3	1.4	9	4.2	6	2.9	14	6.9	9	2.1	23	5.4
15 - 24 . .	19	10.7	27	15.2	8	4.7	18	10.6	27	7.8	45	12.9
25 - 34 . .	24	17.1	36	25.7	30	22.8	37	28.2	54	19.9	73	26.9
35 - 44 . .	34	25.3	45	33.5	20	16.1	32	25.8	54	20.9	77	29.8
45 - 54 . .	43	38.0	62	55.2	17	14.5	23	19.8	60	26.0	85	36.8
55 - 64 . .	41	47.8	54	63.0	16	19.0	26	30.8	57	33.5	80	47.0
65 & Over .	75	84.8	93	105.1	22	22.1	28	28.1	97	51.6	121	64.4
TOTAL .	244	23.3	335	32.0	122	12.0	190	18.6	366	17.7	525	25.4

1. Rates per 100,000 Population estimated for 1969

There were 525 active cases of tuberculosis diagnosed in British Columbia in 1969 giving a rate of 25.4 per 100,000. 366 (18.6 in 100,000) have been proven bacteriologically. The high rates among middle-aged and elderly men are one of the characteristics of tuberculous epidemiology in developed countries.

TABLE 3a. - PRINCIPAL DIAGNOSIS OF ACTIVE TUBERCULOSIS, AND BACILLARY CASES
BRITISH COLUMBIA, 1969

Diagnosis	Bacillary Only		All Active Cases		Bacillary as Percent of all Active Cases
	Number	Percent	Number	Percent	
<u>Pulmonary</u>					
Primary	16	4.4	44	8.4	36.4
Minimal	112	30.6	145	27.6	77.2
Moderately Advanced . . .	112	30.6	137	26.1	81.8
Far Advanced	59	16.1	67	12.8	88.1
Pleurisy	13	3.6	27	5.1	48.1
Miliary of Lung	6	1.6	9	1.7	66.7
Silico-TB	3	0.8	3	0.6	100.0
<u>Non-Pulmonary</u>					
Meninges & Central Nervous System	2	0.5	2	0.4	100.0
Gastro Intestinal	2	0.5	7	1.3	28.6
Bones and Joints	5	1.4	9	1.7	55.6
Skin & Subcutaneous Cell Tissue	-	-	2	0.4	-
Lymphatic System	13	3.6	37	7.0	35.1
Genito-Urinary System . . .	23	6.3	32	6.1	71.9
Other Organs (eye, ear, etc.)	-	-	4	0.8	-
TOTAL	366	100.0	525	100.0	69.7

82 percent of all the active cases recorded in 1969 were pulmonary. Among the non-pulmonary cases by far the largest numbers are those with tuberculosis of the lymphatic system (cervical adenitis) and the genito-urinary system. There were 2 cases of tuberculous meningitis. The high proportion of bacteriological confirmation in many of the diagnostic groups is gratifying.

TABLE 3b. - PRINCIPAL DIAGNOSIS OF ACTIVE TUBERCULOSIS,
AMONG NON-INDIANS AND INDIANS
BRITISH COLUMBIA, 1969

Diagnosis	Non-Indian		Indian	
	Number	Percent	Number	Percent
<u>Pulmonary</u>				
Primary	22	5.0	22	25.3
Minimal	127	29.0	18	20.7
Moderately Advanced	120	27.4	17	19.5
Far Advanced	53	12.1	14	16.1
Pleurisy	24	5.5	3	3.5
Miliary of Lung	7	1.6	2	2.3
Silico Tuberculosis	3	0.7	-	-
<u>Non-Pulmonary</u>				
Meninges & Central Nervous System	2	0.4	-	-
Gastro Intestinal	6	1.4	1	1.1
Bones and Joints	8	1.8	1	1.1
Skin & Subcutaneous Cell Tissue .	2	0.4	-	-
Lymphatic System	34	7.8	3	3.5
Genito-Urinary System	27	6.2	5	5.8
Other Organs (eye, ear, etc.) . .	3	0.7	1	1.1
TOTAL	438	100.0	87	100.0

Primary Tuberculosis is more frequently diagnosed among Indians than non-Indians, indicating that Tuberculosis infection is much more common in the Native population.

TABLE 4a. - NOTIFICATIONS OF ACTIVE¹ TUBERCULOSIS BY AGE GROUP, SEX AND DIAGNOSIS
BRITISH COLUMBIA, 1969
(Bacillary Only)

Diagnosis on Notification	Age-Group (Years)								TOTAL	
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+		
<u>Pulmonary</u> - Primary	M	5	3	-	-	-	-	-	1	9
	F	3	4	-	-	-	-	-	-	7
Minimal	M	-	-	5	9	11	10	11	25	71
	F	-	2	3	11	3	7	5	10	41
Mod. Advanced	M	-	-	5	4	11	18	12	28	78
	F	-	-	2	4	11	7	3	7	34
Far Advanced	M	-	-	4	5	5	9	12	12	47
	F	-	-	1	3	2	1	3	2	12
Silico-Tuberculosis	M	-	-	-	-	-	-	1	2	3
	F	-	-	-	-	-	-	-	-	-
Miliary	M	-	-	-	-	-	-	1	1	2
	F	-	-	-	1	-	1	1	1	4
Pleurisy	M	-	-	2	2	2	1	-	3	10
	F	-	-	2	1	-	-	-	-	3
Total Pulmonary	M	5	3	16	20	29	38	37	72	220
	F	3	6	8	20	16	16	12	20	101
	T	8	9	24	40	45	54	49	92	321
<u>Non-Pulmonary</u>										
Meninges	M	-	-	-	-	1	1	-	-	2
	F	-	-	-	-	-	-	-	-	-
Intestines	M	-	-	1	-	-	-	-	-	1
	F	-	-	-	-	-	-	-	1	1
Bones and Joints	M	-	-	-	-	-	1	1	-	2
	F	-	-	-	1	1	-	1	-	3
Skin	M	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-
Lymphatic System	M	-	-	2	4	-	1	-	-	7
	F	-	-	-	6	-	-	-	-	6
Genito-Urinary System	M	-	-	-	2	2	2	3	3	12
	F	-	-	-	3	3	1	3	1	11
Other Non-Pulmonary	M	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-
Total Non-Pulmonary	M	-	-	3	6	3	5	4	3	24
	F	-	-	-	10	4	1	4	2	21
	T	-	-	3	16	7	6	8	5	45
TOTAL NOTIFICATIONS OF ACTIVE CASES	M	5	3	19	26	32	43	41	75	244
	F	3	6	8	30	20	17	16	22	122
	T	8	9	27	56	52	60	57	97	366

1. Includes active and reactivated cases.

TABLE 4b. - NOTIFICATIONS OF ACTIVE¹ TUBERCULOSIS BY AGE GROUP, SEX AND DIAGNOSIS
BRITISH COLUMBIA, 1969
(All Active Cases)

Diagnosis on Notification	Age-Group (Years)								TOTAL	
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+		
<u>Pulmonary</u> - Primary	M	8	8	2	-	-	-	-	1	19
	F	11	11	3	-	-	-	-	-	25
Minimal	M	1	-	7	16	14	17	15	25	95
	F	-	3	3	11	7	7	8	11	50
Mod. Advanced	M	-	-	5	6	13	24	16	34	98
	F	-	-	3	4	12	9	4	7	39
Far Advanced	M	-	-	4	5	5	10	13	17	54
	F	-	-	1	3	2	2	3	2	13
Silico-Tuberculosis	M	-	-	-	-	-	-	1	2	3
	F	-	-	-	-	-	-	-	-	-
Miliary	M	-	-	-	-	-	-	2	2	4
	F	-	-	-	1	-	1	2	1	5
Pleurisy	M	-	-	5	4	5	1	1	4	20
	F	1	-	3	2	-	-	1	-	7
Total Pulmonary	M	9	8	23	31	37	52	48	85	293
	F	12	14	13	21	21	19	18	21	139
	T	21	22	36	52	58	71	66	106	432
<u>Non-Pulmonary</u>										
Meninges	M	-	-	-	-	1	1	-	-	2
	F	-	-	-	-	-	-	-	-	-
Intestines	M	-	-	2	-	1	2	-	-	5
	F	-	-	-	-	1	-	-	1	2
Bones and Joints	M	-	-	-	-	-	2	1	1	4
	F	-	-	-	1	2	-	2	-	5
Skin	M	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	2	2
Lymphatic System	M	-	1	2	4	1	1	2	1	12
	F	-	-	4	9	4	3	2	3	25
Genito-Urinary System	M	-	-	-	3	2	4	3	4	16
	F	-	-	1	5	4	1	4	1	16
Other Non-Pulmonary	M	-	-	-	-	1	-	-	2	3
	F	-	-	-	1	-	-	-	-	1
Total Non-Pulmonary	M	-	1	4	7	6	10	6	8	42
	F	-	-	5	16	11	4	8	7	51
	T	-	1	9	23	17	14	14	15	93
TOTAL NOTIFICATIONS OF ACTIVE CASES	M	9	9	27	38	43	62	54	93	335
	F	12	14	18	37	32	23	26	28	190
	T	21	23	45	75	75	85	80	121	525

1. Includes active and reactivated cases.

TABLE 5. - BACTERIOLOGICAL STATUS OF ACTIVE CASES OF PULMONARY TUBERCULOSIS
BRITISH COLUMBIA, 1969

	Positive Smear	Positive Culture Only	Negative and Not Examined ¹	TOTAL
<u>TOTAL MALES AND FEMALES</u>				
Number of Cases .	172	149	111	432
Percent	39.8	34.5	25.7	100.0
<u>MALES</u>				
Number of Cases .	116	104	73	293
Percent	39.6	35.5	24.9	100.0
<u>FEMALES</u>				
Number of Cases .	56	45	38	139
Percent	40.3	32.4	27.3	100.0

1. This group consists of 60 cases with negative bacteriology and 51 with no examination.

About 3/4 of the cases of active pulmonary tuberculosis in British Columbia have been confirmed bacteriologically. Half of them showed acid-fast bacilli on microscopic examination, while half were positive on culture only.

TABLE 6. - EXTENT OF POST-PRIMARY
OR ADULT PULMONARY TUBERCULOSIS
BRITISH COLUMBIA, 1969

Extent of Disease	Number of Cases	Percentage
Minimal	145	41.5
Moderately Advanced	137	39.3
Far Advanced	67	19.2
TOTAL	349	100.0

There has been a slight increase in the number and percentage of far advanced cases in 1969. In 1968 there were 53 far advanced pulmonary tuberculosis cases, comprising 15.5% of the total post-primary.

TABLE 7. - CONTRIBUTION OF REACTIVATIONS TO
TOTAL ACTIVE TUBERCULOSIS CASES BY AGE GROUPS
BRITISH COLUMBIA, 1969

Type of Case	Age-Group (Years)				
	0-24	25-44	45-64	65+	TOTAL
<u>All Active Cases</u>					
Total Cases	89	150	165	121	525
Reactivations I	2	25	40	20	87
Percent of Reactivations I	2.3	16.7	24.2	16.5	16.6
Reactivations II	1	8	16	13	38
Percent of Reactivations II	1.1	5.3	9.7	10.7	7.2
<u>Bacteriologically Confirmed Cases Only</u>					
Total Cases	44	108	117	97	366
Reactivations I	1	18	32	17	68
Percent of Reactivations I	2.3	16.7	27.4	17.5	18.6
Reactivations II	-	5	13	11	29
Percent of Reactivations II	-	4.6	11.1	11.3	7.9

Reactivations I: Derived from Inactive tuberculosis cases previously documented active.

Reactivations II: Derived from Presumed Inactive tuberculosis cases.

About one quarter of all active cases of tuberculosis arise in patients with known inactive disease. As expected, this proportion is greatest among the patients over the age of 45.

TABLE 8. - ACTIVE TUBERCULOSIS ARISING IN PERSONS
IN VARIOUS DIAGNOSTIC CATEGORIES ROUTINELY FOLLOWED UP
BY TUBERCULOSIS CONTROL CLINICS
BRITISH COLUMBIA, 1969

Diagnosis	Number in this Category in TB Control Files	Number of Cases	Risk
<u>Reactivation I</u>			
Inactive Tuberculosis (Previously Documented) . . .	11,137*	87	1:128
<u>Reactivation II</u>			
Presumed Tuberculin Inactive.	12,761*	38	1:336
Pneumoconiosis	750	1	1:750
Pulmonary Fibrosis			
Localized and Diffuse	5,401	14	1:386
Old Pleurisy	4,841	7	1:692
Healed Primary Complex	7,371	7	1:1053

* Estimated

For patients with inactive tuberculosis, presumed tuberculosis inactive, and pulmonary fibrosis, the risk of developing active disease is high. In 1969 only 1 case of tuberculosis was diagnosed in patients with pneumoconiosis, in 1968 the corresponding number was 6.

TABLE 9. - TUBERCULIN STATUS OF HOUSEHOLD CONTACTS
AND THE SOURCE OF INFECTION, BY AGE GROUPS
BRITISH COLUMBIA, 1969

	Age Group (Years)							TOTAL
	0-4	5-9	10-14	15-19	20-29	30-39	40+	
<u>Positive Smear,</u>								
<u>Positive Culture</u>								
Total Contacts	66	43	56	42	45	53	117	422 ²
Tuberculin Tested	61	38	52	34	31	41	73	330
Positive	12	10	20	15	17	17	37	128
Percent Positive	19.7	26.3	38.5	44.1	54.8	41.5	50.7	38.8
<u>Positive Culture Only¹</u>								
Total Contacts	37	40	37	35	47	31	96	323 ³
Tuberculin Tested	30	40	36	28	34	24	66	258
Positive	5	5	9	9	12	11	34	85
Percent Positive	16.7	12.5	25.0	32.1	35.3	45.8	51.5	32.9
<u>Negative Smear,</u>								
<u>Negative Culture</u>								
Total Contacts	12	22	15	17	26	11	36	139 ⁴
Tuberculin Tested	12	20	14	16	21	9	25	117
Positive	1	-	1	4	6	7	8	27
Percent Positive	8.3	-	7.1	25.0	28.6	77.8	32.0	23.1

1. Includes positive culture, negative or no smear.
2. Excludes 21 cases age not given.

3. Excludes 9 cases age not given.
4. Excludes 7 cases age not given.

Contacts of those patients with active tuberculosis who excrete large enough numbers of bacilli to be visible on microscopic smear show a higher rate of positive reactors than do the contacts of patients with only positive culture or those with negative bacteriological findings. Nevertheless, less than half of the household contacts of smear positive cases become infected.

TABLE 10. - INCIDENCE OF ACTIVE TUBERCULOSIS AMONG HOUSEHOLD CONTACTS
AND AMONG TUBERCULIN POSITIVE HOUSEHOLD CONTACTS
BRITISH COLUMBIA, 1969

Source Bacteriology ¹	Under 20			20 & Over			TOTAL		
	Total Contacts	Number Active	Morbidity Percent	Total Contacts	Number Active	Morbidity Percent	Total Contacts	Number Active	Morbidity Percent
<u>Positive Smear & Culture</u>									
All Contacts . . .	207	12	5.8	215	3	1.4	422 ²	15	3.6
Tuberculin Pos. Contacts . . .	57	11	19.3	71	3	4.2	128	14	10.9
<u>Positive Culture Only</u>									
All Contacts . . .	149	1	0.7	174	-	-	323 ³	1	0.3
Tuberculin Pos. Contacts . . .	28	1	3.6	57	-	-	85	1	1.2
<u>Negative Smear & Culture</u>									
All Contacts . . .	66	-	-	73	-	-	139 ⁴	-	-
Tuberculin Pos. Contacts . . .	6	-	-	21	-	-	27	-	-

Excludes active contact cases not tuberculin tested.

1. This table excludes source cases not bacteriologically examined and for whom age was not given.
2. Excludes 21 cases age not given.

3. Excludes 9 cases age not given.

4. Excludes 7 cases age not given. (see Table 9)

The morbidity among household contacts of cases of active tuberculosis is high. It is highest among those exposed to sources with positive sputum smears.

TABLE 11

There has been a decrease of the percentage of positive reactors in all age groups compared with 1967 and 1968 findings. This may in part reflect the fact that testing in 1969 was done in different geographical areas than in the two previous years.

TABLE 12

As in previous years the positive reactions tend to be smaller among the persons under the age of 20 and those over 50 than those seen between 20 and 49.

TABLE 11. - TUBERCULIN TESTING RESULTS BY AGE GROUP, SEX AND PERCENT POSITIVE
BRITISH COLUMBIA, 1969

Age Group	Total Tested			Number Positive			Percent Positive		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0 - 9 . .	13,050	12,504	25,554	107	122	229	0.8	1.0	0.9
10 - 19 . .	15,640	16,651	32,291	483	503	986	3.1	3.0	3.1
20 - 29 . .	7,855	9,707	17,562	874	1,124	1,998	11.1	11.6	11.4
30 - 39 . .	5,910	6,650	12,560	1,331	1,140	2,471	22.5	17.1	19.7
40 - 49 . .	4,590	5,151	9,741	1,691	1,143	2,834	36.8	22.2	29.1
50 - 59 . .	3,182	3,583	6,765	1,247	805	2,052	39.2	22.5	30.3
60 & Over .	3,159	2,946	6,105	1,165	671	1,836	36.9	22.8	30.1
Not Stated.	418	526	944	23	27	50	5.5	5.1	5.3
TOTAL .	53,804	57,718	111,522	6,921	5,535	12,456	12.9	9.6	11.2

Excludes 198 cases for which sex was not stated.

TABLE 12. - TUBERCULIN TESTING RESULTS BY AGE GROUP AND SIZE OF REACTION,
BRITISH COLUMBIA, 1969

Age Group	Size of Reaction (mm)							
	0	1-5	6-10	11-15	16-20	21-25	26+	TOTAL
0 - 9 . .	25,073	347	99	67	36	14	13	25,649
10 - 19 . .	30,628	750	356	316	170	67	79	32,366
20 - 29 . .	15,373	197	706	637	333	169	155	17,570
30 - 39 . .	9,913	181	656	792	502	267	256	12,567
40 - 49 . .	6,710	198	756	890	574	276	339	9,743
50 - 59 . .	4,507	207	634	681	374	164	199	6,766
60 & Over .	4,041	231	732	602	288	112	102	6,108
Not Stated.	874	26	16	18	8	4	5	951
TOTAL .	97,119	2,137	3,955	4,003	2,285	1,073	1,148	111,720
Percent . .	87.0	1.9	3.5	3.6	2.0	1.0	1.0	100.0

TUBERCULOSIS IN THE HEALTH UNIT AREAS

SECTION "B" (Tables 13 - 14)

In this section the mortality rate and the incidence of tuberculosis in 1969 is shown for individual health units.

Table 13

The number of deaths from tuberculosis in 1969 is too small to serve as a good epidemiological index. The average annual mortality rate in 1960-1969 shows the highest rates in Cariboo, Skeena, and South Okanagan.

Table 14

There are noticeable differences between the incidence of active tuberculosis in different health units. As this disease is more common among Indians, these differences reflect to an appreciable extent the varying proportion of Indians in the population.

TABLE 13. - TUBERCULOSIS MORTALITY BY HEALTH UNIT OF RESIDENCE

BRITISH COLUMBIA, 1960-1969

(Rates per 100,000 Population)

Health Unit	Total Number of Deaths 1960-1969	Number of Deaths 1969	Mean Annual Rate 1960-1969	Rate 1969
East Kootenay	9	1	2.2	2.1
Selkirk	6	-	4.1	-
West Kootenay	3	-	-	-
North Okanagan	12	-	2.3	-
South Okanagan	27	2	4.6	2.7
South Central	19	-	3.9	-
Upper Fraser Valley	7	-	1.7	-
Central Fraser Valley	10	1	2.8	1.7
Boundary	15	1	1.6	0.8
Simon Fraser	17	4	2.4	3.4
Coast-Garibaldi	2	1	-	2.7
Central Vancouver Island	17	1	2.1	0.9
Upper Island	7	-	1.9	-
Cariboo	15	1	7.0	3.0
Skeena	23	-	4.5	-
Peace River	6	-	2.5	-
Northern Interior	6	1	2.1	1.3
Metropolitan Board of Health of Greater Vancouver	246	13	3.8	1.8
Greater Victoria Metropolitan Board of Health	38	3	2.2	1.5
Areas Not Served by Health Units.	21	-	-	-
TOTAL	506	29	2.9	1.4

Rates are based on estimated populations for the areas shown.

TABLE 14. - ACTIVE TUBERCULOSIS¹ BY HEALTH UNIT OF RESIDENCE
FOR BACILLARY CASES AND ALL ACTIVE CASES
BRITISH COLUMBIA, 1969

Health Unit	Bacillary Only		All Active Cases			
			Total Population		Other Than Indian	
	Number	Rate ²	Number	Rate ²	Number	Rate ²
East Kootenay	11	22.8	15	31.1	13	28.2
Selkirk	3	11.9	4	15.9	4	15.9
West Kootenay	4	8.9	6	13.4	6	13.4
North Okanagan	4	7.7	7	13.5	7	14.0
South Okanagan	7	9.5	15	20.3	15	20.7
South Central	5	7.6	8	12.2	5	7.9
Upper Fraser Valley	7	10.2	10	14.5	6	9.4
Central Fraser Valley	16	26.7	20	33.4	17	29.5
Boundary	15	11.4	23	17.5	22	17.5
Simon Fraser	18	15.5	29	25.0	28	26.0
Coast Garibaldi	5	13.7	6	16.5	2	5.7
Central Vancouver Island	10	9.5	17	16.1	15	14.5
Upper Island	7	14.3	11	22.5	11	22.6
Cariboo	11	32.5	16	47.3	11	33.7
Skeena	25	41.0	41	67.2	21	36.9
Peace River	16	36.6	20	45.8	12	27.8
Northern Interior	11	14.1	20	25.6	9	12.0
Metropolitan Board of Health of Greater Vancouver	153	20.8	207	28.1	194	26.8
Greater Victoria Metropolitan Board of Health	24	12.3	33	16.9	30	15.8
Areas Not Served by Health Units ³	14	-	17	-	10	-
TOTAL	366	17.7	525	25.4	438	22.2

1. Active and Reactivated cases.
2. Rates per 100,000 estimated population.
3. Includes 2 address unknown and 9 ex-province.

TUBERCULOSIS IN VARIOUS RACIAL GROUPS

SECTION "C" (Tables 15 - 17)

Tuberculosis rates are at least ten times greater among the Indian population than among the white population. This is shown by every epidemiological index such as mortality, incidence of active tuberculosis and prevalence of inactive tuberculosis. The problem among the British Columbians of Chinese origin is almost as great as among the Indians.

Table 15

Although the mortality rate is no longer a very precise epidemiological index the differences between races are both large and consistent over the past 10 years. Tuberculosis mortality rate is about ten times higher among native Indians and the Chinese population than in the white group.

Table 16

The incidence of active tuberculosis in 1968 was eleven times higher among the Indians than among the white population. The incidence among the white people born outside Canada is two times greater than among those born in Canada. Undoubtedly some of these differences are a reflection of varied age structures of various groups.

TABLE 15. - TUBERCULOSIS MORTALITY FOR THE TOTAL POPULATION,
 THE INDIAN, CHINESE AND JAPANESE POPULATION,
 AND THE POPULATION EXCLUDING INDIANS AND ORIENTALS
 BRITISH COLUMBIA, 1960-1969
 (Rates per 100,000 Population)*

Racial Origin	1960-1964		1965-1969		1969	
	Total Number	Average Annual Rate	Total Number	Average Annual Rate	Total Number	Average Annual Rate
Total Province	274	3.3	223	2.3	29	1.4
Indians	44	22.6	37	15.4	4	8.4
Excluding Indians	230	2.8	186	1.9	25	1.2
Chinese	33	27.9	24	17.5	3	9.7
Japanese	5	9.3	6	8.3	1	7.8
Excluding Indians & Orientals	192	2.4	156	1.6	21	1.1

* Rates per 100,000 population based on estimated population only.

TABLE 16. - INCIDENCE OF ACTIVE¹ TUBERCULOSIS
 IN CANADIAN AND NON-CANADIAN BORN PERSONS
 BRITISH COLUMBIA, 1969

Ethnic Group and Racial Origin	Bacteriologically Confirmed Cases		Total Active Tuberculosis	
	Number of Cases	Rate ²	Number of Cases	Rate ²
Canadian Born	215	14.1	305	19.9
Non-Canadian Born	151	28.1	220	40.9
<u>Total</u>				
White and Others	145	7.3	392	19.8
Indian	66	138.4	87	182.4
Chinese	1	3.3	37	120.1
Japanese	3	23.3	9	69.8

1. Active and reactivated cases.

2. Rates per 100,000 population based on estimated population only.

TABLE 17. - INCIDENCE OF ACTIVE TUBERCULOSIS AMONG THE INDIAN POPULATION
 BY AGE GROUP AND SEX, BRITISH COLUMBIA, 1969
 (Rates per 100,000 Population)

Age Group	Male				Female				Total			
	Bacillary Cases		All Active Cases		Bacillary Cases		All Active Cases		Bacillary Cases		All Active Cases	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
0 - 4	4	105.0	5	131.3	3	80.0	7	186.8	7	92.6	12	158.9
5 - 14	2	27.3	2	27.4	5	67.1	8	107.4	7	47.5	10	67.8
15 - 24	4	83.1	7	145.4	1	21.9	2	43.9	5	53.3	9	96.0
25 - 34	5	161.6	6	193.9	9	332.5	10	369.4	14	241.3	16	275.8
35 - 44	8	383.0	9	430.8	5	273.5	7	382.9	13	331.9	16	408.5
45 - 54	2	145.3	3	218.0	5	423.7	5	423.7	7	273.9	8	313.0
55 - 64	3	297.9	4	397.2	1	123.5	2	246.9	4	220.1	6	330.2
65 & Over	5	463.0	5	463.0	4	468.4	4	468.4	9	465.4	9	465.4
TOTAL	33	134.3	41	166.9	33	143.6	45	194.5	66	138.4	86	180.3

Rates per 100,000 population estimated for 1969

TABLE 18. - PRINCIPAL DIAGNOSIS OF ACTIVE TUBERCULOSIS, AND BACILLARY CASES
BRITISH COLUMBIA, 1969
(Indians Only)

Diagnosis	Bacillary Only		All Active Cases		Bacillary as Percent of all Active Cases
	Number	Percent	Number	Percent	
<u>Pulmonary</u>					
Primary	12	18.2	22	25.3	54.5
Minimal	13	19.7	18	20.7	72.2
Moderately Advanced . . .	13	19.7	17	19.5	76.5
Far Advanced	14	21.2	14	16.1	100.0
Pleurisy	2	3.0	3	3.4	66.7
Miliary of Lung	2	3.0	2	2.3	100.0
Silico-TB	-	-	-	-	-
<u>Non-Pulmonary</u>					
Meninges & Central Nervous System	-	-	-	-	-
Gastro Intestinal	1	1.5	1	1.2	100.0
Bones and Joints	1	1.5	1	1.2	100.0
Skin & Subcutaneous Cell Tissue	-	-	-	-	-
Lymphatic System	3	4.6	3	3.4	100.0
Genito-Urinary System . . .	5	7.6	5	5.7	100.0
Other Organs (eye, ear, etc.)	-	-	1	1.2	-
TOTAL	66	100.0	87	100.0	75.9

