

COLORADO STATE DEPARTMENT OF PUBLIC WELFARE
DIVISION OF TUBERCULOSIS HOSPITALIZATION
SUMMARY FOR 1949

A decline in the incidence of tuberculosis appears to have taken place in Colorado during the past year. This conclusion is based on the distribution of cases of tuberculosis in 1949 applying for State care under the State Tuberculosis Assistance Act. For the State as a whole, not including Denver, there was a 36% decline in the number of cases hospitalized for tuberculosis this past year, as compared with 1948. Indeed, the total number hospitalized during the year would have probably declined to a new low level had it not been for the mass case finding survey which took place in Denver and the surrounding counties in the summer. During this survey, most of the adult population in this area were x-rayed. This survey embraced over one-third of the total adult population of the State. The number of cases found needing hospitalization, and eligible under the law, more than offset the decline from the rest of the State and has led to more than a doubling in the number of cases hospitalized in 1949 from the Denver area. No such intensive case finding has ever taken place before in Colorado and it should lead to a very marked decline in the incidence of tuberculosis in the metropolitan area in the future.

Many workers in the field of tuberculosis are misled by the death rate figures published by the U. S. Public Health Service. These published figures for Colorado are high but they are not truly representative since they include the deaths of many healthseekers who come to Denver and Colorado Springs sanatoria in the advanced stage of the disease. If they have lived for a year in the State they are counted as a Colorado resident and their death is counted as a Colorado death from tuberculosis. No wonder our death rate is high. It would be comparable to saying that leprosy is rampant in Louisiana, because many people die of this disease at the Federal institution (the only one I believe in this country) located in that State and, if they have lived for a year after being sent to the institution, their death might be counted as that of a resident of Louisiana who died of leprosy.

The various clinics run by the county tuberculosis associations and county health departments, and the prompt determination of eligibility by county welfare departments, have all combined to bring about a more rapid removal to institutions of cases of active tuberculosis before these individuals have infected others sufficiently to cause the disease. These agencies have taken an important part in this decline in tuberculosis now going on in Colorado. Also the foresightedness of the members of the legislature has played no small part by providing the increased appropriations of the past few years which have made possible the approval for hospitalization of all applicants with active tuberculosis eligible under the law.* The results are beginning to be outstanding.

I am happy to report still further improvement in the facilities for care of our State patients. Two additional institutions in the Denver area have been approved for hospitalization. These are Bethesda Sanatorium and Craig Colony. These institutions can add about forty more beds for infirmary and ambulant patients which are badly needed in this region and bring the total of the number of hospitals and sanatoria approved for the care of State cases to fourteen.

*The Colorado State Health Department reports that as of January 1, 1950, there were 803 known cases of active tuberculosis in the State of Colorado not in hospitals. Undoubtedly among these active cases are some who are eligible for care under the State Hospitalization program.

Discharges of patients against advice have continued to fall far below the national average for tuberculosis sanatoria, indicating that most of our patients like their care and are willing to stay with it until medically ready for discharge. The fact that most of the sanatoria in which patients are placed are religious institutions tends toward a higher morale and a mental peace of mind not usually found in state or county sanatoria.

Ward A of the Colorado General Hospital, which was equipped through a special appropriation of the legislature in 1947 to take care of chest surgery for State tuberculosis cases, continues to render valuable service to our program. Its 28 beds are usually filled by State patients, sent there by the Director of Tuberculosis Hospitalization from the sanatoria for evaluation and surgery. At this hospital leading chest surgeons of Denver give many hours of service without any financial remuneration in return. Also, cases with difficult diagnostic problems are transferred there for studies under the guidance of the staff of the Colorado School of Medicine.

During the past year, thanks in part to financial support from the Colorado Tuberculosis Association, each of our patients has had the valuable aid of medical social workers. This service is rendered under the able leadership of Miss Gertrude Loos of the State Department. Also, occupational therapy and rehabilitation services have been available to all patients. Through the cooperation of Mr. Russell Haase of the Colorado State Division of Vocational Training and Mr. Ralph Susman, Director of Rehabilitation of the Colorado Tuberculosis Association, monthly conferences are held in all the sanatoria, at which are discussed with the medical and social service staffs the problems of each patient, and plans are initiated for rehabilitation to an economic self sustaining basis if deemed medically feasible.

The State Tuberculosis Hospitalization program for indigent patients in Colorado is now fairly complete and well rounded. Many people, especially those outside Colorado, do not understand clearly our system of State care. They feel that because we have no state sanatorium we cannot give the right sort of treatment. This is because almost all states do have one or more state or county institutions for the care of the tuberculous. Colorado is unique in having a number of good private institutions for the care of people afflicted with this disease, that were built when the State was a world famous tuberculosis center. Many of these sanatoria have a national reputation and are endowed or supported in part by religious groups. While in these private institutions, each State patient is placed under the care and responsibility of a physician who has had 10 to 30 years of wide experience in the tuberculosis field. The condition of each patient is reexamined at frequent intervals by the State Director of Tuberculosis Hospitalization with the physician in charge of the case, and at least every six months the chest surgeons on the staff of the Colorado General Hospital visit the institutions, review our cases and give the staff and the Director the benefit of their advice on problems of collapse therapy, including surgical collapse.

I think the care offered by these smaller, homelike, privately operated sanatoria is preferable to that which could be obtained in one large central institution, certainly as long as present standards are maintained. Our system illustrates what can be done through cooperative effort by many agencies in this field of tuberculosis. This gives to each agency the well deserved feeling of playing an important part. The taxpayers of Colorado owe a debt of gratitude to the sanatoria listed below for having furnished care to State patients at a figure considerably less than their cost during the past year.

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Bethesda Sanatorium, Denver
 Cragmor Sanatorium, Colorado Springs
 Craig Colony, Denver
 Glockner-Penrose Hospital and Sanatorium, Colorado Springs
 Lutheran Sanatorium, Wheatridge
 Mennonite Hospital and Sanatorium, La Junta
 Mesa Vista Sanatorium, Boulder
 National Jewish Hospital, Denver (entirely free care)
 Psychopathic Hospital, Colorado Springs (emergency care only)
 St. Francis Sanatorium, Denver
 St. Francis Hospital and Sanatorium, Colorado Springs
 Sunnyrest Sanatorium, Colorado Springs
 Swedish National Sanatorium, Englewood

A total of 195 applications were approved during the year and the individuals placed under care, as seen from the tables on subsequent pages of this report. 184 cases were terminated during the year. At the year end approximately 220 patients were under care. Of the pulmonary cases admitted, an improvement in the percentage of minimal and moderately advanced cases (37%) was noted over the previous year when only 27% were in these less advanced stages of the disease. However, 63% of cases were in the far advanced classification and still too many patients come to us in the final weeks of life. They are usually people who have refused to leave home and only accept hospitalization as a last and final resort. This is most unfortunate since nothing can be done for them in a curative way and they constitute the worst possible public health menace in remaining so long at home.

The approximate percentage distribution of the 184 cases terminated was as follows:

	(Arrested and Apparently Arrested	30%)	
	(Quiescent	4%)	
	(Improved	12%)	50.0%
Tuberculosis	(Discharged from Out-patient as Arrested	4%))
Discharged, unimproved				4.0%
Left Against Advice *				22.4%
Died				22.0%
Disciplinary Discharge				1.6%

* Some of these were later readmitted.

The following Table I shows the great improvement in the percentage of cases discharged from the sanatoria and out-patient department with their disease arrested, quiescent, or improved during the last five years:

<u>YEAR</u>	<u>PERCENT</u>
1945	32.7%
1946	34.0%
1947	34.6%
1948	45.0%
1949	50.0%

TABLE I

In 1945 only 6% of cases were discharged with disease arrested. In 1949 the figure had risen to 34%.

This reflects chiefly the effect of streptomycin on tuberculosis although better methods of surgical collapse and improved sanatorium care have played, probably, an important part.

The percentage of our cases terminated through death in relation to our total discharges from the sanatoria as seen in Table II shows, over the past five years, a decline which is gratifying. The figure has probably reached a minimum and will remain at about its present level as long as two-thirds of admissions are in the far advanced stage of the disease on admission.

DEATHS, AS A PERCENTAGE OF TOTAL DISCHARGES FROM SANATORIA

<u>YEAR</u>	<u>PERCENT</u>
1945	37%
1946	7.35% - being 28.38% (1946 Report)
1947	7.31% 25.7
1948	23% 22.98
1949	23% 21.73

TABLE II

One of the greatest improvements in the program in the last few years has been in the decrease in cases that have been discharged from the program with disease quiescent or arrested, but have later broken down at home and have had to be readmitted. Only 10 out of 195 admissions in 1949 fell in this category. An additional six cases were patients with a former renal or orthopedic tuberculosis who were brought back for a recheck of their condition. Only three individuals had to be dropped for flagrant disregard of reasonable sanatoria rules. The rest of the readmissions were cases taken back who had previously left against medical advice, except that in three instances they were patients that had been former disciplinary discharges. This decline in readmission rate, I think, is chiefly due to setting up of the exercise centers beginning with Sunnyrest in Colorado Springs in 1946. To Sunnyrest has been added Bethesda and Craig Colony. Patients are really given a workout before discharge. Also streptomycin and a better rehabilitation program which returns patients to jobs for which their physical limitations better qualify them, have played an important part.

PERCENTAGE OF READMISSIONS

<u>YEAR</u>	<u>PERCENT</u>
1945	36%
1946	24%
1947	14%
1948	13.8%
1949	17%

TABLE III

The gross amount expended for Tuberculosis Hospitalization in 1949 was \$381,771.45 from which should be deducted the amount spent for the out-patient department, transportation and burials totalling \$3,834.83, leaving a balance of \$377,936.62 spent for hospitalization and care. Part payments by patients and relatives amounted to \$7,544.97. The net cost for the care of cases of tuberculosis eligible under the State Program has been \$374,226.48, which cost was divided

equally between the state and the counties from which the patients originated. The average cost per day was \$5.19 as against a figure of \$5.34 in 1948.

Again I should like to acknowledge with thanks the continued assistance of the Colorado State Tuberculosis Association, and the Colorado State Department of Health. Their aid and constructive criticism have been most helpful.

EDWARD N. CHAPMAN, M.D., DIRECTOR
DIVISION OF TUBERCULOSIS HOSPITALIZATION
COLORADO STATE DEPARTMENT OF PUBLIC WELFARE

SUMMARY OF TUBERCULOSIS ASSISTANCE

Year ending December 31, 1949

PART I -- APPLICATION

Pending -- January 1, 1949.....	8
New applications, never previously hospitalized.....	7
Applications for readmission.....	0
Applications for reopening.....	1
Received during 1949.....	230
New applications, never previously hospitalized.....	197
Applications for readmission.....	15
Applications to re-open case.....	18
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	238
Disposed of during 1949.....	229
New applications, never previously hospitalized.....	196
Applications for readmission.....	15
Applications to re-open case.....	18
Placed under care.....	195
Not placed under care.....	34
Applications withdrawn by county.....	14
Patient died before approval of hospitalization....	2
Disapproved.....	15
Refused hospitalization.....	3
Pending December 31, 1949.....	9

PART II -- CASES UNDER CARE

Cases under care January 1, 1949.....		218
In Sanatoria.....	203	
In Out-patient Department.....	15	
Placed under care during the year.....		195
New cases - never before hospitalized.....	162	
Readmissions - previously hospitalized.....	33	
Total.....		413
Care terminated during the year.....		184
Discharged.....	92	
Arrested.....	42	
Apparently arrested.....	14	
Quiescent.....	7	
Improved.....	22	
Unimproved.....	7	
Died.....	40	
Left against advice.....	41	
Discharged from Out-patient Department.....	8	
Disciplinary.....	3	
Cases under care December 31, 1949.....		229
In Sanatoria.....	222	
In Out-patient Department.....	7	

SUMMARY OF OUT-PATIENT DEPARTMENT

Cases in Out-patient Department January 1, 1949.....		15
Cases transferred to Out-patient Department during the year.....		0
Placed directly into Out-patient Department.....		0
Cases in Out-patient Department terminated during the year.....		8
Discharged.....	0	
Readmitted to Sanatoria.....	0	
Cases in Out-patient Department December 31, 1949.....		7

TUBERCULOUS PERSONS PLACED UNDER CARE
 COLORADO STATE DEPARTMENT OF PUBLIC WELFARE
 BY AGE AND STAGE, 1949

AGE	P U L M O N A R Y				
	TOTAL	MINIMAL	MODERATELY ADVANCED	FAR ADVANCED	EXTRA PULMONARY
1 - 9					
10 - 19	12	2	4	6	
20 - 29	53	10	14	27	2
30 - 39	48	5	9	26	3
40 - 49	39	2	9	27	1
50 - 59	24	1	3	18	2
60 - 69	22		11	11	
70	2			2	

OCCUPATION OF NEW PATIENTS HOSPITALIZED IN 1949
 (FIVE HIGHEST CLASSIFICATIONS)

Housewives	32.3%
Clerks & Sales People	12.3%
Too Young or Too Old To Work	12.3%
Semi-Skilled	9.2%
Food Handlers & Service People	6.6%

TUBERCULOUS PATIENTS RECEIVING CARE IN SANATORIA AND OUT-PATIENT DEPARTMENTS
 COLORADO STATE DEPARTMENT OF PUBLIC WELFARE, BY COUNTIES, 1949

	JANUARY 1, 1949		PLACED DURING 1949		TOTAL 1949	
	SANATORIA	OUT-PATIENT	SANATORIA	OUT-PATIENT	SANATORIA	OUT-PATIENT
Adams	2		8		10	
Alamosa		1	1		1	1
Arapahoe	9		5		14	
Archuleta			1		1	
Bent	2				2	
Boulder	11		4		15	
Chaffee			2		2	
Clear Creek			1		1	
Conejos	1				1	
Costilla	1		4		5	
Delta	5		2		7	
Denver	52		88		140	
Eagle			1		1	
El Paso	24	1	18		42	1
Garfield	2		2		4	
Grand	1				1	
Huerfano	2		6		8	
Jefferson	5		2		7	
Lake	1		1		2	
La Plata	2				2	
Larimer	11		6		17	
Las Animas	9	1	4		13	1
Logan	1				1	
Mesa	9		5		14	
Montezuma	1				1	
Montrose	3		2		5	
Morgan		1	1		1	1
Otero	11	2	2		13	2
Prowers	1		2		3	
Pueblo	19		16		35	
Rio Grande	3	1	3		6	1
Saguache	1		1		2	
San Miguel	1				1	
Weld	12	8	6		18	8
Yuma			1		1	
TOTAL	202	15	195	0	397	15

SURGICAL AND SPECIAL DIAGNOSTIC PROCEDURES PERFORMED ON TUBERCULOUS PATIENTS
 COLORADO STATE DEPARTMENT OF PUBLIC WELFARE, 1949

<u>PROCEDURE</u>	<u>NUMBER</u>	<u>PROCEDURE</u>	<u>NUMBER</u>
Thorocoplasty	34	Cystoscopy	7
Bronchoscopy	47	Appendectomy	1
Pneumolysis	4	Sterilization	3
Lobectomy	3	Leg Cast	1
Drainage of psoas abscess	1	Rectal abscess	1
Pneumonectomy	2	Dilation and curretage	3
Phrenic Crush	10	Tonsillectomy	1
Sacro-iliac fusion	1	Prostatectomy	1
Colostomy	1	Proctoscopy	2
Laminectomy	1	Scapulectomy	1
Cauterization of Cervix	1	Thoracoscopy	5
Spinal fusion	5	Removal of Foreign Body	1
Confinement	1		

EXPENDITURES, DIVISION OF TUBERCULOSIS HOSPITALIZATION
 COLORADO STATE DEPARTMENT OF PUBLIC WELFARE, 1949

Total amount expended for patients in Sanatoria.....	\$377,936.62
Amount expended for Out-patient Department.....	\$1,929.13
Amount expended for Transportation.....	805.70
Amount expended for burials.....	1,100.00
	3,834.83
Total gross amount expended.....	\$381,771.45
Patient Days.....	72,124
Cost per person per day.....	\$5.19
Partial reimbursement by patients and relatives.....	7,544.97
Total net amount expended.....	374,226.48