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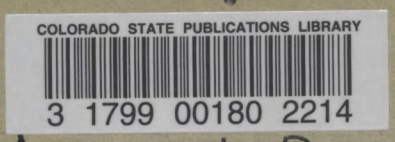

Annual Report of the Division of Tuberculosis Hospitalization

Colo. State Dept. of Public Welfare

Division of Tuberculosis

Hospitalization

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STATE OF COLORADO

Division of Tuberculosis Hospitalization

ANNUAL REPORT

1954

EDWARD N. CHAPMAN, M. D., *Director*

1452 Pennsylvania Street

Denver 3, Colorado

STATE DEPARTMENT OF PUBLIC WELFARE

GUY R. JUSTIS, Director

ED JOHNSON
Governor

DUKE W. DUNBAR
Attorney General

ANNUAL REPORT FOR 1954

The results obtained by the Division of Tuberculosis Hospitalization in 1954 have again been gratifying. The percentage of cases discharged with disease in an inactive or arrested stage is the best to date, as shown in the charts that accompany this report. The percentage of patients who died was the smallest in the history of this Division. Also the percentage of patients leaving against medical advice (13.4) was by far the lowest yet experienced, which is in part a tribute to the work of our medical social department. It is also in part due to the fact that patients are becoming increasingly aware that their disease can be stopped if they cooperate in the excellent treatment now being offered them.

Our patients are now being hospitalized in the following institutions which have been approved by the State Board of Public Welfare and by your Director for the care of state patients.

Colorado General Hospital, Denver
Cragmor Sanatorium, Colorado Springs
Craig Colony, Lakewood, (ambulant care only)
Glockner-Penrose Hospital, Colorado Springs
Lutheran Sanatorium, Wheatridge
Mennonite Hospital, La Junta
National Jewish Hospital, Denver (children only)
St. Mary's Hospital, Grand Junction (temporary care only)
Sunnyrest Sanatorium, Colorado Springs, (ambulant care only)
Swedish National Sanatorium, Englewood

Regular conferences are held with the staffs of these institutions by the Director of the Division and others on his staff. Thus each patient's case is discussed at least once every two months by a group composed of the physician in charge of the patient, a chest surgeon, his head nurse, medical social worker and occupational therapist and by the Director. At some of these conferences a representative of the State Division of Vocational Rehabilitation is also present. Conferences of a similar nature are held once in two months on the cases undergoing care in the Denver Home Care pilot study group. Recently the services of a psychiatrist, Dr. K. V. Kuiper, have been added to a few of the group conferences, and his services have been made available to some of the patients in the Denver area on a consultation basis. This is an important improvement.

These conferences are constructive since they bring together all those individuals with a knowledge of each patient's condition and problems. If the patient is not making satisfactory progress, suggestions are frequently

6727

made for a change in therapy or some surgical procedure. Possibly a request is suggested to his county welfare department for information regarding the condition of the family at home about whom he is worrying.

Who is eligible for care and how it is obtained

Any individual who has **active** tuberculosis and who has lived in Colorado for the past twelve consecutive months (or who has been born in the state in the past year) who is unable to pay for hospitalization, in whole or in part, is eligible under present Colorado law. The individual must sign an application at his local county welfare department, following which the department must make an investigation proving residence and need. Since the cost of hospitalization on a private basis is now so high (usually in excess of $300.00 a month), very few individuals can afford private care for a disease that will require on the average many months or, occasionally, even years of hospitalization. Our county welfare departments are, as a rule, quite liberal in their interpretation of the means test because they have learned the importance of early hospitalization of active cases in order to safeguard the public health and to reduce the cost of care. About ten per cent of our cases pay part of the expense of their care. A recent study indicates that it now takes on the average fourteen days from the time the patient signs his application to the time he is under hospitalization. This time lapse has decreased rapidly in recent years—another sign of increased efficiency by county welfare departments in the handling of cases of tuberculosis.

Table I

TOTAL NUMBER OF CASES GIVEN CARE FOR TUBERCULOSIS

1946	338
1947	343
1948	379
1949	413
1950	442
1951	479
1952	501
1953	541
1954	505

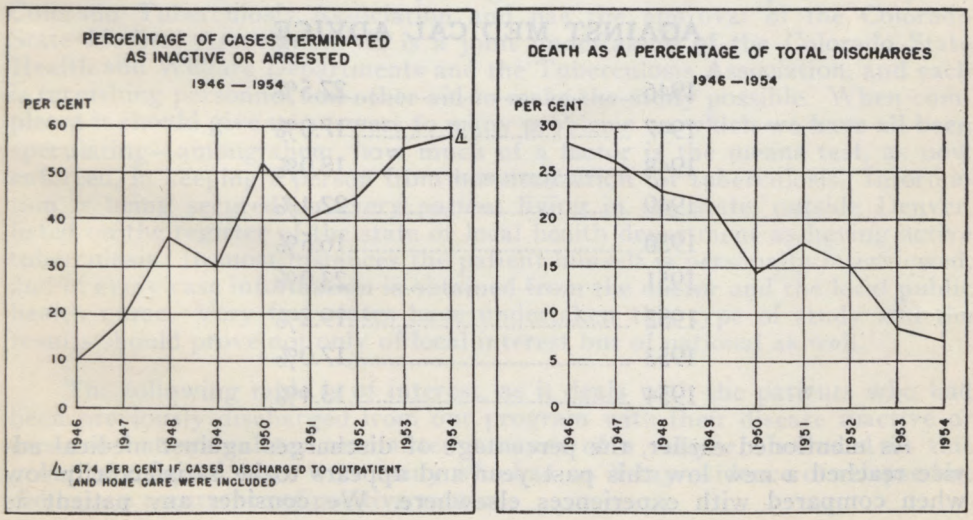
No cases duplicated because of discharge from institution to Home Care or Out Patient.

A total of 505 cases was given care in 1954. This included 438 who underwent hospital care, 41 in the Outpatient department and 15 placed directly in the Denver Home Care pilot study. Some of these Home Care cases had previously undergone hospitalization, but not under our Program.

The total figure of 505 represents approximately a six per cent decline over the case load in 1953, when the figure was at an all time high. At the year end there were twenty-five percent fewer cases under care than at the start of 1954, which is probably a sign that tuberculosis in Colorado is gradually coming **under** control, though it may represent more home care by private physicians. We still have a long way to go before we can reach what can be regarded as a mopping up stage of this disease—if indeed that stage can ever be reached in the foreseeable future. My reason for saying this is that, judging from the present make up of our case load, there is a sizable group of cases in it whose lives have been spared as the result of "wonder" drug therapy or chest surgery, but where irreparable damage had already taken place before hospitalization due to delayed treatment. These individuals will need very long care because they are respiratory cripples. There is another group of patients, fortunately rather small, in whom it has been impossible to get rid of a positive sputum, despite all known "cures" or because some of them are too old for surgery and drug therapy alone has not been enough. There is increasing evidence that bed rest, and fairly strict bed rest at that, is essential in combination with the drugs and possibly surgery also. The pendulum has swung, in recent years, away from the old and tried methods and we have expected streptomycin, PAS and isoniazid to do everything. Better results seem to be obtained in the institutions to which we send patients where bed rest is emphasized in connection with drug therapy than in some of the others where our patients have only "rest periods" plus the anti-tuberculosis drugs. We have observed marked chest X-ray improvement in individuals who had become stationary by X-ray under drug therapy but who still showed extensive X-ray infiltration, when strict bed rest was added with no change in drug therapy.

Of the pulmonary cases admitted in 1954, 16% were minimal, 36% were moderately advanced and 48% were far advanced.

CHART A



It has been urged by some that a home care program be set up by this Division throughout the state. This seems unwise for several reasons. **First** this is a Division for Tuberculosis **Hospitalization** and it would be difficult to expand our facilities to effectively handle a home care program. **Second,** home care is not expensive and few patients need assistance to finance treatment at home. **Third,** and by far the most important, there is increasing evidence that home care is a very poor substitute for institutional care. Experience in other parts of the country indicates that a home care program will undermine good institutional care. Many patients will not go to a tuberculosis hospital if they can receive care at home; or, if already in a hospital, many will leave against medical advice if they can receive care at home. The poor results of home care, as yet, do not justify this hazard.

Patients on home care sometimes forget to take their medication and this hastens the development of drug resistance. They are dangerous to other members of the family and may infect them with tubercle bacilli that are drug resistant. If surgery is indicated (and about 25% of cases can be helped by surgery), they are apt to refuse because they have not been able to observe the good results of surgery as they would have done if they had had previous hospital experience. There is far less chance of converting a positive sputum to a negative sputum under home care, most observers testify. The case that becomes worse under home therapy is very difficult to persuade to enter an institution, in our experience. All in all, the disadvantages of home care seem to outweigh the only advantage, which is less cost; and even this one advantage disappears if everything does not go well and his disease does not heal or if the patient passes on his tuberculosis, while at home, to those about him. Our results from institutional care, as shown in the tables in this report, are just too good to trade for a home care program where the results, at best, are not as good.

Table II

PERCENTAGE OF TOTAL DISCHARGES LEAVING AGAINST MEDICAL ADVICE

1946	27.5%
1947	17.0%
1948	18.0%
1949	22.4%
1950	16.5%
1951	23.0%
1952	19.2%
1953	17.0%
1954	13.4%

As mentioned earlier, the percentage of discharges against medical advice reached a new low this past year and appears to be satisfactorily low when compared with experiences elsewhere. We consider any patient as

having left the program against medical advice who leaves an institution and is not rehospitalized under our program in another institution within 30 days. Cases are not returned to the institution they left, but are usually rehospitalized in another hospital or sanatorium removed from the previous environment which may have been a disturbing factor. If those patients who left against advice, but were rehospitalized in one to thirty days under our program, were included in the against medical advice rate, the percentage would rise to 20%—still only two-thirds the national average. We do not have, in Colorado, a compulsory hospitalization law. Where such a law exists, it has been found to be a potent factor in reducing the leaving against medical advice rate.

Even better planning for the family by the county welfare departments than now exists would undoubtedly aid in reducing the number of patients who leave against medical advice. Where there are children in the patient's family, we find that frequently the local child welfare workers are not consulted. Mothers particularly worry about their children at home, and this worry is the most common cause of leaves against medical advice among women. It is uneconomic to have a mother leave, since usually the money already spent is largely wasted and all the work that went into her hospitalization lost. Also renewed effort in education of the family by public health nurses as to the need for the patient to remain in the hospital would help reduce the leaving against medical advice rate. The cultural pattern among Spanish Americans may lead the husband to insist upon the wife coming home after the first sign of improvement has taken place.

All our patients have medical social service. Where this is not furnished by the institution itself, it is by members of our own staff. Mrs. Dorothy Adams has capably handled most of our case work in 1954. Miss Gertrude Loos, head of the department, returned in March 1954, from a leave of absence, and has been intensively engaged in a study of unhospitalized cases of active tuberculosis in the state to attempt to find the true reasons why these patients are at home. This study, long overdue, has been sponsored by the Colorado Tuberculosis Association and has the approval of the Colorado State Medical Association. It is a joint undertaking of the Colorado State Health and Welfare Departments and the Tuberculosis Association, and each is furnishing personnel and other aid to make the study possible. When completed it should give us answers to many problems on which we have all been speculating—among them, how much of a factor is the means test, as now enforced, in keeping a person from hospitalization for tuberculosis. Information is being secured on every patient living in the state, outside Denver, listed on the register of the state or local health department as having active tuberculosis. In most instances the patient himself is personally interviewed, and in every case information is obtained from the doctor and the local public health nurse. Very few states have undertaken this type of study and the results should prove not only of local interest but of national as well.

The following table is of interest, as it deals with the patients who had been previously discharged from our program with their disease inactive or arrested but were later readmitted because of a relapse. Included in this group of relapsed cases were many who had no X-ray evidence of relapse but did have a recurrence of positive sputum.

Table III

PER CENT OF CASES DISCHARGED AS INACTIVE OR ARRESTED WHO LATER WERE REHOSPITALIZED IN 1950-1954 INCLUSIVE, FOR RELAPSE

1950	10 %
1951	5.2%
1952	6 %
1953	1.4%
1954	1.4%

In 1950 the old National Tuberculosis Association criteria were used for inactive or arrested, whereas beginning in 1951 the new N.T.A. criteria were used which are much more rigid.. In 1952 isoniazid was first used on our patients. The percentage of relapse is believed low when it is considered that the majority of our patients return to conditions of poor housing and poor nutrition. Some of our county welfare departments have wisely granted an allowance sufficient to provide a high protein diet where the individual has been unable to provide it himself upon discharge.

The net cost of care in 1954, under the Division of Tuberculosis Hospitalization was $570,816.00 which cost was divided equally between the state and the counties from which the patients originated.

The death, early in 1954, of Mr. Earl Kouns, Director of the Department of Public Welfare since its beginning in 1935, was a serious blow for he had shown a special interest in this division. His understanding of our problems and encouragement had been of very great value.

I want to take this opportunity to acknowledge my indebtedness to my associates and to members of my staff for their devotion to their work and for their assistance during the year. Especially is appreciation due to Dr. James J. Waring, our chief medical consultant, and to the chest surgeons, Doctors Robert Brown, William Condon, Fred Harper and Hugh MacMillan who have served our cases so well at the Colorado General Hospital and without compensation for their skill.

I also want to thank the members of the Colorado State Board of Public Welfare and the new Director of the Department, Mr. Guy Justis, for their unfailing support of the work of our Division during the year. It would be difficult to envision a finer cooperation.

SURGICAL PROCEDURES PERFORMED ON TUBERCULOSIS PATIENTS COLORADO STATE DEPARTMENT OF PUBLIC WELFARE

1954

PROCEDURE	NUMBER	PROCEDURE	NUMBER
Appendectomy	1	Dilation and Curettage	3
Arthroplasty of Hip	3	Excision of Breast Tumor	2
Arthrectomy (Shoulder)	2	Lobectomy and Partial Resection	19
Arthroplasty of Wrist	1	Lung Excision	1
Artificial Joint in Hip	1	Nephrectomy	3
Aspiration of Ankle	1	Open Reduction and Nailing Fractured Hip	1
Biopsy (Cervical Node)	1	Pneumonectomy	4
Cataract	1	Prostatectomy	2
Cavernostomy	1	Rib Resection and Drainage	4
Cholecystectomy	1	Scapulectomy (Partial)	1
Costotransversectomy	1	Skin Graft	1
Cyst opened	1	Spinal Fusion	4
Cyst removed	2	Thoracoplasty (Chiefly Tailoring)	10
Delivery	4	Ureteral Dilation	1

EXPENDITURES DIVISION OF TUBERCULOSIS HOSPITALIZATION COLORADO STATE DEPARTMENT OF PUBLIC WELFARE

1954

Total amount expended for patients in sanatoria		$552,732.87
Amount expended for Outpatient Department	$5,569.78	
Amount expended for transportation	1,025.86	
Amount expended for burials	270.00	
Amount expended for Home Care	4,870.00	11,735.64
Total gross amount expended		$564,468.51
Patient days	73,816	
	$ 7.50	
Partial reimbursement by patients and relatives		6,347.89
Total net amount expended		$570,816.40

TUBERCULOSIS HOSPITALIZATION

ANNUAL STATISTICAL REPORT

Year — 1954

PART I

A. APPLICATIONS

1.	Pending December 24, 1953		12
	a. New	11	
	b. Readmission (out less than 6 months)	---	
	c. Reopened (out over 6 months)	1	
2.	Received during 1954		240
	a. New, never previously hospitalized	179	
	b. Readmission	30	
	c. Reopened	31	
3.	Total		252
4.	Disposed of during 1954		247
	a. Approved, placed in sanatorium	210	
	New	160	
	Readmission	25	
	Reopened	25	
	b. Approved for home care	15	
	New	9	
	Readmission	4	
	Reopened	2	
	c. Denied	22	
	(1) Application withdrawn by county	6	
	(2) Disapproved	10	
	(3) Patient died before approval	1	
	(4) Refused hospitalization	3	
	(5) Denied for home care	2	
5.	Pending December 24, 1954		5
	a. Approved for admittance to sanatoria at later date	3	
	b. Approved for home care at later date	1	
	c. No action taken	1	

PART II. CASES UNDER CARE

SANATORIA CARE

6.	Cases under care in sanatoria December 24, 1953		228
7.	Placed under care during the year		210
	a. New, never previously hospitalized	160	
	b. Readmission	25	
	c. Reopened	25	
8.	Total cases		438
9.	Cases terminated during the year		276
	a. Discharged	172	

	Pul.	Renal	Bone	Perito-nitis	Pulmonary + Meningeal	Total		
(1) Inactive	44	....	....	1	....	45		
(2) Arrested	111	2	1	....	1	115		
(3) Active	12	....	....	....	....	12		
b. Death							20	
c. Left against advice							37	
d. Disciplinary							10	
e. Transferred to outpatient							20	
f. Discharged to home care							6	
g. Nontuberculous							4	
h. No longer in need of assistance							7	
10. Cases under care December 24, 1954								162

HOME CARE

11.	Cases under care December 24, 1953		11
12.	Added during 1954		21
	a. Placed directly in home care	15	
	(1) New, never previously hospitalized	9	
	(2) Readmission	4	
	(3) Reopened	2	
	b. Transferred from sanatoria (same as 9f)	6	
13.	Total		32
14.	Cases terminated during 1954		19
	a. Discharged	15	

	Pulmonary	Glandular	Total		
(1) Arrested	5	1	6		
(2) Inactive	7	....	7		
(3) Active	2	....	2		
b. Disciplinary				2	
c. No longer in need of assistance				1	
d. Transferred to sanatoria				1	
15. Cases under care December 24, 1954					13

OUTPATIENT

1.	Cases in outpatient December 24, 1953		41
2.	Added during 1954		20
	a. Placed directly in outpatient	---	
	b. Transferred from sanatoria (same as item 9e, Sec. II)	20	
3.	Total		61
4.	Terminated during 1954		27
	a. Discharged	17	
	b. Transferred to sanatoria	10	
	(1) Never previously hospitalized	---	
	(2) Readmitted	10	
5.	Cases in outpatient December 24, 1954		34

TUBERCULOUS PATIENTS RECEIVING CARE IN SANATORIA AND OUTPATIENT DEPARTMENTS COLORADO STATE DEPARTMENT OF PUBLIC WELFARE, BY COUNTIES, 1954

County	January 1, 1954			Placed during 1954			Total 1954		
	Sanatoria	Outpatient	Home care	Sanatoria	Outpatient	Home care	Sanatoria	Outpatient	Home care
Total	228	41	11	**210	20	21	438	61	32
Adams	4	....	....	4	1	....	8	1	....
Alamosa	....	2	....	2	....	....	2	2	....
Arapahoe	5	....	....	1	....	....	6	....	....
Archuleta	1	....	....	....	....	....	1	....	....
Bent	2	....	....	1	....	....	3	....	....
Boulder	9	1	....	11	1	....	20	2	....
Chaffee	1	....	....	2	....	....	3	....	....
Clear Creek	1	....	....	....	....	....	1	....	....
Conejos	....	....	....	1	....	....	1	....	....
Costilla	1	....	....	....	....	....	1	....	....
Crowley	....	....	....	2	....	....	2	....	....
Delta	1	....	....	1	....	....	2	....	....
Denver	87	11	11	79	10	20	166	21	31
Elbert	....	1	....	....	....	....	....	1	....
El Paso	13	2	....	9	....	....	22	2	....
Fremont	1	....	....	1	....	....	2	....	....
Garfield	2	....	....	2	....	....	4	....	....
Gilpin	....	....	....	1	....	....	1	....	....
Huerfano	2	2	....	4	3	....	6	5	....
Jefferson	8	....	....	5	....	....	13	....	....
Lake	2	....	....	4	....	....	6	....	....
La Plata	3	....	....	1	....	....	4	....	....
Larimer	2	1	....	4	....	....	6	*1	....
Las Animas	6	1	....	7	1	....	13	2	....
Mesa	10	....	....	9	1	....	19	1	....
Moffat	....	....	....	1	....	....	1	....	....
Montezuma	1	....	....	1	....	....	2	....	....
Montrose	2	....	....	4	....	....	6	....	....
Morgan	....	....	....	3	....	....	3	....	....
Otero	10	3	....	10	....	....	20	3	....
Ouray	....	....	....	1	....	....	1	....	....
Pitkin	....	....	....	1	....	....	1	....	....
Prowers	2	4	....	2	....	....	4	4	....
Pueblo	26	7	....	18	1	....	44	8	....
Rio Blanco	3	....	....	....	....	....	3	....	....
Rio Grande	4	1	....	5	....	....	9	1	....
Routt	1	1	....	....	....	....	1	1	....
Saguache	3	....	....	2	....	....	5	....	....
San Juan	1	....	....	1	....	....	2	....	....
Sedgwick	1	....	....	....	....	....	1	....	....
Teller	....	....	....	1	....	....	1	....	....
Washington	1	....	....	....	....	....	1	....	....
Weld	12	3	....	9	2	1	21	5	1
Yuma	....	1	....	....	....	....	....	1	....

*One case transferred from Yuma to Larimer during 1954 not included.
**Because of re-admissions, this figure represents only 203 persons.

TUBERCULOUS PERSONS PLACED UNDER CARE
COLORADO STATE DEPARTMENT OF PUBLIC WELFARE
BY AGE AND STAGE 1954

AGE	TOTAL CASES	PULMONARY									NON-PULMONARY					
		Total Pulmonary	Minimal	Moderately advanced	Far advanced	Silico	Miliary	Primary	Pulmonary + other TB complications	Evaluation	Glandular	Bone	Meningeal	Renal	Peritonitis
Total	210†	191	26	58	78	1	4	19	5	1	1	5	3	8	1
0- 9	27	24	3	1	1	....	1	18	....	....	....	....	3	....	....
10-19	13	12	5	4*	2	....	....	1	....	....	....	....	....	1	....
20-29	23	22	5	9	7	....	1	....	....	....	1	....	....	....	....
30-39	31	23	4	5	13	....	....	....	1	....	....	3*	....	4*	1
40-49	35	33	3	10	17*	1	....	....	2	1	....	....	....	1	....
50-59	37	36	2	13**	19*	....	....	....	2	....	....	....	....	1	....
60-69	30	27	1	12	13	....	1	....	....	....	....	2	....	1	....
70-79	12	12	3	3	5	....	1	....	....	....	....	....	....	....	....
80 and over	2	2	....	1	1	....	....	....	....	....	....	....	....	....	....

†Represents only 203 persons.

*Each star represents a duplication in the count because of patients re-entering sanatoria during 1954.

OCCUPATION OF PATIENTS HOSPITALIZED IN 1954

	Per cent
Total	100.00
Housewives	21.43
None	19.52
Semiskilled labor	17.14
Unskilled labor	12.38
Office and sales people	8.10
Food handlers and service	7.62
Agricultural	5.24
Skilled labor	4.76
Professional, managers, and proprietors	3.81

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