

## **Annual report of the Department of Public Health, Province of Alberta.**

### **Contributors**

Alberta. Department of Public Health.

### **Publication/Creation**

Edmonton : Queen's Printer, [1933]

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ANNUAL REPORT  
OF THE  
**Department of Public Health**  
PROVINCE OF ALBERTA  
INCLUDING  
**Vital Statistics Branch**  
**1933**

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PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

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EDMONTON:  
PRINTED BY W. D. McLEAN, KING'S PRINTER  
1935





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Edmonton, December 15, 1934.

To His Honour

W. D. WALSH,

*Lieutenant Governor of the Province of Alberta.*

SIR,—

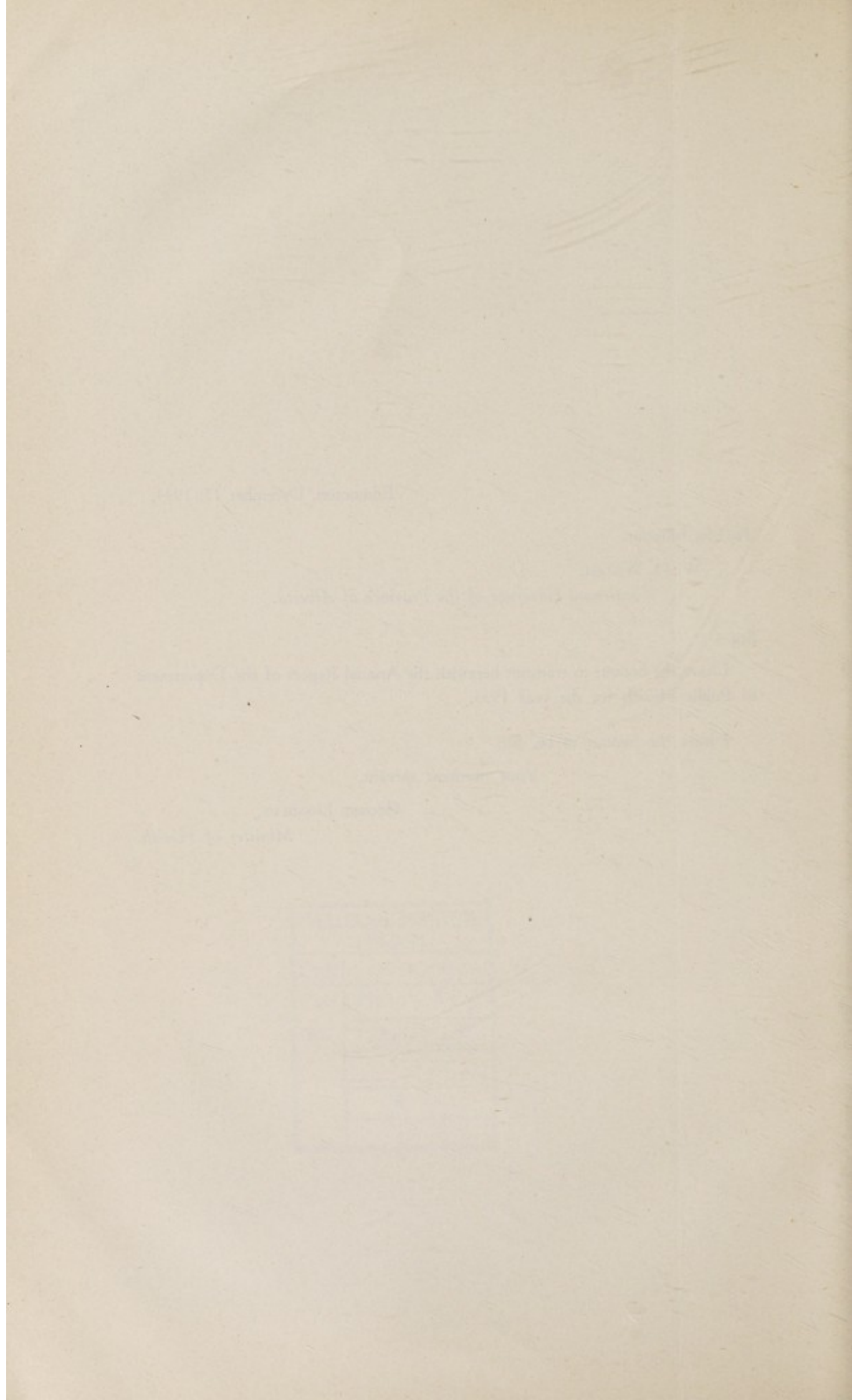
I have the honour to transmit herewith the Annual Report of the Department of Public Health for the year 1933.

I have the honour to be, Sir,

Your obedient servant,

GEORGE HOADLEY,

*Minister of Health.*



Edmonton, December 15, 1934.

TO THE HONOURABLE GEORGE HOADLEY,  
*Minister of Health,*  
Parliament Buildings, Edmonton, Alberta.

SIR,—


I have the honour to submit herewith the Fifteenth Annual Report of the Department of Public Health.

I have the honour to be, Sir,

Your obedient servant,

MALCOLM R. BOW, M.D., C.M., D.P.H.,  
*Deputy Minister.*





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FIFTEENTH ANNUAL REPORT OF THE  
PROVINCIAL DEPARTMENT OF PUBLIC HEALTH, INCLUDING  
THE VITAL STATISTICS REPORT

THE DEPARTMENT

*Divisions:*

1. Communicable Diseases.
2. Public Health Education.
3. Hospital Inspection.
4. Laboratory.
5. Public Health Nursing.
6. Municipal Hospitals.
7. Social Hygiene.
8. Sanitary Engineering and Sanitation.
9. Dental Hygiene.
10. Mental Health:
11. Institutions: Provincial Mental Hospital, Ponoka.  
Provincial Mental Institute, Oliver.  
Provincial Training School, Red Deer.  
Psychopathic Ward, University Hospital.  
Provincial Auxiliary Hospital, Claresholm.  
Central Alberta Sanatorium, Calgary.
12. Vital Statistics Division.
13. General Administration.

A report giving a summary of the work of each of these divisions is included herewith.

THE ADVISORY COMMITTEE OF HEALTH

No meeting of the Advisory Committee of Health was held during the year.

REGULATIONS PASSED DURING THE YEAR

*Public Health Regulations.*

Re: Embalmers, passed August 14, 1933.

Re: Dentists—association of a dentist with a dental mechanic, passed June 26, 1933.

Re: The Hospitals Act—making reciprocal arrangements with the Province of Saskatchewan covering responsibility for certain residents of one province who are admitted to hospitals in the other province, passed March 18, 1933.

Re: The Hospitals Act—Section 46, covering submission of all specimens removed at operation to the Provincial Laboratory, was suspended April 22, 1933.

Re: The Mental Defectives Act—Provincial Mental Institute, Oliver, named as an Institute for care of mentally defective persons, June 26, 1933.

LEGISLATION PASSED DURING THE YEAR

*The Mental Diseases Act, Amendment Act, 1933.*

The Director or Superintendent is empowered to approve an order for the removal of a patient to an institution without waiting to inspect the actual certificates upon which the Justice of the Peace makes the order.

The Director is given authority to remove any patient in a psychopathic ward to any other hospital by order of the Attorney General or upon the



certificate of two medical practitioners and the direction of a Justice of the Peace.

*The Mental Defectives Act, Amendment Act, 1933.*

The Superintendent is given additional powers in discharging or releasing on parole any patient in an institution.

The period of residence in a municipality to make such municipality liable for the maintenance of a mental defective under The Child Welfare Act, is changed from one year to not less than six consecutive months.

The Minister may, upon the recommendation of the Superintendent, order the removal of a mental defective from one institution to another.

*The Public Health Act, Amendment Act, 1933.*

The Provincial Board of Health, with the approval of the Lieutenant Governor in Council, is given additional powers of regulation with respect to mausoleums, also power to make regulations as to the responsibility of local boards with respect to communicable diseases and as to persons infected with tuberculosis.

The Provincial Board may by regulation delegate to a local board such powers and authority of the Provincial Board as may be necessary to enable the local board to carry out the provisions of the Act.

*The Municipal Hospitals Act, 1929, Amendment Act, 1933.*

Where by any scheme provision is made by which a resident of the district who is not a ratepayer may become entitled to hospitalization in the hospital of the district at a fixed per diem fee upon payment of an annual sum, in case such resident has in any year become so entitled, and in any subsequent year ceased to be so entitled, the Board may in any subsequent year add to the amount of the annual fee payable by the resident a sum not in excess of the aggregate of the annual sums for all the years which have elapsed since the year he was last entitled.

The Minister is empowered to transfer any area included in a hospital district to any other hospital district without a vote of the ratepayers, upon being requested so to do by petition signed by sixty-five per centum of the resident ratepayers of the area and with the consent of the Board of the district from which the area is to be transferred and of the Board of the district to which the area is to be transferred.

Provision is made for the appointment of auditors and for the prescribing of their duties.

Upon the receipt of a petition signed by not less than twenty-five per centum of the resident ratepayers of any included area, the Minister may by Order appoint a Returning Officer and provide for the taking of a poll of those persons resident in the included area who are entitled to vote upon the following question, namely:

"Are you in favour of a proposal whereby—

- (a) any patient who is a resident of that part of (name of municipality) which is included in (name of hospital district) and who is entitled to hospitalization in the hospital of the district at the rate chargeable to a ratepayer shall no longer be personally liable for the payment of the hospital charges at the rate aforesaid in respect of hospitalization received by him; and
- (b) the cost of hospitalization of all such patients not exceeding the aggregate amount chargeable in respect thereof calculated at the rate chargeable to ratepayers shall be added to the portion of the annual expendi-



tures of the hospital district payable by the included area and be levied as a part of the ordinary hospital taxes levied in the included area?

Yes..... No....."

The vote shall be taken in the same manner as nearly as possible as if it were a poll to ratify or reject a hospital scheme, but the Minister may give any contrary or other directions which may seem to him to be necessary or convenient.

If upon the taking of a vote it is made to appear to the Minister that more than sixty-six per centum of all the persons who voted thereon voted in favour of the proposal, he may by Order published in *The Alberta Gazette* declare that from and after a day to be mentioned therein—

- (a) any patient who is a resident of that part of (name of municipality) which is included in (name of hospital district) and who is entitled to hospitalization in the hospital of the district at the rate chargeable to a ratepayer shall no longer be personally liable for the payment of the hospital charges at the rate aforesaid in respect of hospitalization received by him and
- (b) the cost of hospitalization of all such patients not exceeding the aggregate amount chargeable in respect thereof calculated at the rate chargeable to ratepayers shall be added to the portion of the annual expenditures of the hospital district payable by the included area and be levied as a part of the ordinary hospital taxes leviable in the included area.

Upon the making and publication of any Order by the Minister as last aforesaid, from and after the day mentioned therein the cost of hospitalization in the hospital of the district of all patients resident in the included area, not exceeding the aggregate amount chargeable in respect thereof, calculated at the rate chargeable to ratepayers shall be ascertained and fixed by the Board and shall be paid by a levy upon all the property in the included area liable to assessment and taxation for the purposes of this Act; and upon the Board making a requisition upon the contributing council in respect of the included area for that part of the estimate attributed to it, the Board shall add to the amount of the part aforesaid the total amount of the hospitalization costs of the resident patients of the included area for the previous calendar year and thereupon the amount to be levied and collected by the contributing council for hospital tax pursuant to Section 68 of this Act shall be increased by the amount of the charges for hospitalization added thereto as aforesaid.

In case in any included area any manufacturing or mining industry is carried on, the Board of directors may, at any time before the making of any Order by the Minister under the provisions of this section by resolution, request the Minister to declare the area to be an industrial area, and the Minister may, upon being advised of the passing of any such resolution, if in the circumstances he deems it convenient and proper so to do, declare the included area to be an industrial area accordingly, and thereupon the foregoing provisions of this section shall not apply therein.

*The Public Health Act, Amendment Act No. 2, 1933.*

The Provincial Board may, subject to the approval of the Lieutenant Governor in Council, make and issue rules and regulations providing for the terms and conditions upon which a dentist registered under *The Dental Association Act* may enter into and remain in an association with persons who are dental mechanics and who are not registered under this said Act, and to make rules and regulations governing the conduct of persons so associated.

Any dentist who enters into and remains in an association with a dental mechanic upon terms and conditions approved by the Provincial Board and who conforms with the rules and regulations of the said Board governing the persons



so associated, shall not be deemed to be guilty of any offence of any professional misconduct within the meaning of The Dental Association Act by reason of his being so associated or by reason of anything done by him or his associates in conformity with such rules and regulations.

TABLE No. 1  
DEPARTMENT OF PUBLIC HEALTH

FINANCIAL STATEMENT FOR THE FISCAL YEAR ENDING MARCH 31st, 1934

Div. Vote.	Name.	Salaries.	Expenses.	Revenue.
1. 605.	Communicable Diseases .....	\$ 3,879.61	\$ 11,724.19	\$ 501.55
2. 602.	Public Health Education .....	2,000.00	757.40	.....
3. 603.	Hospital Inspections .....	4,881.51	1,521.41	.....
	Grants .....		382,706.50	.....
4.	Laboratory .....			.....
5. 606.	Public Health Nursing and Clinics .....	26,300.82	6,794.84	2,304.40
6. 608.	Municipal Hospitals .....	3,950.00	796.99	.....
7. 610.	Social Hygiene .....	8,760.19	7,249.80	.....
8. 605.	Sanitary Engineering and Sanitation .....			.....
9.	Dental Hygiene .....	10,510.69	14,569.27	210.00
10. 622.	Mental Hygiene .....	7,475.35	613.75	.....
11.	Institutions:		12,011.94	.....
614.	Prov. Mental Hospital, Ponoka .....	271,215.04	117,131.77	136,641.52
623.	Prov. Auxiliary Hospital, Claresholm .....	7,210.79	5,861.48	1,993.07
612.	Prov. Mental Institute, Oliver .....	74,537.12	31,195.32	31,393.41
613.	Prov. Training School, Red Deer .....	49,630.92	19,683.64	40,135.00
604.	Central Alberta Sanatorium, Calgary .....	113,347.87	54,579.97	112,045.66
619.	University Hospital .....		20,000.00	.....
12. 607.	Vital Statistics .....	14,860.95	4,948.64	35,444.37
611.	Grants to Homes .....		3,500.00	.....
	Administration .....	13,710.97	11,899.22	2,195.48
		<u>\$612,263.83</u>	<u>\$707,546.13</u>	<u>\$362,864.40</u>
	TOTAL—Public Health Administration .....			\$1,319,809.96
	TOTAL—Public Health Revenue .....			362,864.46
	TOTAL—Public Health Net Cost .....			<u>\$ 956,945.50</u>

#### General Health Conditions.

The favourable health conditions experienced during the last three years have been maintained in 1933, so that 1933 takes rank as one of the most satisfactory years in the history of the Province. No serious outbreaks of acute communicable diseases occurred during the year, with the exception of an outbreak of Whooping Cough. Fifty-five deaths were reported from Whooping Cough as compared with 34 deaths from this disease in 1932. Whooping Cough must be regarded as a communicable disease of major importance when one considers the number of deaths for which it is responsible. Of the 55 deaths from Whooping Cough, 48 were of children under three years of age.

Vital statistics registrations during 1933 were as follows: Births, 16,123; marriages, 5,389; deaths, 5,346.

In the following table the number of births and the birth rate, the number of marriages and the marriage rate, and the number of deaths and the death rate for each of the years from 1929 to 1933 is shown:

Year	No. of Deaths	Death Rate	Year	No. of Deaths	Death Rate
1929	6,239	9.65	1932	5,521	7.46
1930	5,396	8.33	1933	5,346	7.06
1931	5,302	7.24			
Year	No. of Births	Birth Rate	Year	No. of Births	Birth Rate
1929	16,924	26.19	1932	16,990	22.96
1930	17,649	26.74	1933	16,123	21.33
1931	17,252	23.57			
Year	No. of Marriages	Marriage Rate	Year	No. of Marriages	Marriage Rate
1929	6,004	9.29	1932	5,054	6.83
1930	5,334	8.08	1933	5,389	7.10
1931	5,142	7.02			

The birth rate for 1933 is the lowest recorded in the history of the Province, and shows a reduction of 1.63 as compared with the birth rate for the previous year. The death rate for 1933 of 7.06 is the lowest on record and is .40



below the death rate for the previous year. These rates are based on an estimated population of 757,000 (the estimate of the Dominion Bureau of Statistics).

The combined death rate (deaths per 100,000 population) for diphtheria, scarlet fever, measles and whooping cough is 9.5, as compared with the rate of 8.3 for 1932 and 17.3, the average rate for the last five years. The decline in the number of cases of and deaths from diphtheria, to which reference was made in the report of 1932, has continued. In 1933 only 32 cases of diphtheria were reported, and 6 deaths were registered as due to this cause, giving a diphtheria death rate of .79 per 100,000 population, the lowest rate ever recorded in the Province. The rate for 1932 was 1.3. Diphtheria can now be practically eliminated in any community if advantage is taken of the means of immunizing children, and particularly children of pre-school age. The toxoid used for the purpose of immunization is supplied free of charge by the Department, and as the procedure is comparatively simple, there is no reason why every child in the Province should not be protected. There are still, however, many districts in the Province in which no action has been taken by local authorities to safeguard the children against this highly dangerous, but entirely preventable disease.

Only one case of smallpox was reported during the year. While smallpox did not present any problem in 1933, the fact that we have a large unvaccinated population in Alberta gives us cause for real concern. When a severe type of smallpox breaks out in an unvaccinated community the result is almost certain to be serious, both for the persons affected and the community. We pay a high price in sickness and death for our indifference to, and neglect of the means of prevention. In the outlying districts 2,323 persons were vaccinated against smallpox and 1,982 inoculated against diphtheria by one of our inspectors who devotes part of his time to this work.

Typhoid fever cases reported during the year numbered 46, and 6 deaths were reported from this disease, giving a typhoid death rate of .79. This marks the lowest rate we have ever experienced. I desire to again emphasize the great risk of utilizing raw water, drawn from streams and irrigation ditches, for domestic purposes. Typhoid carriers present a public health problem of considerable importance, and are doubtless responsible for the sporadic cases of typhoid, the source of which it is frequently impossible to determine.

Influenza was responsible for 223 deaths in 1933, as compared with 297 in 1932. Pneumonia (all forms) was responsible for 327 deaths, as compared with 362 deaths in 1932.

#### *Tuberculosis.*

Three hundred and ninety deaths were reported from tuberculosis in 1933, as compared with 401 deaths in 1932. Of these 390 deaths, 305 were due to pulmonary tuberculosis. The death rate from tuberculosis was 51 per 100,000 population and 40.3 from the pulmonary type of the disease. Excluding deaths of Indians, the total deaths from all forms of tuberculosis in 1933 numbered 207, giving a death rate of 27.8 per 100,000 population.

The total Sanatorium accommodation available for the treatment of tuberculous patients is 230 beds; 382 patients suffering from tuberculosis were admitted to the Sanatorium and 615 to general hospitals during the year. Having in mind the delay which frequently occurs in persons suffering from tuberculosis seeking medical advice, and having in mind the length of time patients requiring Sanatorium treatment have to wait until Sanatorium accommodation is available, and in view of the fact that those suffering from open types of tuberculosis are a menace to the other members of their families, as well as to those with whom they come in contact in the community, this is, in my opinion, the most serious public health problem confronting us today.



*Diseases of the Heart and Circulatory System.*

Diseases of the heart accounted for 749 deaths, or 14.01% of the total deaths registered, and diseases of the circulatory system for 295 deaths, or 5.5% of all deaths registered in the Province in 1933. Of every 1,000 deaths registered, diseases of the heart and circulatory system were responsible for 195. As the age distribution of our population changes and more and more of our people are found in the older age groups, we will experience an increase in the death rate from diseases of the heart and circulatory system.

By means of the medical examination of all children, both school and pre-school, through the correction of the defects so found and through provision for the treatment advised, much can be done to reduce the number of potential victims of heart disease. In this connection I also desire to urge the importance of the periodic medical examination of adults. When all persons attaining 40 years of age make it a rule to have a thorough examination by a competent physician each birthday and act on the advice given, a large number of deaths from diseases of the heart and circulatory system will be prevented or postponed.

*Cancer.*

There were 590 deaths reported from cancer in 1933, an increase of 51 deaths over 1932. The cancer death rate is 79.3 per 100,000 population, as compared with 72.8, the rate for 1932. Cancer accounted for 11% of the deaths registered in 1933, ranking second as a cause of death. It is estimated that not less than 40% of the deaths from cancer could be prevented if all cases could be discovered in the earliest stages and given prompt and efficient treatment.

As in previous years, the Department has co-operated with the Cancer Committee of the Alberta Medical Association in connection with its educational programme. There were 695 reports on cancer cases submitted by physicians and hospitals during the year, and a summary of the information contained in these reports has been prepared by the Department.

*Deaths by Violence.*

Deaths due to violence (suicides excepted) numbered 378, or 7% of the total deaths registered in 1933, ranking as the third principal cause of death.

In the following tables the deaths by violence are classified:

TABLE 1

Homicides .....	12
Attack by venomous animals .....	2
Food poisoning .....	1
Accidental absorption of toxic gases .....	8
Other acute accidental poisonings (except by gas) .....	5
Conflagration .....	16
Accidental burns (conflagration excepted) .....	26
Accidental mechanical suffocation .....	8
Accidental drowning .....	51
Accidental injuries by firearms .....	22
Accidental injuries by cutting instruments .....	6
Accidental injuries from falling, crushing or landslides .....	172
Cataclysm .....	1
Injuries inflicted by animals .....	18
Hunger or thirst .....	1
Excessive cold .....	8
Excessive heat .....	2
Accidental electric shocks .....	2
Other accidents .....	14
Violent death (accident, suicide or homicide), unknown .....	1
Capital punishment .....	2

TABLE 2

## SPECIAL CLASSES OF ACCIDENTAL DEATH INCLUDED IN THE TABLE ABOVE

Accidents in mines and quarries .....	7
Accidents caused by machines .....	21
Railways accidents .....	16
Street car accidents .....	0
Automobile and motor cycle accidents .....	64
Other land transportation .....	24
Water transportation .....	7
Air transportation .....	1



Accidental injuries by falls accounted for 101 deaths and transport (chiefly highway accidents) for 112 deaths, and drowning for 51 deaths. These three accounted for 72% of all violent deaths registered in 1933.

When we consider the number of deaths due to highway accidents, namely 88, we realize the need of a well planned campaign of education in this field. By means of education, regulation and the careful planning of highways much can be done to prevent highway accidents and to reduce the large number of preventable deaths from this cause.

The number of deaths from suicides was 85, as compared with 96 deaths from this cause in 1932, a reduction of 11.4%.

#### *Infantile Mortality Rate.*

Deaths of children under one year of age numbered 966, as compared with 997 in the previous year. The infantile mortality rate for 1933 is 59.9 as compared with 58.6, the rate for 1932, and 69.08, the average rate for the five-year period 1928 to 1932. We have pointed out in previous years that the infantile mortality rate in the rural districts and the towns and villages is, generally speaking, considerably higher than the rate in the larger cities in which full time public health service is available. In 1933 the average infantile mortality rate for the rural districts was 65.2, and for the cities of the Province 48.1. Of the 966 deaths of children under one year of age, 383 occurred within the first week of life and 547 within the first month. The principal causes of infantile deaths were as follows:

Prematurity .....	249
Respiratory .....	140
Gastro-intestinal .....	88
Acute contagious .....	100

The need of full time local health services in our rural districts, including towns and villages, becomes evident from a study of the causes of infantile deaths in these districts. It would be quite conservative to say that not less than one-third of these deaths could be prevented were an adequate full time local health service available throughout the Province.

#### *Maternal Mortality.*

Seventy-three deaths of women were registered in 1933 as due to conditions associated with childbirth. This represents the deaths of 4.53 mothers for every 1,000 births as compared with a maternal death rate of 3.76 in 1932, and 5.41, the average death rate for the five-year period 1929 to 1933. When more adequate pre-natal as well as post-natal care is available in every part of the Province, it will be possible to show a material reduction in the maternal mortality rate. The establishment of full time rural health units in which such care is included as a part of the local health programme is the logical way of dealing with this problem.

#### *Full Time Health Districts.*

The work of the Red Deer and the Foothills Full Time Health Districts, which were established on June 1, 1931, has been conducted along the same lines as in previous years. The staff of each of these units is composed of a medical officer of health who has received special training in public health to qualify him for his duties, two graduate nurses with special training in public health nursing, one sanitary inspector with special training and experience in this work, whose time is divided between the two units, and one stenographer who has been trained as a laboratory-technician, and is responsible for the office work and the keeping of records.

These two full time health units were established as demonstration units for the purpose of determining whether, through the operation of such units, a



solution could be found for the health problems of our rural districts and smaller urban centres. Each unit has been fortunate in the selection of a competent staff, and the work has gone forward in a very satisfactory manner.

The following is a summary of the work of each of the units for the year 1933:

	Foothills (High River)	Red Deer
<b>EDUCATIONAL:</b>		
Lectures .....	79	245
Attendance at above .....	2,206	2,188
Letters .....	2,104	1,877
Conferences .....	130	600
<b>SANITATION:</b>		
Inspections, public and private premises .....	1,160	729
<b>CHILD HYGIENE:</b>		
Babies and pre-school children examined .....	899	690
School visits .....	129	435
School children examined .....	2,574	1,985
Home visits .....	291	184
<b>LIFE EXTENSION EXAMINATIONS</b> .....	249	254
<b>COMMUNICABLE DISEASES:</b>		
Visits to cases and contacts .....	104	215
<b>TUBERCULOSIS:</b>		
Cases examined .....	64	124
Visits to homes .....	3	151
<b>IMMUNIZATION:</b>		
Diphtheria inoculations .....	675	1,917
Smallpox vaccinations .....	864	654
<b>LABORATORY EXAMINATIONS:</b> .....	766	578

#### *Public Health Educational Work.*

Notwithstanding the reduction in funds available for travelling, and for the purchase of educational material, the programme in health education carried out in 1933 was an extensive one. As in previous years, by means of lectures, exhibits, radio talks and the distribution of public health literature, the value of preventive health measures has been stressed. By greatly improving the Public Health Education division as a bureau of information, it has been possible to serve more people than in any previous year. During the year a total of 162 lectures was given in 75 places, at which the total attendance was 31,671. The subjects of the lectures included health habits, sanitation, communicable diseases, food, child welfare, sex hygiene, mental hygiene and social hygiene. Radio health talks were broadcast over CKUA every second week during the fall, winter and spring months. Eleven monthly health bulletins were published by the Department during the year and distributed to all local boards of health in the Province. Health educational work is of fundamental importance, and the Department is faced with an increased demand each year for the extension of this service.

#### *Public Health Nursing and Child Welfare.*

A public health nurse is in charge of each of the following Child Welfare Clinics: Edmonton, Calgary and Medicine Hat, and devotes her whole time to the work of the clinic. Local physicians giving special attention to pediatrics are in attendance at these clinics each week; 14,162 children were examined at these clinics, and 7,925 home visits were made by the nurses. Owing to the reduction in funds available it was necessary to reduce the services of the Travelling Child Welfare Clinic. During the summer months this clinic visited 32 centres, at which 748 babies and pre-school children were examined. As in previous years public health nurses served each of the following municipalities: Norma Municipal District No. 515, with Vegreville as a centre; Marquis Municipal District No. 157, with Milo as a centre; and Richdale Municipal District No. 274, with Stanmore as a centre. A generalized public health nursing service is given by the public health nurses stationed in these districts.



District physicians on the staff of the Department provided service in two outlying districts and district nurses in six outlying districts. The following districts were served by district physicians: Fort Vermilion, Notikewin, and the following by district nurses: Worsley, Valley View, Kinuso, Jarvie, Pendryl and Peers. These district physicians and nurses stationed in pioneer communities remote from hospital and medical services are engaged in a service which demands a strong physique and a high degree of courage, initiative and skill.

A detailed statement of the work of the Public Health Nursing Division is submitted in the report of this division.

#### *Social Hygiene.*

The work of this division, which has been very heavy during recent years again shows an increase over the previous year. As a result of economic conditions during recent years many patients who had been under treatment by private physicians are no longer able to pay for such service and now come to the Provincial clinics. The total number of cases of syphilis under treatment at all Provincial clinics in 1933 was 1,043, and the total number of cases of gonorrhoea 1,211.

As in previous years special attention has been directed to the early detection of neuro-syphilis and cardio-vascular syphilis, the two types of the disease which cause the greatest economic loss through incapacitation and early death. During the year the neurological examination of 500 syphilitic individuals was completed. We believe that this work will produce a marked reduction in the incidence of symptomatic neuro-syphilis in the years to come, and should result in a reduction in the number of cases of general paralysis of the insane admitted to our institutions.

#### *The Provincial Laboratory.*

The report of the Director of the Provincial Laboratory indicates that 63,203 examinations were made during the year. The work of the Provincial Laboratory includes the examination of water, ice, sewage and milk, the examinations required in connection with communicable diseases, examination of pathological material submitted by hospitals, chicken and cattle blood examinations, medico-legal examinations, post-mortem examinations and a number of other examinations too numerous to detail.

In addition, the Provincial Laboratory functions as a centre for the distribution of all vaccines and sera used in the prevention and treatment of communicable diseases. A highly efficient service is rendered by the laboratory staff to local boards of health, hospitals and physicians, which is of prime importance in safeguarding the public health. The commercial value of the work done free of charge by the laboratory in 1933, if minimum charges only had been made for the service, was \$132,424.60.

#### *Sanitary Engineering and Sanitation.*

All plans and specifications submitted to the Provincial Board of Health for waterworks, sewerage and sewage disposal plants as required under The Public Health Act were examined and, where approved, certificates were issued for the same. A statement of the works for which approval has been given will be found in the report of the Sanitary Engineering Division. Typical plans dealing with sewage disposal, heating, ventilation, water filtration, etc., have been prepared and distributed to those requesting information on these subjects. During the year 1,452 reports on the analyses of water and ice were received from the Director of the Provincial Laboratory. These were examined and, where necessary, action in the matter of prohibiting the use of the supply, was taken, or an investigation made for the purpose of advising as to a remedy.



We would again call attention to the great danger to the public in the use of untreated water drawn from streams and irrigation ditches. It is a matter of vital importance that municipal authorities should in their own interests as well as in the interests of their citizens take such steps as are necessary to provide safe water supplies. We also desire to draw attention to the responsibility of municipal authorities for the control of local milk supplies. Failure to exercise proper supervision and control over milk supplies invites epidemics of milk borne diseases. Two hundred and eighteen districts in the Province were visited and inspected by Departmental sanitary inspectors, and of these 74 were re-inspected; 63 lumber, tie, saw-mill and mining camps were also inspected during the year. There is a great need for the extension of the sanitary inspection service as soon as more funds can be made available. Municipal authorities have taken full advantage of the services of the sanitary inspectors, but with the very limited staff engaged in this work it has not been possible to give the time which should be given to follow-up work.

#### *Dental Hygiene.*

Dental treatment was provided for the patients in all Provincial institutions as in previous years.

While the Travelling Clinic was not sent out in 1933, a dental clinic was sent out on a limited itinerary which included six outlying points; 467 children were examined and 285 given dental treatment by the clinic. There is a great need for such service in our outlying districts.

#### *Hospital Inspection.*

There are 86 approved hospitals in the Province in receipt of the Government grant. Fifty-nine private hospitals were licensed under the provisions of The Private Hospitals Act, of which 11 were licensed as baby shelters. All hospitals were inspected during the year. The number of operations reported by hospitals in 1933 was 21,775, and the number of deaths following operations 444, giving a mortality rate of 2.04%. Splendid co-operation has been given by the management and the staffs of the hospitals in carrying out the requirements of The Hospitals Regulations. The difficult conditions of recent years have made it a serious problem for hospitals to maintain efficient service in face of the necessity of exercising the strictest economy. The hospitals of the Province deserve great credit for the way in which they have met the situation.

The total capacity of the approved hospitals, including the Central Alberta Sanatorium, is 4,565 beds, divided as follows: General 2,375, maternity 646, infants 630, isolation 281, tuberculosis 304, pediatrics 329. This represents one bed for every 165.8 of the population, or six beds per thousand population. Patients treated during the year numbered 64,697, representing 8.5% of the population of the Province. The average length of stay in hospital was 12.8 days. Excluding the Sanatorium, isolation, orthopedic and pension cases, the average length of stay was 11.3 days. The average cost per patient per day, excluding capital charges, for all approved hospitals was \$2.97 as compared with \$3.14, the average for 1932. Statements giving detailed statistical information in regard to the administration of approved hospitals will be found in the report of the Hospitals Division.

#### *Municipal Hospitals.*

There was no change in the number of municipal hospitals operated in 1933. The 22 municipal hospitals provided accommodation for 758 patients, including babies, and 14,958 patients were treated during the year. A detailed statement giving statistical information in regard to the operation of municipal hospitals will be found in the report of the Hospitals Division. In common



with other hospitals, municipal hospital authorities have had to carry on in face of very difficult economic conditions during recent years, but have faced their difficulties courageously, making every effort to give the best service possible with the funds available.

#### *Central Alberta Sanatorium.*

As in former years, the medical staff of the Sanatorium has provided a diagnostic service for the tuberculosis clinics held at the Sanatorium and in Calgary weekly, and for the Edmonton clinic, which is held fortnightly. Tuberculosis clinics were also held during the year in Medicine Hat, Lethbridge, Drumheller, Red Deer Health Unit and the Foothills Health Unit, High River. The annual survey was made at the Blood Indian Reserve near Cardston, 266 children being examined. A total of 1,438 persons were examined at all clinics during the year, and 102 new cases of tuberculosis diagnosed at these clinics. The extension of the diagnostic service is an urgent need, as is also the provision of increased accommodation for patients discovered through the clinics, and particularly those who are spreaders of infection.

#### *Mental Health Division.*

TABLE No. 1  
MOVEMENT OF PATIENTS—MENTAL INSTITUTIONS, 1933

	On Books Jan. 1, 1933		Admissions during 1933		Discharges during 1933		Deaths during 1933		On Books Dec. 31, 1933	
	Insane	Mental Deficients	Insane	Mental Deficients	Insane	Mental Deficients	Insane	Mental Deficients	Insane	Mental Deficients
Oliver .....	407	17	*16	0	†8	0	8	0	407	17
Ponoka .....	1161	56	425	38	‡363	26	61	4	1162	64
Red Deer .....	0	190	0	38	0	16	0	5	0	207
Claresholm .....	0	0	95	5	0	0	0	0	95	5
Psychopathic Ward .....	15	0	31	0	44	0	2	0	0	0
Total .....	1583	263	567	81	415	42	71	9	1664	293

\*Included in 16 admissions, 5 transfers from Ponoka.

†Included in 8 discharges, 1 transfer to Ponoka.

‡Discharges included—

(1) 61 cases not psychotic (admitted for malarial treatment, drug addiction, etc.).

(2) 100 cases to Claresholm.

(3) 2 mental defectives admitted from Red Deer for sterilization.

The preceding table shows that there was an increase of 111 in the patient population in Provincial mental institutions during the year. On December 31st, 1933, the patient population stood at 1,957, of which 1,214 were males and 743 females. The ratio of patients to population in Alberta is still well below the average of the other provinces as well as the average for the United States. As this is a ratio which tends to become relatively constant, a further increase in the number of patients making application for admission to the mental hospitals may be expected.

On October 31st and November 2nd, 100 female patients were transferred from the Provincial Mental Hospital at Ponoka to the Auxiliary Hospital, which was established at Claresholm and which was formally opened on November 8th. While this afforded considerable relief in so far as overcrowding in the women's section of the hospital at Ponoka is concerned, the overcrowding in the men's section was even more acute at the end of the year than at the beginning. There is urgent need for a new reception unit fully equipped for the treatment of patients suffering from acute manifestations of mental disease. With such facilities available early mental cases could be cared for in the most suitable surroundings and given the benefit of the most modern methods of treatment.



On May 31st the first group of psychiatric nurses and attendants was graduated from the Provincial Mental Hospital Training School. This event may be said to mark a very important forward step in the history of our mental hospitals.

The patient population at the Provincial Mental Institute at Oliver remained the same at the end of the year as at the beginning, namely, 424. These patients are practically all of the chronic type, 14% having been patients in Alberta mental hospitals for a period of 20 years or more.

Owing to the necessity of further reducing expenditures it became necessary to close the Psychopathic Ward of the University Hospital on March 31st. As noted in the report of last year, the opening of this ward marked an important forward step, and it is to be hoped that improved economic conditions will soon make possible the re-establishment of this service. During the three months this ward was in operation in 1933, 31 patients were admitted, of which number 27 were first admissions and 4 re-admissions; 144 consultations, exclusive of the examinations, were carried out by the Director in charge of this service, Dr. C. A. Baragar.

The accommodation in the Provincial Training School for Mental Defectives at Red Deer was increased by 6 beds during the year, and at the end of the year stood at 210 beds. This institution continues to be filled to the limit of its capacity, and there is a long waiting list, 75% of the patients are of the low grade type and requiring a maximum of nursing care and supervision. The need for increased accommodation is urgent both for patients of the low grade type requiring custodial care and for the higher grades, many of whom by means of proper training could be made largely self-sustaining. There were 36 new patients admitted to the Training School for Mental Defectives—18 male and 18 female patients.

#### *Mental Hygiene Clinics.*

These clinics continue to serve a most useful purpose, and the work has followed much the same lines as in previous years. A new clinic was opened at Medicine Hat on November 17th, and is held quarterly. Clinics are now established in Edmonton, Calgary, Lethbridge and Medicine Hat, but there is an urgent need for the extension of this service as soon as improved economic conditions make this possible. There were 326 new cases presented at the various mental hygiene clinics and 332 follow-ups dealt with, making a total of 658 cases dealt with by the clinics. Since this service was established in 1929, a total of 2,708 cases have been presented.

#### *The Eugenics Board.*

The work of this Board is carried on under the authority of The Sexual Sterilization Act, which was assented to on March 21st, 1928. Four meetings of the Board were held during the year. These included three sessions in Edmonton, four at the Provincial Mental Hospital, Ponoka, two at the Provincial Training School, Red Deer, and two at the Calgary General Hospital. There were 91 cases, of which 35 were male patients and 56 female, presented to and passed by the Board, making a total of 288 cases which have been passed since the Board was constituted in 1929; 72 operations, 22 male and 50 female, were performed during the year, bringing the total number of operations performed since this work was undertaken to 205, of which 48 were male and 157 female cases. This work has gone forward in a most satisfactory manner. The Board has discharged the responsibilities imposed on it under the provisions of The Sexual Sterilization Act, in a most painstaking and efficient way. Our experience in this field has demonstrated the need for such legislation in a mental hygiene programme.

*General Administration.*

A statement of expenditures and revenue for the fiscal year ending March 31st, 1933, is included in this report. An analysis of said statement indicates that out of a total expenditure of \$1,319,809.96, the sum of \$1,170,087.71 was expended for the maintenance and operation of Provincial institutions, grants to approved hospitals and homes and other treatment services. Only \$149,722.25, or approximately 11.3%, of the total funds were expended for preventive public health activities. This means that out of every dollar expended by the Department in 1933, only 11 cents was spent for preventive public health services. There is an urgent need for the expansion of preventive public health work, and it is earnestly hoped that an improvement in economic conditions may soon make this possible.

In concluding this brief review of some of the more salient features of the work of the Department in 1933, I desire to express my sincere appreciation of the splendid co-operation given throughout the year by the directors of the various divisions and their staffs, including the superintendents of our Provincial institutions and all those working under their direction.

All of which is respectfully submitted.

MALCOLM R. BOW, M.D., C.M., D.P.H.,

*Deputy Minister of Public Health.*



## Communicable Disease Division

(A. C. McGUGAN, M.D., *Director*)

The chief function of this division is the prevention of communicable diseases.

During the year educational work has been carried on through the press and by the distribution of literature prepared in the Department. Also a number of public lectures and radio talks on some phase of disease prevention have been given.

The interest evidenced in public health work by individuals, local boards of health and school boards during the past year has been very gratifying indeed. This increased interest is a decided incentive to us in the development of our educational programme.

At the request of local doctors and local boards of health, assistance has been given in the diagnosis of suspected cases of communicable diseases and in problems epidemiological in nature.

Mr. Zalizniak, health inspector, has done a considerable amount of public health work in districts so remote from a doctor that this type of service could not otherwise be obtained. In these districts the health inspector has inoculated 1,982 against diphtheria and vaccinated 2,323 against smallpox. He has also lectured at 19 points.

In connection with vital statistics work, Mr. Zalizniak has visited 33 local registrars and 38 cemetery caretakers.

During the past few years our provincial morbidity and mortality rates from communicable diseases have been decreasing materially. The year 1933 shows a decrease over 1932 in many of the communicable diseases. With interest in public health growing throughout the Province, we may hope for the increased municipal appropriations necessary to maintain an efficient health service. Such appropriations will be reflected in the better health of the community.

TABLE No. 1  
COMMUNICABLE DISEASES AS REPORTED FOR 1932 AND 1933

	1932	1933
Acute Anterior Poliomyelitis .....	39	31
Meningococcic Meningitis .....	2	7
Chickenpox .....	1,594	1,288
Diphtheria .....	51	33
Encephalitis Lethargica .....	3	2
Erysipelas .....	36	53
Rubella .....	267	10
Measles .....	7,382	211
Mumps .....	652	439
Scarlet Fever .....	202	216
Smallpox .....	1	1
Pulmonary Tuberculosis .....	259	216
Typhoid Fever .....	52	46
Paratyphoid Fever .....	6	
Whooping Cough .....	665	1,830
Actinomycosis .....		3
Undulant Fever .....		2

TABLE No. 2  
TOTAL DEATHS DUE TO COMMUNICABLE DISEASES IN THE PROVINCE  
OF ALBERTA DURING THE YEAR 1933

Pneumonia (all forms) .....	327	Whooping Cough .....	55
Influenza (all forms) .....	223	Diphtheria .....	6
Pulmonary Tuberculosis .....	305	Meningococcal Meningitis .....	7
Tuberculosis (all other forms) .....	85	Typhoid Fever .....	6
Erysipelas .....	17	Poliomyelitis .....	7
Scarlet Fever .....	5	Smallpox .....	
Encephalitis Lethargica .....	7	Measles .....	6



TABLE No. 3  
DEATHS DUE TO COMMUNICABLE DISEASES IN THE CITIES OF EDMONTON  
AND CALGARY DURING 1933

EDMONTON		CALGARY	
Pneumonia (all forms)	42	Pneumonia (all forms)	36
Influenza (all forms)	26	Influenza (all forms)	24
Pulmonary Tuberculosis	34	Pulmonary Tuberculosis	14
Tuberculosis (all other forms)	17	Tuberculosis (all other forms)	4
Diphtheria	1	Diphtheria	2
Whooping Cough	6	Whooping Cough	2
Poliomyelitis	1	Poliomyelitis	2
Meningococcic Meningitis	1	Meningococcic Meningitis	1
Typhoid Fever	1	Typhoid Fever	1
Erysipelas	4	Erysipelas	1
Scarlet Fever	1	Scarlet Fever	1
Encephalitis Lethargica	1	Encephalitis Lethargica	5
Measles	1	Measles	1
Smallpox	1	Smallpox	1

TABLE No. 4  
DEATHS DUE TO COMMUNICABLE DISEASES IN THE SMALLER CITIES, TOWNS,  
VILLAGES AND RURAL DISTRICTS DURING THE YEAR 1933

Pneumonia (all forms)	192	Meningococcic Meningitis	6
Influenza (all forms)	152	Erysipelas	11
Pulmonary Tuberculosis	109	Typhoid Fever	5
Tuberculosis (all other forms)	39	Scarlet Fever	5
Diphtheria	5	Encephalitis Lethargica	2
Whooping Cough	27	Measles	4
Poliomyelitis	5	Smallpox	1

TABLE No. 5  
DEATHS OF INDIANS DUE TO COMMUNICABLE DISEASES IN THE PROVINCE  
OF ALBERTA, 1933

Pneumonia (all forms)	57	Meningococcic Meningitis	1
Influenza (all forms)	21	Typhoid Fever	1
Pulmonary Tuberculosis	148	Erysipelas	1
Tuberculosis (all other forms)	35	Scarlet Fever	1
Diphtheria	1	Encephalitis Lethargica	1
Whooping Cough	20	Measles	2
Poliomyelitis	1	Smallpox	1

TABLE No. 6  
MORBIDITY, MORTALITY AND CASE FATALITY RATES IN THE MORE COMMON  
COMMUNICABLE DISEASES FOR THE YEAR 1933

	Total cases	Total deaths	Morbidity rate	Mortality rate	Case Fatality rate
Acute Anterior Poliomyelitis	31	7	4.09	0.92	22.58
Cerebro-spinal Meningitis	7	7	0.92	0.92	100.00
Pneumonia (all forms)	327	223	43.18	29.45	67.88
Influenza (all forms)	223	305	28.53	40.29	141.38
Pulmonary Tuberculosis	216	157	20.73	18.75	90.51
Pulmonary Tuberculosis (exclusive of Indians)	157	6	4.34	0.79	18.75
Diphtheria	33	55	241.79	7.26	3.00
Whooping Cough	1,830	1	6.07	0.79	13.04
Smallpox	1	17	7.00	2.24	32.07
Typhoid Fever	46	5	28.53	0.66	2.31
Erysipelas	53	7	0.26	0.92	353.85
Scarlet Fever	216	439	57.99	0.79	2.84
Encephalitis Lethargica	2	211	27.87	0.79	2.84
Mumps	439	6	27.87	0.79	2.84
Measles	211	6	27.87	0.79	2.84

Population for 1933—757,000.

In several of the above noted diseases the case rate is higher than that which prevails elsewhere. Probably certain cases have not been diagnosed, and possibly in a few instances diagnosed cases have not been reported.

A study of the above tables will reveal the fact that there has been an appreciable decrease in most of the communicable diseases for the year 1933.

With the exception of tuberculosis, whooping cough now constitutes our most serious communicable disease problem. Until a means of conferring an active immunity against the disease is made available, we will have to depend upon the early isolation of cases and contacts to prevent its spreading. The use of Pertussis vaccine seems to be of some value when used for contacts and also in the treatment of cases in the early stages of the disease.

Whooping cough is very serious in infants and young children, and every effort should be made to prevent them from contracting the disease.

The better control of tuberculosis is another recognized public health problem. It is also a difficult problem from an economic point of view.



There has been a very gratifying response on the part of school boards in providing for vaccination against smallpox and inoculation against diphtheria at the expense of the district.

The year 1933 has been a very satisfactory one in the control of communicable diseases.

## DIPHTHERIA

Year	Population	Total cases	Total deaths	Morbidity rate	Mortality rate
1924	590,000	758	100	128	17
1925	600,000	395	62	66	10
1926	607,584	260	60	43	10
1927	620,000	235	18	38	3
1928	633,000	485	50	77	8
1929	646,000	578	64	88	10
1930	660,000	269	30	40	4.5
1931	731,605	151	26	20	2.7
1932	750,000	51	10	6.89	1.35
1933	757,000	32	6	4.23	0.79

## TYPHOID FEVER

Year	Population	Total cases	Total deaths	Morbidity rate	Mortality rate
1924	590,000	98	26	16	4
1925	600,000	127	27	21	5
1926	607,584	127	18	21	3
1927	620,000	75	23	12	4
1928	633,000	122	26	19	4
1929	646,000	114	31	17	5
1930	660,000	69	16	10	2
1931	731,605	42	16	5	2
1932	750,000	52	9	7	1.21
1933	757,000	46	6	6	0.79

## ACUTE ANTERIOR POLIOMYELITIS

Year	Population	Total cases	Total deaths	Morbidity rate	Mortality rate
1924	590,000	83	10	14.1	1.7
1925	600,000	13	5	2.1	0.8
1926	607,584	2	5	.....	0.8
1927	620,000	354	53	57.1	8.5
1928	633,000	92	35	14.6	5.6
1929	646,000	29	8	4.5	1.2
1930	660,000	150	32	22.7	4.8
1931	731,605	23	8	3.2	1.1
1932	750,000	39	14	5.2	1.8
1933	757,000	31	7	4.1	0.9

## WHOOPIING COUGH

Year	Population	Total cases	Total deaths	Morbidity rate	Mortality rate
1924	590,000	612	51	103.7	8.6
1925	600,000	763	43	123.8	7.1
1926	607,584	1,336	75	220.1	12.3
1927	620,000	334	37	53.9	5.9
1928	633,000	492	37	77.7	5.8
1929	646,000	1,214	70	187.9	10.8
1930	660,000	1,246	52	188.8	7.8
1931	731,605	451	32	61.8	4.4
1932	750,000	665	34	88.6	4.5
1933	757,000	1,830	55	241.7	7.2

## SCARLET FEVER

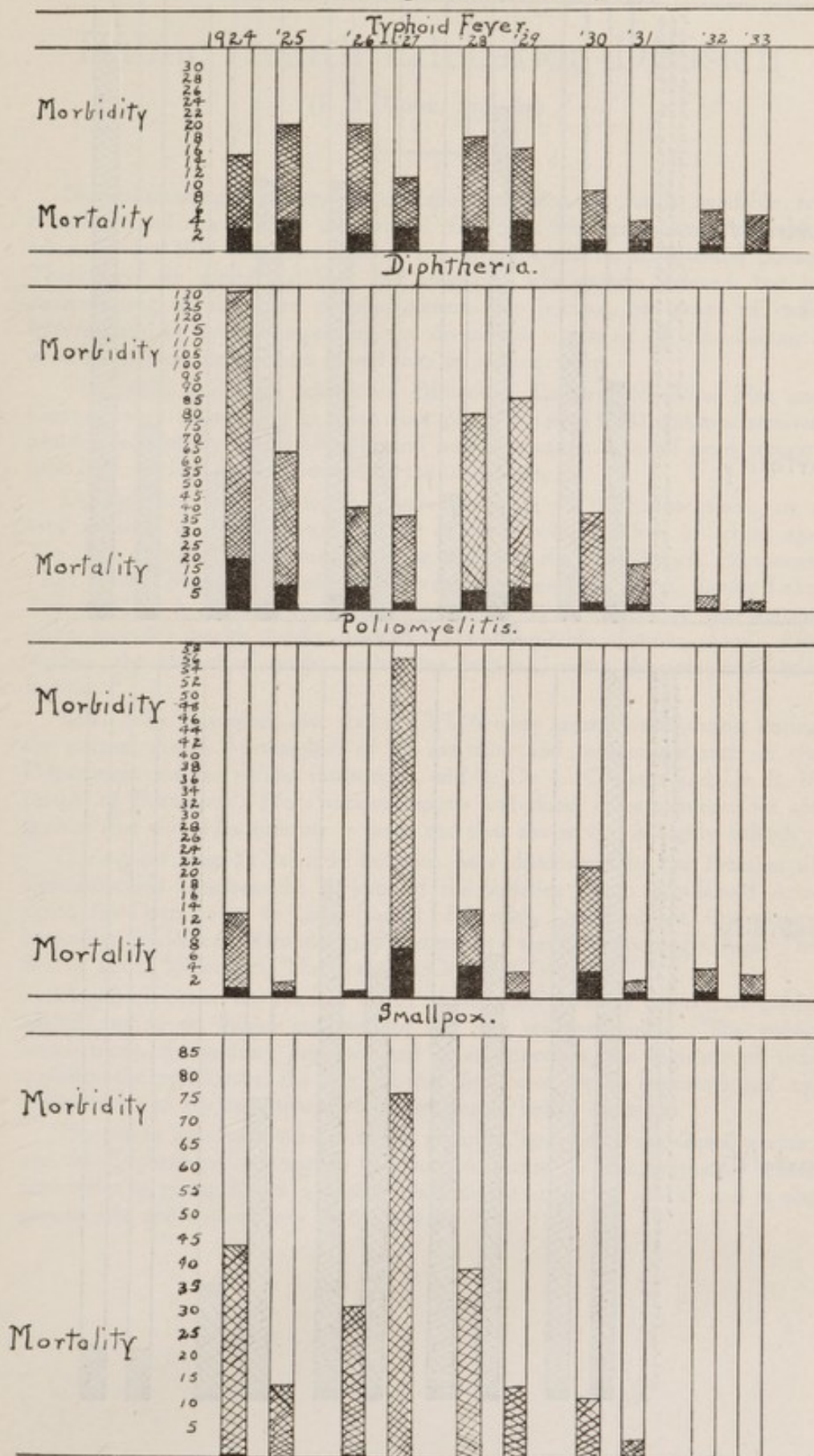
Year	Population	Total cases	Total deaths	Morbidity rate	Mortality rate
1924	590,000	2,245	47	380.3	7.9
1925	600,000	1,473	39	245.5	6.5
1926	607,584	1,396	32	229.9	5.2
1927	620,000	1,275	22	205.6	3.5
1928	633,000	1,397	24	220.7	3.8
1929	646,000	1,731	45	267.9	6.9
1930	660,000	1,028	31	155.8	4.7
1931	731,605	438	8	60.0	1.1
1932	750,000	202	4	26.9	0.5
1933	757,000	216	5	28.5	0.6

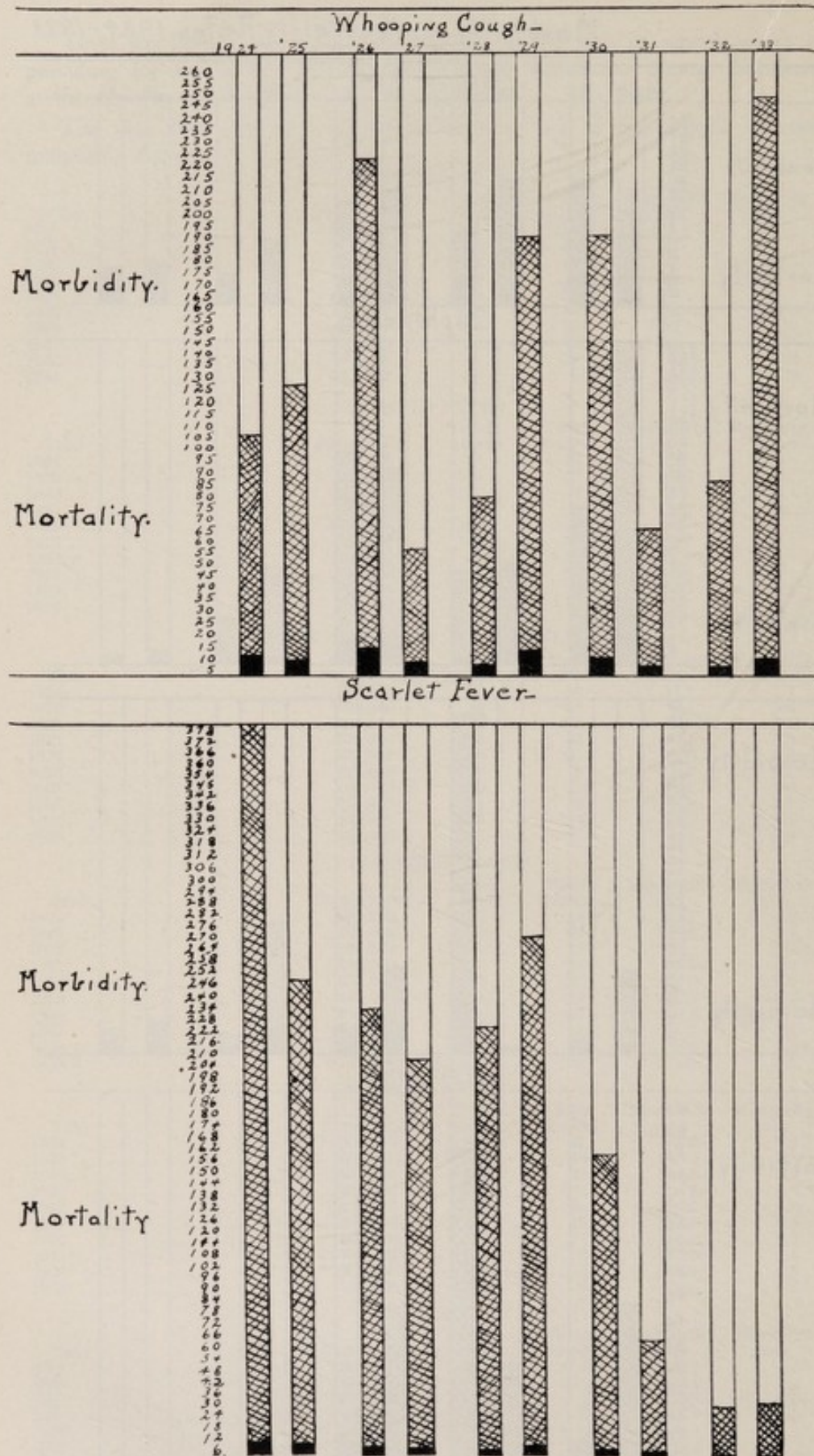
## SMALLPOX

Year	Population	Total cases	Total deaths	Morbidity rate	Mortality rate
1924	590,000	265	4	44.9	0.6
1925	600,000	89	.....	14.8	.....
1926	607,584	202	2	33.2	0.3
1927	620,000	481	3	77.6	0.5
1928	633,000	254	.....	40.1	.....
1929	646,000	94	.....	14.5	.....
1930	660,000	81	.....	12.3	.....
1931	731,605	27	1	3.7	0.1
1932	750,000	1	.....	0.1	.....
1933	757,000	1	.....	0.1	.....



## Morbidity and Mortality Rates 1924-1933.







## Public Health Education Division

(F. T. COOK, *Lecturer*)

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Notwithstanding the very considerable reduction in funds available for travelling and for certain educational material, the programme in health education for 1933 surpassed that of any previous year in its essential phases. There were no special exhibits, and travelling was greatly reduced, but by concentrating on the more populous centres for lectures, by means of radio lectures, and by greatly improving the division as a bureau of information, a great many more people were served than in previous years.

The public and high schools of Edmonton, Calgary, Medicine Hat and Camrose were visited, and in these four places nearly 14,000 children received health education by means of talks and moving pictures. In all cases requests have been received for a repetition of the programme.

During the year 162 lectures were given in 75 different places to a total audience of 31,681 people, 26,250 of whom were children of school age. The chief districts covered were: Calgary, Camrose, the Coal Branch, Edmonton, High River, Okotoks, Lacombe, Red Deer, Medicine Hat, Peers, Smoky Lake, Tofield, Thorsby, Sunnybrook and Vermilion. The subjects of the lectures given included health habits, sanitation, communicable diseases, food, child welfare, the history of public health, sex hygiene, mental hygiene and social hygiene.

Radio talks were given over station CKUA every second week, except during the summer season, by members of the executive and professional staff of the Department and the various institutions, and by Dr. L. C. Conn and Dr. R. B. Leitch, of Edmonton. From various reports and direct correspondence we are assured that the radio audience is large and that the service is highly valued.

During the year 11 monthly bulletins were distributed by the Division of Communicable Diseases, the subjects of the bulletins being: Household Accidents, An Open Letter to Local Boards of Health, Our Children, Community Sanitation, Periodical Examination, Summertime Health, Whooping Cough, The School Term, Vegetables, The Common Cold and Goitre.

Health education has become a part of the work of every division of public health, and is no longer confined to any one set programme. The public health nurse, the sanitary inspector and other inspectors, the registrar of vital statistics, the psychiatrist, the hospital and the doctor are all educators and are indispensable in any comprehensive programme of health education.

The person who holds the key to the situation, however, is the school teacher, and this Department continues in its efforts to secure the co-operation of school authorities in giving health a greater place in the course of studies and in the general life and environment of the school.

# Hospital Inspection Division and Medical Inspector's Report of Operations

(E. A. BRAITHWAITE, M.D., *Inspector of Hospitals*)

During the year I visited and inspected 85 of the approved hospitals in the Province. The total number of inspections was 90.

The total number of operations, taken from the weekly hospital operation reports, was 21,775, and the number of deaths following operations was 444.

The following is a list of operations performed and deaths which occurred in the approved, municipal and private hospitals during the year 1933:

	Approved H.	Deaths	Municipal H.	Deaths	Private H.	Deaths
<b>GENERAL:</b>						
Abscess .....	225	20	125	4	3	0
Adenectomy .....	4	0	1	0	0	0
Adhesions .....	165	2	18	0	0	0
Albee's Operation .....	0	0	0	0	0	0
Amputation .....	292	5	50	1	1	0
Anus .....	9	0	2	0	0	0
Appendectomy .....	2354	64	1175	21	28	2
Arthroclasis .....	1	0	0	0	0	0
Arthrodesis .....	26	0	0	0	0	0
Aspiration .....	34	0	0	0	0	0
Bone Graft .....	3	0	0	0	0	0
Bone Plating .....	2	0	1	0	0	0
Bowel .....	37	10	7	3	0	0
Bronchoscopy .....	2	0	0	0	0	0
Bunionectomy .....	3	0	4	0	0	0
Cancer .....	111	37	15	7	3	2
Carbuncle .....	13	0	0	0	0	0
Cauterization .....	31	1	2	0	0	0
Cecopexy .....	15	0	0	0	0	0
Cholecystectomy .....	369	17	69	4	5	0
Circumcision .....	287	4	84	0	2	0
Colostomy .....	31	7	3	1	0	0
Craniotomy .....	2	0	0	0	0	0
Curetting .....	48	1	11	0	0	0
Cystectomy .....	0	0	3	0	0	0
Cystoscopy .....	371	0	8	0	0	0
Cystotomy .....	96	9	2	2	0	0
Cyst .....	11	0	2	0	0	0
Decompresia .....	6	2	0	0	0	0
Dilatation .....	7	0	0	0	0	0
Dislocation .....	71	0	20	2	0	0
Epididymotomy .....	12	0	1	0	0	0
Examination .....	43	0	31	0	0	0
Excision .....	213	2	55	0	0	0
Extraction Teeth .....	427	0	105	0	1	0
Fasciotomy .....	6	0	0	0	0	0
Fistula .....	25	0	3	0	0	0
Foreign Body .....	33	0	12	0	0	0
Fracture .....	797	5	193	3	0	0
Fulguration .....	18	0	0	0	0	0
Gastrectomy .....	3	0	2	1	0	0
Gastroenterostomy .....	81	13	11	3	1	0
Gastrostomy .....	2	2	0	0	0	0
Hammer Toe .....	8	1	1	0	0	0
Hare Lip .....	29	0	1	0	0	0
Hemorrhoidectomy .....	141	0	29	0	0	0
Herniotomy .....	515	13	130	0	6	0
Hydrocele .....	54	0	28	0	0	0
Ileocolostomy .....	4	0	0	0	0	0
Incision .....	280	3	66	0	2	0
Injection .....	56	0	5	0	0	0
Jejunostomy .....	17	2	1	0	0	0



	Approved H.	Deaths	Municipal H.	Deaths	Private H.	Deaths
Laminectomy .....	4	1	0	0	0	0
Laparotomy .....	109	33	79	9	1	0
Ligation .....	43	0	11	0	0	0
Lithotomy .....	3	0	0	0	0	0
Lobectomy .....	20	0	0	0	0	0
Manipulation .....	109	0	7	0	0	0
Nephrectomy .....	31	3	2	0	0	0
Nephrotomy .....	3	0	0	0	0	0
Neurectomy .....	1	0	0	0	0	0
Orchidectomy .....	10	0	0	0	0	0
Osteoplasty .....	4	0	0	0	0	0
Osteomyelitis .....	51	2	13	1	1	0
Peritonitis .....	18	0	0	0	0	0
Plaster Cast .....	130	0	18	0	1	0
Plastic .....	29	0	0	0	0	0
Proctoscopy .....	25	0	1	0	0	0
Prostatectomy .....	153	20	11	1	0	0
Puncture .....	13	2	2	1	0	0
Pyloroplasty .....	11	2	0	0	0	0
Removal .....	565	11	118	0	4	0
Repair .....	232	8	123	1	0	0
Resection .....	99	12	17	4	2	0
Sequestrectomy .....	14	0	1	0	0	0
Sinusitis .....	7	0	0	0	0	0
Skin Graft .....	27	0	4	0	0	0
Splenectomy .....	0	0	2	0	0	0
Suturing .....	230	0	40	3	1	0
Sympathectomy .....	4	1	0	0	0	0
Synovectomy .....	1	0	0	0	0	0
Tenoplasty .....	3	0	0	0	0	0
Tenotomy .....	14	0	0	0	0	0
Thoracotomy .....	6	1	0	0	0	0
Thyroidectomy .....	267	4	25	1	2	0
Transfusion .....	112	5	8	0	0	0
Tumour .....	98	10	16	1	0	0
Tuberculosis .....	21	1	5	0	0	0
Urethrotomy .....	18	0	0	0	0	0
Varicocele .....	11	0	1	0	0	0
Vasectomy .....	14	0	2	0	0	0
Wounds .....	146	7	83	0	0	0
OBSTETRICAL AND GYNAECOLOGICAL:						
Abortion .....	340	0	79	0	3	0
Adhesions .....	11	0	1	0	0	0
Cervix .....	88	0	10	0	1	0
Caesarean Section .....	37	2	6	0	0	0
Cauterization .....	71	0	0	0	0	0
Colporrhaphy .....	33	0	2	0	0	0
Colpotomy .....	10	0	1	0	0	0
Curretage .....	443	0	68	0	1	0
Dilatation .....	216	0	8	0	0	0
Examination .....	38	1	2	0	2	0
Hysterectomy .....	175	5	29	3	1	0
Induction Labour .....	11	0	4	1	0	0
Insertion Radium .....	102	0	0	0	0	0
Oophorectomy .....	67	0	7	0	0	0
Ovariectomy .....	105	0	2	0	0	0
Panhysterectomy .....	1	0	0	0	0	0
Perineorrhaphy .....	138	0	7	0	1	0
Salpingectomy .....	203	0	15	0	1	0
Salpingo-Oophorectomy .....	36	0	2	0	0	0
Sterilization .....	12	0	7	0	0	0
Trachelorrhaphy .....	32	0	3	0	0	0
Uterus .....	133	1	23	1	0	0
EYE, EAR, NOSE, THROAT:						
Abscess .....	5	1	2	0	0	0
Adenoidectomy .....	41	0	9	0	0	0
Antrum .....	38	1	0	0	0	0
Cataract .....	79	0	3	0	0	0
Cautery .....	11	0	1	0	0	0
Cysts .....	8	0	2	0	0	0
Dacryocystectomy .....	6	0	1	0	0	0
Dilatation .....	5	0	0	0	0	0
Enucleation Eye .....	34	0	3	0	2	0
Oesophagascopy .....	2	0	0	0	0	0
Ethmoidectomy .....	4	0	0	0	0	0
Excision .....	1	0	0	0	0	0
Foreign Body .....	14	0	1	0	0	0
Glaucoma .....	3	0	0	0	0	0
Iridectomy .....	36	0	1	0	1	0
Laryngoscopy .....	2	0	0	0	0	0
Mastoidectomy .....	103	1	8	0	0	0
Myomectomy .....	4	0	0	0	0	0

	Approved H.	Deaths	Municipal H.	Deaths	Private H.	Deaths
Needling .....	2	0	0	0	0	0
Otitus Media .....	23	0	0	0	0	0
Paracentesis .....	14	0	13	0	0	0
Polypi .....	11	0	5	0	0	0
Pterygium .....	11	0	2	0	0	0
Submucous Resection .....	69	0	1	0	1	0
Synectomy .....	18	0	0	0	0	0
Tonsillectomy .....	2356	3	574	0	42	0
Tracheotomy .....	5	2	0	1	0	0
Turbinectomy .....	2309	0	318	0	9	0
Total number of operations in hospitals .....					21,775	
Total number of deaths .....					444	
Percentage .....					2.04	



## Private Hospitals

(MARY E. CONLIN, R.N., *Inspector*)

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Fifty-nine private hospitals were inspected during the year and licenses issued. Twenty-four of these hospitals have graduate nurses in charge, the remainder being operated by certified midwives or practical nurses.

Licenses were issued to eleven baby shelters in Calgary, one in Red Deer and three in Edmonton. These were inspected four times during the year.

Four institutions in which babies are placed were also inspected.

One hundred and forty-five cases receiving free Insulin through the Department were visited.

## Provincial Laboratory

(ALLAN C. RANKIN, C.M.G., M.D., D.P.H., *Provincial Bacteriologist*)

Sixty-three thousand two hundred and three examinations were made during the year. The biochemical and other departments of the University have at all times willingly co-operated, and the work of the laboratory has been thus supplemented. The chemical examination of milk and water has been carried out by the Provincial Analyst.

The following table indicates the nature and number of examinations performed—a decrease of 1,589 examinations, in comparison with the previous twelve-month period.

This decrease is mainly represented by the elimination of histo-pathological examinations of operative material, which was originally carried out under Section 46 of The Hospital Regulations.

In other respects, although strenuous efforts have been made to reduce the amount of work undertaken, the requirements of government departments, the public and the medical, dental and veterinary professions have been so insistent and necessary that there is actually an increase of approximately 1,000 examinations.

TABLE No. 1

### WORK PERFORMED IN THE PROVINCIAL LABORATORY DURING THE YEAR 1933

Sputum .....	754
Diphtheria .....	908
Typhoid Fever .....	290
Milks .....	1,847
Waters .....	1,452
Miscellaneous Examinations .....	2,247
Mothers' Milk .....	5
Urinalysis .....	212
Medico-Legal Examinations .....	16
Bloods for the Wassermann Test .....	19,006
Smears for the Gonococcus .....	3,160
Icterus Index Determination .....	45
Van Den Berg Determination .....	5,490
Pathological Histological Material .....	4,084
Blood Smear Examinations .....	78
Post Mortem Examinations .....	163
Ascheim Zondek .....	78
Cerebro-Spinal Fluid Examinations .....	1,071
Bacteriological Post-mortem Examinations .....	32
B. Abortus Examinations .....	205
B. Tularensis .....	67
Chicken Blood Examinations .....	21,260
Cattle Blood Examinations .....	733
Typhoid Vaccine (25 c.c. quantity) .....	187
Autogenous Vaccine (25 c.c. quantity) .....	63
B.C.G. Vaccine (10 c.c. quantity) .....	248
Poliomyelitis Convalescent Serum (20 c.c. quantity) .....	86
B. Abortus Vaccine (5 c.c. quantity) .....	140
Total .....	63,203

TABLE No. 2

Table No. 2 shows the number of water and milk, special and blood containers prepared and distributed during the year:

	1932	1933
Water Containers .....	1,326	1,246
Special Containers .....	1,469	1,742
Wassermann Containers .....	16,317	13,081
Chicken Blood Containers .....	21,909	21,260
Total .....	41,021	37,329

Decrease in preparation of 3,692 containers.



TABLE No. 3

The following table shows the number of cubic centimeters of autogenous and other vaccines prepared and distributed during the year:

	1932	1933
Typhoid Vaccine .....	5,450 c.c.	4,675 c.c.
Autogenous Vaccine .....	1,625 c.c.	1,575 c.c.
B.C.G. Vaccine .....	1,690 c.c.	2,480 c.c.
Poliomyelitis Convalescent Serum .....	2,130 c.c.	1,720 c.c.
B. Abortus Vaccine .....		700 c.c.
Total .....	10,895 c.c.	11,150 c.c.
Increase in the preparation and distribution of Vaccines and Sera, 255 c.c.		

TABLE No. 4

Table No. 4 shows the detail of some of the work done by the laboratory in relation to the control of infectious diseases:

Diseases	No. of Specimens		Physi- cians	Post Offices	Month.	Sputum.	Diph.	Typhoid Fever.	Total.
	Posi- tives	Nega- tives			Jan.	98	142	30	270
					Feb.	80	108	8	196
					Mar.	87	86	16	189
Pulmonary Tuberculosis ....	124	630			Apr.	103	49	24	176
					May	76	54	26	156
					June	57	69	17	143
					July	39	61	56	156
Diphtheria .....	29	879			Aug.	46	62	37	145
					Sept.	46	61	31	138
					Oct.	40	71	19	130
					Nov.	53	75	15	143
Typhoid Fever..	40	250	262	127	Dec.	29	70	11	110
						754	908	290	1952

TABLE No. 5

Table No. 5 shows the number of blood examinations by the complement fixation test for the diagnosis of syphilis:

Bloods received .....	19,100
Bloods examined .....	19,006
Bloods positive to reaction .....	2,332
Bloods negative to reaction .....	16,674
Bloods unsuitable for examination .....	94
Male Bloods examined .....	10,774
Female Bloods examined .....	5,099

Out of 13,056 of these, the following details can be given.

Male married .....	2,684
Male married positive .....	427
Male married negative .....	2,257
Male single .....	5,618
Male single positive .....	876
Male single negative .....	4,742
Female married .....	3,035
Female married positive .....	329
Female married negative .....	2,706
Female single .....	1,719
Female single positive .....	213
Female single negative .....	1,506
Bloods received from Calgary and south .....	5,246
Bloods received from north of Calgary .....	13,760
Number of blood examinations made in 1932 .....	17,763
Number of blood examinations made in 1933 .....	19,006
Increase in number of specimens examined .....	1,243
Increase in per cent. ....	6.9%



TABLE No. 6

Table No. 6 gives the details of the bacteriological and chemical examination of water performed throughout the year:

Waters	1932	1933
Number of samples of water examined bacteriologically and found fit for human consumption	802	752
Number of samples of water examined bacteriologically and found unfit for human consumption	104	48
Number of samples of water examined bacteriologically and chemically and found fit for human consumption	762	511
Number of samples of water examined bacteriologically and chemically and found unfit for human consumption	142	93
Number of samples of water examined chemically and found fit for human consumption	57	36
Number of samples of water examined chemically and found unfit for human consumption	9	8
Number of samples of ice examined bacteriologically and found fit for human consumption	16	3
Number of samples of ice examined bacteriologically and found unfit for human consumption	.....	1
Total	1,637	1,452

TABLE No. 7

Table No. 7 gives the details of the bacteriological, bacteriological and chemical, and chemical examination of milk performed throughout the year:

	1932	1933
Number of samples of milk examined bacteriologically	1,778	1,686
Number of samples of milk examined bacteriologically and chemically	159	142
Number of samples of milk examined chemically	9	19
Total	1,946	1,847
Number of samples of milk examined showing low butterfat content	15	12
Number of pasteurized milk samples examined bacteriologically with a bacterial count above 30,000	86	73
Number of non-pasteurized milk samples examined bacteriologically with a bacterial count above 300,000	29	51
Number of pasteurized milk samples examined	805	708
Number of non-pasteurized milk samples examined	1,141	1,139

#### *Pathological Histological Material.*

Owing to the reduction in the funds available the routine examination of operative material for the smaller hospitals was discontinued. This has reduced the number of such examinations undertaken. The following notification was sent to the hospitals by the Deputy Minister of Health:

"Owing to the reduction in the estimates of the Provincial Laboratory, it has been necessary to reduce the technical staff. On this account it will not be possible for the Laboratory to undertake the pathological examination of routine specimens which hospitals have been required to forward to the Laboratory as provided for in Section 46 of The Hospitals Regulations. This regulation is, therefore, being suspended for the time being.

"This change will not affect the pathological examination of any specimens on which a diagnosis is desired. The Laboratory will give the same service as in the past in connection with all specimens submitted for diagnosis, and hospitals are asked to take full advantage of this service."

The Pathological Department, which is under the direction of Dr. J. J. Ower, continues to co-operate closely with the hospitals, and where the examination of material is considered advisable for the purpose of diagnosis, etc., it is always undertaken. This department carries on a most important work in a very efficient manner in relation to histo-pathological diagnosis of cancer, and of other diseases.

#### *Medico-Legal Examinations.*

The medico-legal examinations have been divided between the pathological, bacteriological and serological departments, and have included examinations of a very intricate nature.



It should be pointed out that the estimates have never included funds for the carrying out of this important work which, under present conditions, adds to the work of an otherwise very much occupied public health staff.

#### *Miscellaneous Examinations.*

There were 2,247 miscellaneous examinations made during the year. These are of a very varied nature and include the examination of food, body fluids, etc.

Under this heading are also included some of the examinations in relation to disease in poultry and animals. There is a continued demand on the part of the public for examinations of this nature. An attempt has been made to control this work in accordance with the policy of the Department of Agriculture. We have, however, still found it necessary, on account of urgent solicitation, to undertake a certain amount of this work for private individuals. Here again, unfortunately, funds have never been made available to cover the necessary expenses.

#### *Smears for the Gonococcus.*

Three thousand one hundred and sixty examinations were made during the period under consideration for the presence of the gonococcus.

#### *Chicken Blood Examinations.*

It has been possible by means of a special grant from the Provincial Department of Agriculture to continue the work in the diagnosis of bacillary white diarrhoea in domestic fowl. This is part of a scheme for the eradication of the disease from flocks in the Province—a matter of considerable economic importance. There were 21,260 examinations made.

#### *Cattle Blood Examinations.*

Cattle blood examinations, for which a charge is made, are of assistance in connection with the diagnosis of contagious abortion among dairy herds.

#### *Animal Work.*

By agreement with the Provincial Department of Agriculture, certain work which we have been carrying on in the diagnosis of disease in poultry and animals, has been considerably curtailed. Such work is ordinarily now undertaken only at the special request of the Department of Agriculture, the Department of Poultry of the University, or a practising veterinarian. A co-ordination of effort is necessary whereby field observation may be compared with laboratory findings.

#### *Vaccines and Sera Prepared and Distributed.*

There were 11,150 cubic centimeters of sera and vaccines prepared. This includes typhoid vaccine, autogenous vaccine, B.C.G. vaccine, B. Abortus vaccine, and poliomyelitis convalescent serum. A charge is made for autogenous vaccine.

#### *Research Work.*

The work on B.C.G. vaccine is continuing. A large experiment with B.C.G. vaccine, involving 91 cattle, is in progress.

#### *Reduction in Staff.*

Reduction in staff, necessitated by diminished funds, has restricted the spread of the work previously undertaken.

#### *Staff.*

The reduced staff, despite the efforts to control the amount of work undertaken, have been required generally to deal with almost the same amount of



material as previously. To carry on effectively under such conditions has only been made possible by loyal co-operation under circumstances which cannot be considered as entirely satisfactory.

#### ESTIMATION OF COMMERCIAL VALUE IF MINIMUM CHARGE WERE MADE

Sputum .....	754	\$ 1.00	\$ 754.00
Diphtheria .....	908	1.00	908.00
Typhoid Fever .....	290	1.00	290.00
Milks .....	1,847	3.00	5,541.00
Waters .....	1,452	10.00	14,520.00
Miscellaneous examinations .....	2,247	3.00	6,741.00
Mothers' milk .....	5	2.00	10.00
Urinalysis .....	212	3.00	636.00
Medico-Legal examinations .....	16	5.00	80.00
Bloods for the Wassermann Test .....	19,006	3.50	66,521.00
Smears for the Gonococcus .....	3,160	1.00	3,160.00
Icterus Index Determination .....	45	1.00	45.00
Van Den Bergh Determination .....	5,490	1.00	5,490.00
Pathological Histological Material .....	4,084	5.00	20,420.00
Blood Smear Examinations .....	78	2.00	156.00
Ascheim Zondek .....	78	5.00	390.00
Cerebro-Spinal Fluid Examinations .....	1,071	2.00	2,142.00
Bacteriological P.M. Examinations .....	32	5.00	160.00
B. Abortus Examinations .....	205	1.00	205.00
B. Tularensis .....	67	1.00	67.00
Chicken Blood Examinations .....	21,260	.10	2,126.00
Cattle Blood Examinations .....	733	.20	146.60
Typhoid Vaccine (25 c.c. quantity) .....	187	1.00	187.00
Autogenous Vaccine (25 c.c. quantity) .....	63	10.00	630.00
B.C.G. Vaccine (10 c.c. quantity) .....	248	3.00	744.00
Poliomyelitis Serum (20 c.c. quantity) .....	86	2.50	215.00
B. Abortus Vaccine (5 c.c. quantity) .....	140	1.00	140.00
	63,040		\$132,424.60

Post-mortem examinations not included.

#### SERA AND VACCINES DISTRIBUTED DURING THE YEAR 1933

Smallpox Vaccine—10 points .....	13,080 points
Diphtheria Antitoxin—	
1,000 units—1,089 pkgs. ....	1,089,000 units
5,000 units— 64 pkgs. ....	320,000 units
10,000 units— 48 pkgs. ....	480,000 units
20,000 units— 339 pkgs. ....	6,780,000 units
	8,669,000 units
Diphtheria Toxoid—	
1 person—2,137 pkgs. ....	2,137 persons
6 persons— 400 pkgs. ....	2,400 persons
12 persons— 441 pkgs. ....	5,292 persons
	9,829 persons
Schick Test—25 persons—129 pkgs. ....	3,225 persons
Scarlet Fever Antitoxin—	
15 c.c. Vial—117 pkgs. ....	1,755 c.c.
15 c.c. Syringe— 91 pkgs. ....	1,365 c.c.
2 c.c. Syringe—543 pkgs. ....	1,086 c.c.
	4,206 c.c.
Scarlet Fever Toxin—	
1 person —358 pkgs. ....	358 persons
6 persons— 91 pkgs. ....	546 persons
	904 persons
Dick Test—10 persons—130 pkgs. ....	1,300 persons
Tetanus—	
1,500 units—52 pkgs. ....	78,000 units
5,000 units—12 pkgs. ....	60,000 units
10,000 units— 6 pkgs. ....	60,000 units
	198,000 units
Anti-Meningococcus—20 c.c. Vial, 79 pkgs. ....	1,580 c.c.
Pertussis—	
5 c.c.—266 pkgs. ....	1,330 c.c.
20 c.c.— 33 pkgs. ....	660 c.c.
	1,990 c.c.
Staphylococcus Vaccine—2 c.c. Vial, 21 pkgs. ....	42 c.c.



# Public Health Nursing Division

(KATE S. BRIGHTY, R.N., *Superintendent*)

The following districts have been served as in past years by a public health nurse stationed in each district; Norma Municipality, including the Town of Vegreville; Marquis Municipality, and Richdale Municipality.

The following statistical report shows the work of major importance accomplished by public health nurses. In Richdale Municipality the work differs somewhat from that in the other two districts, bedside nursing being included in the general nursing programme.

## STATISTICAL REPORT

First inspections .....	2,133	With defective vision .....	426
Second inspections .....	1,077	With defective hearing .....	37
Classroom inspections .....	37	With throat symptoms .....	498
Not vaccinated .....	2,010	With symptoms of adenoids .....	159
With defects .....	2,034	With carious teeth .....	1,306

## RESULTS OBTAINED

Number of vaccinations .....	21	Surgical treatments .....	4
Diphtheria toxoid .....	682	Medical treatments .....	38
Glasses fitted .....	28	Schoolroom talks .....	79
Glasses refitted .....	29	Home visits .....	406
Tonsils removed .....	43	Child Welfare Clinics .....	56
Adenoids removed .....	41	Attendance .....	288
Dental treatments .....	129	Public lectures .....	7

## DISTRICT NURSING.

Seven districts have been served, one by a district physician and six by district nurses. The services of the district nurse were withdrawn from Local Improvement Districts 828 and 769 at the end of April. A resident physician is now established in this district.

## STATISTICAL REPORT (DISTRICT NURSING)

Home visits .....	1,647	Pre-natal consultations .....	349
Office consultations .....	2,247	Child welfare consultations .....	49
Dressings done .....	735	Child welfare visits .....	46
Medical cases .....	1,186	Deaths (under 1 year) .....	14
Surgical cases .....	363	Deaths (over 1 year) .....	14
Obstetrical cases .....	146	Indigent cases sent to city .....	78
Abortions .....	11	Visits to Indian Reserves .....	38
Pre-natal visits .....	1,197	Dental extractions .....	33

## CHILD WELFARE CLINICS.

Provincial Child Welfare Clinics are conducted at Edmonton, Calgary, Medicine Hat, Redcliff and Vegreville. In the City of Edmonton 102 clinics were held during the year with an average attendance of 62, the total attendance being 6,336, and the number of home visits 4,085.

In the City of Calgary 104 clinics were held with an average attendance of 59, the total attendance being 6,169 and the number of home visits 2,205.

In Medicine Hat and Redcliff 119 clinics were held during the year with a total attendance of 1,657 and 1,635 home visits were made.

In addition to the maternal and child hygiene services rendered to the public, these clinics serve as teaching centres for medical students, home economic classes and nurses from the various training schools in the city.

## TRAVELLING CHILD WELFARE CLINIC.

The Travelling Child Welfare Clinic provided service in the southern and central sections of the Province, 32 clinics being held with a total attendance of 748 babies and pre-school children.

During Exhibition week in Edmonton, from July 17th to July 22nd (inclusive), first aid was rendered by a public health nurse stationed at the Emergency Hospital.

During the month of November the Public Health Nursing Division co-operated with the Women's Institute of Drumheller in making a survey in the Drumheller schools. Number of children examined, 937; with defects, 495.

Through the efforts of the Women's Institute a supply of pasteurized milk was furnished to 84 underweight children, one pint of milk per child being delivered daily at the schools throughout the balance of the school year.

#### DENTISTRY.

During Camrose Publicity Week a dental clinic was sponsored by the local dentists of Camrose. A public health nurse organized the work and assisted the dentists in the examination of 213 children.

Dr. Heacock, Provincial dentist, visited six outlying districts, examining a total of 467 children, of whom 285 received dental treatment. This service meets a much felt need in communities isolated by distance and bad roads from facilities for dental care.

Six radio addresses were given over CKUA, the University of Alberta station. A number of public addresses were given and visits made in connection with social welfare work.

One thousand six hundred and five sets of pre-natal and post-natal letters were mailed during the year. There were 804 names on our mailing list at the end of the year.

#### STAFF CHANGES.

Miss Florence M. Linsley resigned from the service to be married. Miss Elizabeth C. Davidson was appointed district nurse in the Worsley district.

Valuable assistance has been rendered by the physicians in attendance at the various clinics, by the dental profession, teachers, the Red Cross Society, and by various women's organizations and welfare societies in the Province.



## Hospitals Division

(W. B. MILNE, C.A., *Supervisor of Municipal Hospitals and Secretary of the Department*)

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The total number of hospitals approved under the provisions of The Hospitals Act of the Province of Alberta, as at the 31st of December, 1933, was 86.

Two approved hospitals were burned during the year 1933—The General Hospital at Gleichen and the St. Joseph's Hospital at Grouard. The Hanna Municipal sub-hospital at Craigmyle was closed.

The total grants paid to hospitals and homes for the year 1933 amounted to \$407,206.50.

The approved hospitals, with the addition of the accommodation at the Central Alberta Sanatorium, had a total bed capacity of 4,565, divided as follows: General, 2,375; maternity, 646; infants, 630; paediatrics, 329; isolation, 281; tuberculosis, 304.

On the basis of an estimated population in the Province of 757,000, we had one hospital bed for every 165.8 of the population, or six beds per thousand population; 64,697 patients were treated during the year and received 829,645 days' treatment. This means that in the year 1933 hospital treatment was provided for 8.5 per cent. of the population, or one in every 11.7 persons.

There was an average daily admission of patients to hospitals of 177.2. The average number of days spent in hospital by each patient was 12.8, and if the Isolation, Sanatorium, Orthopaedic, S.C.R. and T.B. cases in the University Hospital were eliminated, this would be reduced to an average of 11.3. The average number of patients in hospitals daily was 2,273, or one in every 333 of our population. Each bed provided accommodation for an average of 14 patients during the year.

The nursing staff of the approved hospitals consisted of 476 graduate nurses, 679 pupil nurses and 114 other attendants.

There were 11 nurses' training schools in the Province, and the number of nurses who graduated during the year was 186. There were 21 dietitians employed.

During the year 8,289 maternity cases were cared for, these cases comprising 12.8 per cent. of the total cases admitted.

Living births were: Male 3,915, female 3,797, a total of 7,712. Multiple births totalled 92, and there were 239 still born. The maternal deaths reported were 27, this giving a death rate of .33 per cent. of total maternity cases admitted, and 3.5 per 1,000 living births.

The living births in Alberta for 1933 were 16,123. Of this total 47.8 per cent. took place in Government approved hospitals.

The approved hospitals reported that 19,904 general anaesthetics were administered, and 8 deaths occurred from these.

There were 298 autopsies performed, and the infections developed in hospitals totalled 158, divided into: medical 18, surgical 75; obstetrical—mothers 14, infants 51.

The number of communicable disease cases treated, excluding typhoid fever and tuberculosis, totalled 605. Typhoid cases numbered 73, tuberculosis 968 (pulmonary 670, other forms 298).



Amongst other cases treated in hospitals there were 1,430 cardiac, 688 rheumatic, 453 goitre, 383 venereal, 661 malignant.

There were 288 deaths within ten days of surgical operations, and 412 within forty-eight hours after admission. Communicable diseases accounted for 41 deaths.

The approved hospitals reported 111,756 laboratory examinations and 24,234 X-ray examinations.

The total operating expenditure of approved hospitals for the year 1933 was \$2,312,462.78. This includes administration of \$235,503.83, professional care of patients \$913,158.05, kitchen and dining room \$501,793.07, general house and property \$506,905.70, and maintenance \$155,102.13.

Earnings of these hospitals amounted to \$3,043,873.58. On referring to the details of the earnings it will be noted that there is a difference in the total shown as paid by Government Grant and the amount stated previously in this report. This is accounted for by the fact that homes have not been included in this report, and quite a number of the hospitals presented financial statements covering a fiscal year which differs considerably from the calendar year.

Of the earnings shown, \$402,551.50 was Alberta Government grant; municipal and other grants, which included amounts paid by municipalities to take care of deficits, amounted to \$313,993.80. Patients' fees earned amounted to \$1,836,585.97, donations of cash and services were \$158,172.46, taxes for municipal hospital purposes were \$273,376.26, and the sundry earnings amounted to \$59,193.59.

The average cost per patient day was \$2.97. Excluding the Isolation, Junior Red Cross, Sanatorium, University Hospital and hospitals operating incurable wards, the average cost was \$2.88. The average earnings per patient day was \$3.90. The average cost was divided as follows: Administration 7.9%, professional care 40.2%, kitchen and dining room 23.8%, house and property 20.8%, maintenance 7.3%.

The statistical and financial information given in this report has been obtained from financial and statistical returns received from the approved hospitals for the year 1933.

The following statements are submitted giving the details of each approved hospital in the Province:

- No. 1—Bed capacity, number of patients, number of days, nursing staff, etc.
- No. 2—Nursing statistics, cases treated, anaesthetics, autopsies, etc.
- No. 3—Expenses of administration, professional care, kitchen and dining room, house and property, maintenance, reserves and capital repayments.
- No. 4—Revenues.
- No. 5—Costs per patient day and earnings per patient day, with percentage of costs under the different divisions of expense.

#### MUNICIPAL HOSPITALS.

The statistics of municipal hospitals will be found with the other approved hospitals of the Province.

The number of municipal hospitals is the same as in 1932, there being 22 in operation at December 31st, 1933.

The sub-hospital operated at Craigmyle as part of the facilities of the Hanna Municipal Hospital District was closed during the year.



No. 1—STATISTICS OF ALBERTA HOSPITALS, 1933

Name of Hospital	Bed Capacity							Patients Admitted for Treatment					Nursing Staff			Nurses graduated during year	Affiliation with other hospitals for nurses	Dietitians				
	General	Maternity	Infants	Paediatrics	Isolation	Tuberculosis	Total	Semi-Private		Public	Basinnettes	Male	Female	No. of hospital days	Aver. days stay in hospital				Aver. No. of patients in hospital daily	Nurses training		
								Private	Public											Graduates	Pupil nurses	Other attendants
Athabasca, Municipal	21	7	7	3	2		40			33	7	287	393	7,501	11.0	20.5	5	1	No	1		
Banff, Mineral Springs	55	6	3				64	25	33	3	3	186	81	2,779	14.1	10.3	5	2	No			
Barrhead, Barrhead	5	5	3	1			14	2		9	3	154	135	2,636	9.1	7.2	2	2	No			
Bassano, Municipal	16	8	6	2	4		36	10	15	5	6	176	254	5,340	12.4	14.6	5		No			
Bentley, Community	6		3	1			10	3	4		3	128	176	1,870	6.1	5.1	2		No			
Berwyn, W. I.	2	4	3			2	11	2	6		3	66	99	1,444	8.7	3.9	2		No			
Bonnyville, K. H. Prettie		6	6		5		17	2		9	6	104	138	2,895	11.9	7.9	3	1	No			
Bonnyville, St. Louis	23	7	5		5		40	6	7	27	27	87	194	3,388	12.0	9.2	3	3	No			
Calgary, General	159	23	24	9			215	27	53	111	24	2,347	3,003	65,141	12.1	178.4	13	94	6	Yes	28	1
Calgary, Isolation					70		70			70		43	29	1,514	21.3	4.1	3					
Calgary, Smallpox					10		10			10												
Calgary, S. A. Grace		35	22		3		60	2	6	30	22	128	460	6,777	11.5	18.6	7					
Calgary, Holy Cross	228	25	27	10	10		300	49	62	162	27	1,427	1,770	35,882	11.2	98.3	20	84	4	Yes	18	1
Calgary, Junior Red Cross				50			50			50		85	73	12,381	78.3	33.9	5					
Calgary, Central Alberta Sanatorium					210		210			210		202	180	74,807	195.8	204.9						
Camrose, St. Mary's	29	11	10	4			54	16	28	18	10	260	339	5,821	9.8	15.9	7	11	1	Yes	4	1
Cardston, Municipal	15	6	10				32		4	18	10	320	445	5,166	9.1	14.1	5		1	No		
Castor, Rosary	23		7		1		30	17	6		7	145	212	3,124	8.7	8.5	6					
Cereal, General	8		4				12			8	4	69	101	1,420	8.3	3.9	1			No		
Clareholm, General	16						16			16		144	210	3,221	9.1	8.8	4			No		
Cold Lake, John Nell		4	2	1	2		17			15	2	97	149	2,164	8.8	5.9	3			No		
Coleman, Miners' Union	13						13			13		120	119	2,937	12.2	8.0	3			No		
Consort, Municipal	10	5	7		1		23	2	2	12	7	144	532	4,398	6.5	12.0	4			No		
Coronation, General	18	4	1				23	6	2	14	1	109	154	2,811	10.7	7.7	3		1	No		
Daysland, Providence	26	4	4				34	4	26	4	4	104	106	1,770	8.4	4.8	5			No		
Desmarais, St. Martin's	14					2	16		8	8		70	97	1,752	10.5	4.8	1		2	No		
Didsbury, General	7	4	6				17	11			6	113	163	2,097	7.5	5.7	3		2	No		
Drumheller, Municipal	57	15	15	5	2	2	96	16	55	10	15	1,101	986	21,210	10.1	58.1	9	17	1	No		No
Edmonton, Beulah Home	30	6	42		6		84		6	36	42	74	194	4,850	18.1	13.2	2		3	No		
Edmonton, General	103	18	18	36			175	23	29	105	18	1,275	1,541	35,312	12.5	96.8	17	84	3	Yes	22	1
Edmonton, Misericordia	114	30	30	21	4	6	205	32	40	88	45	1,243	1,948	37,835	11.8	103.6	10	76	2	Yes	16	1
Edmonton, S. A. Grace		35	14				49	3	6	26	14	60	197	2,984	11.6		3		7	No		
Edmonton, Royal Alexandra	222	50	50	60		18	400	50	50	240	60	3,012	4,382	94,473	12.7	258.8	42	108	8	Yes	43	2
Edmonton, Isolation					100		100			100		167	157	11,327	34.9	31.0	5	8	2	Yes		



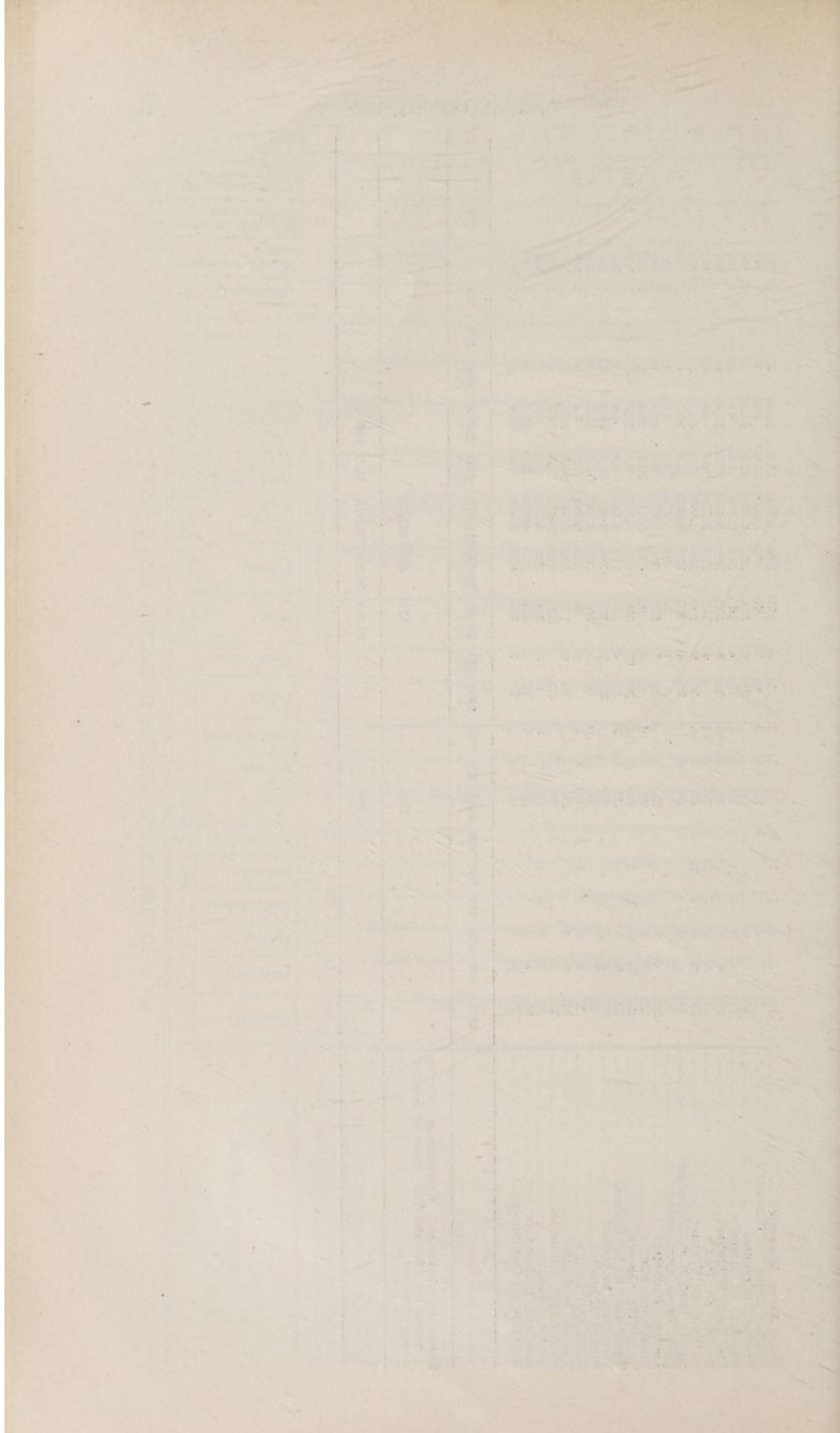
## DEPARTMENT OF PUBLIC HEALTH

No. 1—STATISTICS OF ALBERTA HOSPITALS, 1933—Continued

Name of Hospital	Bed Capacity							Patients Admitted for Treatment				Nursing Staff			Nurses graduated during year	Affiliation with other hospitals for nurses	Dietitians													
	General	Maternity	Infants	Paediatrics	Isolation	Tuberculosis	Total	Private	Semi-Private	Public	Bassinets	Male	Female	No. of hospital days				Aver. days stay in hospital	Aver. No. of patients in hospital daily	Graduates	Pupil nurses	Other attendants								
Edmonton, University (Civilians)	249	17	17	52	...	20	355	12	35	291	17	{ 1,710 419 19 17 262 321 179 99 6 108 270	1,258	56,380	18.9	154.4	{ 46 88	88	15	Yes	26	Yes	2							
Edmonton, University (S.C.R.)		...	...	...	...	...	...	...	...	...	...			...	...	...								...	...	...	...	...	...	...
Edmonton, University (Orthopaedic)		...	...	...	...	...	...	...	...	...	...			...	...	...								...	...	...	...	...	...	...
Edmonton, University (Tuberculosis)		...	...	...	...	...	...	...	...	...	...			...	...	...								...	...	...	...	...	...	...
Edson, St. John's		6	5	5	3	1	2	37	4	8	20			5	262	224								6,027	12.4	16.5	4	...	2	No
Elk Point, Municipal	12	5	5	...	...	...	21	1	...	13	5	321	431	7,402	9.8	20.2	3	...	...	...	...	...								
Empress, Cottage	5	3	3	...	...	...	11	...	...	...	5	179	192	2,571	6.9	7.0	3	...	...	...	...	...								
Fairview, W. I.	4	3	3	...	...	...	11	8	...	...	3	99	116	1,580	7.3	4.3	2	...	...	...	...	...								
Forestburg, Forestburg	10	6	4	4	...	...	11	2	...	3	4	6	16	134	6.0	...	3	...	1	No	...	...								
Galahad, St. Joseph's	28	5	8	...	...	...	24	4	8	8	4	108	137	1,981	8.0	5.4	4	...	...	1	No	...								
Grande Prairie, Municipal	...	...	...	...	...	...	44	4	...	32	8	270	415	8,849	12.9	24.2	9	...	1	No	...	...								
Grouard, St. Joseph's	18	...	...	...	...	...	22	4	18	(Hospital with records burned Nov. 23rd, 1933)	...	...	...	...	...	...	...	...	...	...	...	...								
Hanna, Municipal	28	10	10	...	...	...	56	...	...	46	10	398	568	9,634	10.0	26.4	8	...	1	No	...	...								
Hardisty, St. Anne's	19	1	4	...	...	...	24	4	4	12	4	186	218	3,269	8.0	8.9	3	...	2	No	...	...								
High Prairie, Community	3	2	2	...	...	...	7	2	3	...	2	27	40	588	8.8	1.6	1	...	1	No	...	...								
High River, Municipal	26	12	7	4	...	...	49	4	38	...	7	331	461	7,163	9.0	19.6	8	...	...	...	...	...								
Innisfail, Municipal	26	8	8	2	...	...	44	...	...	36	8	296	399	7,974	11.4	21.8	5	...	2	No	...	...								
Islay, Municipal	11	4	4	...	...	...	19	...	...	15	4	222	237	3,650	7.9	10.0	3	...	1	No	...	...								
Jasper, Seton	14	3	5	1	1	...	24	4	6	9	5	100	51	2,226	14.7	6.1	3	...	1	No	...	...								
Killam, General	4	2	2	1	...	...	9	1	2	4	2	42	68	1,089	9.9	2.9	3	...	...	...	...	...								
Lacombe, General	10	4	4	...	...	...	18	5	2	7	4	199	239	2,847	6.5	7.8	3	...	...	...	...	...								
Lamont, Public	47	8	8	7	...	5	75	12	16	39	8	582	729	17,106	13.0	46.8	3	...	...	...	7	No								
Lethbridge, Galt	62	20	16	6	...	...	104	26	14	48	16	1,033	1,473	26,842	10.7	73.5	11	31	2	Yes	10	No								
Lethbridge, Isolation	...	...	...	...	17	...	...	...	...	...	...	2	1	19	6.3	...	1	...	...	...	...	...								
Lethbridge, St. Michael's	55	29	21	12	4	...	121	32	18	50	21	698	1,421	16,600	7.8	45.4	20	...	1	No	...	2								
Lloydminster, Municipal	28	10	10	...	2	...	52	2	...	40	10	490	703	15,933	13.3	43.6	10	...	2	No	...	...								
Macleod, General	9	6	6	...	2	...	23	1	...	14	6	89	100	2,271	12.0	6.2	4	...	1	No	...	...								
Mannville, Municipal	5	5	5	...	...	...	15	...	10	...	5	134	189	3,537	10.9	9.6	3	...	...	...	...	...								
Medicine Hat, General	84	22	22	9	...	4	141	16	10	93	22	945	1,308	23,129	10.2	63.3	6	37	4	Yes	9	No								
Medicine Hat, Isolation	...	...	...	...	14	...	...	...	...	...	...	2	3	129	25.8	...	3	...	...	...	...	...								
Mundare, General	13	6	6	1	2	2	30	4	6	14	6	131	224	3,061	8.6	8.4	3	...	2	No	...	...								
McLennan, Sacred Heart	12	4	5	1	...	...	22	4	...	13	5	126	269	4,677	11.8	12.8	4	...	1	No	...	...								
Nanton, General	5	3	1	...	1	...	11	3	2	5	1	46	54	990	9.9	2.7	3	...	2	No	...	...								
Nordegg, General	14	4	4	...	...	...	20	4	...	14	2	177	107	3,289	11.8	9.0	1	...	1	No	...	...								
Olds, General	6	4	4	...	...	...	14	2	5	3	4	108	194	2,397	7.9	6.6	3	...	...	...	...	...								
Onoway, Municipal	6	3	3	...	...	...	12	...	...	9	3	73	131	2,139	10.4	5.8	2	...	...	...	...	...								















[illegible]

Name of Person		Address		Occupation	
John A. Smith		123 Main St.		Teacher	
Mary B. Jones		456 Oak St.		Homemaker	
Robert C. Brown		789 Pine St.		Engineer	
Elizabeth D. White		101 Elm St.		Nurse	
James E. Black		202 Maple St.		Farmer	
Sarah F. Green		303 Cedar St.		Retailer	
William G. Hall		404 Birch St.		Lawyer	
Anna H. King		505 Walnut St.		Artist	
Charles I. Lee		606 Spruce St.		Scientist	
Margaret J. Scott		707 Ash St.		Writer	
Thomas K. Adams		808 Hickory St.		Musician	
Lillian L. Baker		909 Sycamore St.		Dancer	
George M. Carter		1010 Poplar St.		Chef	
Helen N. Evans		1111 Chestnut St.		Florist	
Frank O. Fisher		1212 Olive St.		Electrician	
Grace P. Gibson		1313 Elm St.		Librarian	
Harold Q. Hall		1414 Maple St.		Architect	
Irene R. Hill		1515 Pine St.		Veterinarian	
John S. Jones		1616 Oak St.		Historian	
Katherine T. King		1717 Cedar St.		Translator	
Leo U. Lee		1818 Birch St.		Astronomer	
Mildred V. Scott		1919 Walnut St.		Geologist	
Nathan W. Adams		2020 Spruce St.		Botanist	
Olivia X. Baker		2121 Ash St.		Zoologist	
Philip Y. Carter		2222 Hickory St.		Physicist	
Rebecca Z. Evans		2323 Sycamore St.		Chemist	
Samuel AA. Fisher		2424 Poplar St.		Biologist	
Teresa BB. Gibson		2525 Elm St.		Ecologist	
Victor CC. Hall		2626 Maple St.		Paleontologist	
Wanda DD. Hill		2727 Pine St.		Anthropologist	
Xavier EE. Jones		2828 Oak St.		Linguist	
Yvonne FF. King		2929 Cedar St.		Archaeologist	
Zachary GG. Lee		3030 Birch St.		Historiographer	
Alicia HH. Scott		3131 Walnut St.		Genealogist	
Barton II. Adams		3232 Spruce St.		Numismatist	
Cecilia JJ. Baker		3333 Ash St.		Palaeontologist	
Dennis KK. Carter		3434 Hickory St.		Epigraphist	
Evelyn LL. Evans		3535 Sycamore St.		Papyrologist	
Frederick MM. Fisher		3636 Poplar St.		Osteologist	
Gladys NN. Gibson		3737 Elm St.		Archaeologist	
Herbert OO. Hall		3838 Maple St.		Historian	
Ida PP. Hill		3939 Pine St.		Linguist	
Jesse QQ. Jones		4040 Oak St.		Archaeologist	
Kathleen RR. King		4141 Cedar St.		Historiographer	
Lester SS. Lee		4242 Birch St.		Genealogist	
Mabel TT. Scott		4343 Walnut St.		Numismatist	
Nathan UU. Adams		4444 Spruce St.		Palaeontologist	
Ophelia VV. Baker		4545 Ash St.		Epigraphist	
Percy WW. Carter		4646 Hickory St.		Papyrologist	
Quinn XX. Evans		4747 Sycamore St.		Osteologist	
Ruth YY. Fisher		4848 Poplar St.		Archaeologist	
Samuel ZZ. Gibson		4949 Elm St.		Historian	
Teresa AA. Hall		5050 Maple St.		Linguist	
Ulysses BB. Hill		5151 Pine St.		Archaeologist	
Verna CC. Jones		5252 Oak St.		Historiographer	
Walter DD. King		5353 Cedar St.		Genealogist	
Xavier EE. Lee		5454 Birch St.		Numismatist	
Yvonne FF. Scott		5555 Walnut St.		Palaeontologist	
Zachary GG. Adams		5656 Spruce St.		Epigraphist	
Alicia HH. Baker		5757 Ash St.		Papyrologist	
Barton II. Carter		5858 Hickory St.		Osteologist	
Cecilia JJ. Evans		5959 Sycamore St.		Archaeologist	
Dennis KK. Fisher		6060 Poplar St.		Historian	
Evelyn LL. Gibson		6161 Elm St.		Linguist	
Frederick MM. Hall		6262 Maple St.		Archaeologist	
Gladys NN. Hill		6363 Pine St.		Historiographer	
Herbert OO. Jones		6464 Oak St.		Genealogist	
Ida PP. King		6565 Cedar St.		Numismatist	
Jesse QQ. Lee		6666 Birch St.		Palaeontologist	
Kathleen RR. Scott		6767 Walnut St.		Epigraphist	
Lester SS. Adams		6868 Spruce St.		Papyrologist	
Mabel TT. Baker		6969 Ash St.		Osteologist	
Nathan UU. Carter		7070 Hickory St.		Archaeologist	
Ophelia VV. Evans		7171 Sycamore St.		Historian	
Percy WW. Fisher		7272 Poplar St.		Linguist	
Quinn XX. Gibson		7373 Elm St.		Archaeologist	
Ruth YY. Hall		7474 Maple St.		Historiographer	
Samuel ZZ. Hill		7575 Pine St.		Genealogist	
Teresa AA. Jones		7676 Oak St.		Numismatist	
Ulysses BB. King		7777 Cedar St.		Palaeontologist	
Verna CC. Lee		7878 Birch St.		Epigraphist	
Walter DD. Scott		7979 Walnut St.		Papyrologist	
Xavier EE. Adams		8080 Spruce St.		Osteologist	
Yvonne FF. Baker		8181 Ash St.		Archaeologist	
Zachary GG. Carter		8282 Hickory St.		Historian	
Alicia HH. Evans		8383 Sycamore St.		Linguist	
Barton II. Fisher		8484 Poplar St.		Archaeologist	
Cecilia JJ. Gibson		8585 Elm St.		Historian	
Dennis KK. Hall		8686 Maple St.		Linguist	
Evelyn LL. Hill		8787 Pine St.		Archaeologist	
Frederick MM. Jones		8888 Oak St.		Historiographer	
Gladys NN. King		8989 Cedar St.		Genealogist	
Herbert OO. Lee		9090 Birch St.		Numismatist	
Ida PP. Scott		9191 Walnut St.		Palaeontologist	
Jesse QQ. Adams		9292 Spruce St.		Epigraphist	
Kathleen RR. Baker		9393 Ash St.		Papyrologist	
Lester SS. Carter		9494 Hickory St.		Osteologist	
Mabel TT. Evans		9595 Sycamore St.		Archaeologist	
Nathan UU. Fisher		9696 Poplar St.		Historian	
Ophelia VV. Gibson		9797 Elm St.		Linguist	
Percy WW. Hall		9898 Maple St.		Archaeologist	
Quinn XX. Hill		9999 Pine St.		Historiographer	
Ruth YY. Jones		10000 Oak St.		Genealogist	



## No. 4—REVENUE OF ALBERTA HOSPITALS, 1933

Name of Hospital	Grants		Patients' Fees	Donations, Cash and Services	Tax Requisitions	Sundry Earnings	Total Earnings
	Alberta Government	Municipal and others					
Athabasca, Municipal	\$ 3,659.00	.....	\$ 9,782.92	\$ 3,633.10	\$ 8,545.42	\$ 203.93	\$ 22,191.27
Banff, Mineral Springs	1,889.50	.....	12,995.41	.....	.....	633.73	19,151.74
Barrhead, Barrhead	1,318.00	.....	5,933.00	.....	.....	.....	7,251.00
Bassano, Municipal	2,670.00	.....	10,130.86	.....	7,675.00	3,189.39	23,665.25
Bentley, Community	935.00	.....	5,178.00	42.28	.....	.....	6,155.28
Berwyn, W. I.	722.00	.....	2,500.90	30.10	.....	.....	4,911.34
Bonnyville, K. H. Prettie	1,447.50	.....	4,587.07	6,084.94	.....	562.40	12,681.91
Bonnyville, St. Louis	1,694.00	.....	6,208.00	5,763.96	.....	.....	13,665.96
Calgary, General	32,570.50	*85,956.55	171,065.70	.....	.....	1,576.16	291,168.91
Calgary, Isolation	757.00	*20,683.27	339.20	.....	.....	.....	21,779.47
Calgary, S. A. Grace	3,388.50	750.00	6,279.12	1,017.46	.....	.....	11,435.08
Calgary, Holy Cross	17,941.00	3,200.00	123,109.01	27,406.59	.....	.....	171,656.60
Calgary, Junior Red Cross	11,710.50	.....	.....	2,776.66	.....	.....	14,487.16
Camrose, St. Mary's	2,910.50	.....	15,760.86	1,047.79	9,825.47	1,152.69	19,719.15
Cardston, Municipal	2,522.50	.....	6,473.95	.....	.....	.....	19,974.61
Castor, Rosary	1,562.00	.....	7,952.88	882.68	.....	.....	10,397.56
Cereal, General	710.00	.....	1,543.50	.....	.....	.....	2,253.50
Claresholm, General	1,610.50	550.00	8,903.53	.....	.....	138.99	11,064.03
Cold Lake, John Neil	813.50	1,476.50	3,175.35	3,705.00	.....	.....	9,309.34
Coleman, Miners' Union	1,468.50	.....	9,986.95	.....	.....	.....	11,455.45
Consort, Municipal	2,199.00	.....	6,001.90	.....	6,604.65	95.50	14,901.05
Coronation, General	1,405.50	.....	6,562.90	150.00	.....	16.46	8,134.86
Daysland, Providence	885.00	.....	4,210.50	.....	.....	*7,641.35	12,736.85
Didsbury, General	1,048.50	1,800.00	6,165.55	25.00	.....	.....	9,039.05
Drumheller, Municipal	10,605.00	.....	36,870.75	.....	30,609.00	1,721.52	79,896.27
Edmonton, Beulah Home	2,925.00	666.70	3,609.67	2,901.74	.....	120.55	10,223.66
Edmonton, General	17,258.50	7,650.00	79,420.56	17,626.85	.....	.....	121,955.91
Edmonton, Misericordia	18,694.00	5,950.00	95,614.55	6,050.06	.....	.....	126,308.61
Edmonton, S. A. Grace	1,492.00	.....	1,945.23	1,139.23	.....	36.42	4,612.88
Edmonton, Royal Alexandra	47,236.50	*82,717.21	254,254.92	.....	.....	6,627.98	390,836.61
Edmonton, Isolation	4,118.50	*34,794.29	25,887.18	.....	.....	.....	64,799.97
Edmonton, University	*66,131.00	*30,382.37	287,080.92	.....	.....	.....	383,594.29
Edson, St. John's	3,013.50	3,501.50	16,423.00	4,849.55	9,678.03	292.50	22,875.69
Elk Point, Municipal	3,586.00	.....	9,319.16	132.50	.....	.....	9,858.78
Empress, Cottage	1,285.50	.....	8,440.78	.....	.....	.....	5,760.60
Fairview, W. I.	790.00	990.00	3,980.60	.....	.....	.....	11,173.15
Galahad, St. Joseph's	990.50	.....	7,019.34	3,163.31	.....	.....	46,119.17
Grande Prairie, Municipal	4,285.00	.....	15,213.85	16.25	25,595.64	1,008.43	55,255.83
Hanna, Municipal	5,114.00	.....	15,482.27	.....	31,889.00	2,770.56	55,255.83
Hardisty, St. Anne's	1,634.50	.....	10,846.00	285.00	.....	.....	12,765.50

No. 4—REVENUE OF ALBERTA HOSPITALS, 1933—Continued

Name of Hospital	Grants		Patients' Fees	Donations, Cash and Services	Tax Requisitions	Sundry Earnings	Total Earnings
	Alberta Government	Municipal and others					
High Prairie, Community	\$ 294.00		\$ 1,016.75	\$ 15.00	\$ 18,698.46	\$ 1,691.97	\$ 1,325.75
High River, Municipal	3,581.50		11,104.96		15,471.95	603.06	35,076.89
Innisfail, Municipal	3,987.00		9,853.06				29,915.07
Islay, Municipal	1,825.00		3,428.65		9,315.00	52.25	14,620.90
Jasper, Seton	1,113.00	\$ 5,802.00	7,883.83	5,598.37			20,397.20
Killam, General	544.50		2,068.00	1,460.25			4,442.20
Lacombe, General	1,423.50		9,436.19	1.44			11,006.64
Lamont, Public	8,553.00	1,500.00	44,654.79	3,925.00		1,420.00	60,052.79
Lethbridge, Galt	13,368.00	5,000.00	66,442.37	100.00		1,898.65	86,809.02
Lethbridge, St. Michael's	9.50	2,755.69	48.58				2,813.77
Lloydminster, Municipal	8,300.00		54,702.55	13,407.99		371.22	76,781.76
Macleod, General	4,174.00	3,399.50	34,448.00	932.37	*		42,953.87
Manville, Municipal	1,135.50		5,055.33			*12,033.54	18,224.37
Medicine Hat, General	1,768.50		3,859.05		9,809.00	96.00	15,532.55
Medicine Hat, Isolation	12,007.00	8,967.35	63,525.05	956.47		1,329.62	86,785.49
Mundare, General	64.50	1,775.03					1,839.53
McLennan, Sacred Heart	1,530.50		5,742.90	5,526.99		950.03	13,750.42
Nanton, General	2,338.50		11,915.00	3,031.61		2,767.00	20,052.11
Nordeg, General	495.00		3,180.50				3,675.50
Olds, General	1,644.50		8,296.00				9,940.50
Onoway, Municipal	1,198.50		6,922.85	113.50		.50	8,235.35
Peace River, Municipal	1,069.50		1,996.05		6,530.00	8.81	9,604.36
Pincher Creek, St. Vincent's	2,175.50		8,882.95	25.15	12,015.31	853.59	23,952.50
Provost, Municipal	736.50		4,234.01	626.04			5,596.55
Radway, St. Joseph's	3,155.00		7,647.15		12,168.00	360.00	23,330.15
Red Deer, Municipal	1,630.00		7,112.35	4,318.57		695.80	13,756.72
Rimbey, St. Paul's	2,844.00		15,930.72	926.68	1,686.65	2,008.68	22,470.05
St. Paul, St. Theresa	1,189.50		5,149.13	5,800.00			7,265.31
St. Paul, St. Theresa	2,400.00		10,916.00	3,000.00			19,116.00
Smoky Lake, Geo. McDougall	1,929.00		3,304.85	261.45		298.60	8,532.45
Spirit River, Community	450.00	580.00	1,784.25				3,075.70
Stettler, Municipal	3,585.50		9,886.96		13,626.63	1,257.44	28,356.53
Trochu, St. Mary's	1,538.00	150.00	5,564.50	3,114.50			10,367.00
Vegreville, General	4,148.50		23,911.00	6,271.73			34,331.23
Vegreville, R. M. Boswell	1,218.50	137.50	2,425.00	3,515.40			7,296.40
Vermilion, Municipal	3,329.50		6,798.77		11,801.00	535.89	22,476.16
Viking, Municipal	2,207.00		6,034.45		7,716.00	508.81	16,466.26
Vilna, Our Lady's	823.00	600.00	3,879.90	1,827.22			7,130.12
Vulcan, Municipal	2,291.00		6,697.45		15,061.05	464.41	24,513.91



Wainwright, Municipal .....	2,796.00	9,593.50	8,974.00	563.60	21,927.10
Wayne, General .....	1,618.00	6,860.28	.....	.....	8,478.28
Westlock, Immaculata .....	2,048.00	12,687.00	.....	.....	19,665.68
Wetaskiwin, Community .....	3,025.50	15,449.45	.....	100.60	18,931.55
	\$ 402,551.50	\$ 1,836,585.97	\$ 158,172.46	\$ 59,193.59	\$3,043,792.58

## \*ALBERTA GOVERNMENT GRANT:

## Edmonton University:

General Grant

Special Grant

\$46,131.00  
20,000.00

\$66,131.00

## \*MUNICIPAL GRANTS:

Calgary General is the amount charged to the Mill Rate.

Calgary Isolation is the amount charged to the Mill Rate.

Edmonton, Royal Alexandra, City funds to make up deficit

Edmonton, Isolation, City funds to make up deficit

Edmonton, University:

City of Edmonton

University of Alberta

Municipal District

\$12,557.62  
17,500.00

324.75

30,382.37

Lloydminster, Municipal (Alberta Board)

13,500.00

## \*TAX REQUISITION:

Lloydminster, Municipal (Alberta Board)

## \*SUNDRY EARNINGS:

Daysland, Providence, including revenue from incurable wards.

Macleod, General, including revenue from incurable wards.

No. 5—COSTS OF ALBERTA HOSPITALS, 1933

Name of Hospital	Per Patient per Day	Percentage of Cost					Earnings, including grants and contri- butions from Municipalities per patient per day
		Adminis- tration	Professional Care	Kitchen and Dining Room	House and Property	Maintenance	
Athabasca, Municipal	\$ 2.16	10.1	38.5	22.0	23.4	6.0	\$2.95
Banff, Mineral Springs	3.64	3.4	28.9	34.9	31.5	4.3	5.03
Barrhead, St. Elizabeth	1.61	3.2	44.6	28.8	20.4	3.0	2.75
Bassano, Municipal	3.49	10.2	35.9	19.5	26.6	7.8	4.43
Bentley, Community	2.85	12.7	60.2	14.3	12.8	.....	3.29
Berwyn, W. I.	3.16	5.8	47.5	26.9	10.6	9.2	3.40
Bonnyville, K. H. Prettie	3.26	4.2	39.4	17.4	25.5	13.5	4.38
Bonnyville, St. Louis	2.31	2.7	43.7	24.4	21.0	8.2	4.03
Calgary, General	2.94	10.3	36.6	22.1	26.6	4.4	4.47
Calgary, Isolation	11.49	28.6	34.0	15.1	21.2	1.1	14.38
Calgary, S.A. Grace	1.67	8.6	31.9	27.3	14.9	1.69	1.11
Calgary, Holy Cross	3.30	11.7	32.9	31.1	25.7	6.3	4.79
Calgary, Junior Red Cross	3.30	3.1	50.5	24.7	23.8	5	1.11
Camrose, St. Mary's	3.49	11.5	39.0	25.3	13.5	7.5	3.21
Cardston, Municipal	3.06	8.9	44.8	21.1	22.2	15.0	3.86
Castor, Rosary	3.40	2.5	39.2	21.1	22.2	6.2	3.32
Cereal, General	1.80	1.9	54.4	24.4	13.1	7.7	1.58
Clareholm, General	2.84	2.0	53.5	24.2	12.6	2.6	3.43
Cold Lake, John Neil	3.30	3.9	46.8	26.4	20.3	4.8	3.90
Coleman, Miners' Union	3.26	5.8	51.6	23.3	14.5	6.9	3.39
Consort, Municipal	2.50	8.3	45.2	23.7	15.9	3.3	2.88
Coronation, General	2.44	5.1	40.7	27.5	23.4	6.6	1.60
Daysland, Providence	2.18	9.5	31.3	29.3	23.3	4.9	4.30
Didsbury, General	4.08	6.5	42.4	20.0	26.2	6.3	3.77
Drumheller, Municipal	2.89	9.6	41.4	21.4	21.3	19.4	2.11
Edmonton, Beulah Home	2.34	5.2	38.2	28.2	17.5	18.7	3.45
Edmonton, General	4.40	9.2	36.2	18.3	20.8	7.0	3.33
Edmonton, Misericordia	3.29	13.4	40.5	18.3	24.8	8.2	1.54
Edmonton, S.A. Grace	1.84	10.1	35.5	29.5	16.7	4.13	4.13
Edmonton, Royal Alexandra	3.14	13.1	38.5	18.7	28.3	4.9	5.72
Edmonton, Isolation	4.10	20.6	30.7	16.3	17.3	14.1	4.77
Edmonton, University	3.74	8.4	48.6	20.8	20.9	3.9	4.61
Edson, St. John's	3.18	3.3	36.4	25.3	21.3	7.6	3.09
Elk Point, Municipal	1.97	11.0	35.5	22.8	18.9	3.9	3.83
Empress, Cottage	3.00	7.6	49.1	20.5	10.4	7.6	3.65
Fairview, W. I.	3.12	2.6	51.4	28.0	22.4	11.2	5.64
Galahad, St. Joseph's	3.78	5.6	46.4	14.4	.....	.....	.....



Grande Prairie, Municipal	13.6	41.5	21.9	18.0	5.0	5.21
Hanna, Municipal	14.7	38.9	18.9	22.1	5.4	5.73
Hardisty, St. Anne's	2.7	44.0	24.6	24.0	4.7	3.90
High Prairie, Community	2.5	6.8	57.7	6.2	26.8	2.25
High River, Municipal	10.5	36.5	22.5	22.4	8.1	4.89
Innisfail, Municipal	10.9	40.3	22.9	20.4	4.4	3.75
Islay, Municipal	10.0	35.9	24.0	23.4	6.7	4.00
Jasper, Seton	2.7	39.6	32.4	18.8	6.5	9.16
Killam, General	6.2	43.4	16.2	21.9	12.3	4.08
Lacombe, General	8.2	48.7	17.5	19.7	5.9	3.86
Lamont, Public	11.1	31.1	25.0	27.0	5.8	3.51
Lethbridge, Galt	10.1	37.3	24.4	21.5	6.7	3.23
Lethbridge, St. Michael's	8.4	41.9	23.0	25.3	1.4	4.62
Lloydminster, Municipal	11.4	35.6	24.2	24.5	4.3	2.70
Macleod, General	13.2	28.0	32.5	26.7	6.7	1.84
Mannville, Municipal	9.4	38.2	24.2	23.2	5.0	4.39
Medicine Hat, General	13.4	39.0	17.4	26.7	3.5	3.74
Mundare, General	2.9	32.4	18.6	44.6	1.5	4.49
McLennan, Sacred Heart	3.4	33.1	24.6	24.6	14.3	4.28
Nanton, General	2.9	38.0	46.5	7.0	5.6	3.71
Nordeg, General	1.2	36.8	42.4	8.1	11.5	3.02
Olds, General	8.2	45.7	24.0	10.9	11.2	3.43
Onoway, Municipal	8.2	50.1	21.2	18.4	2.1	4.48
Peace River, Municipal	14.4	35.9	17.1	22.7	9.9	5.50
Pincher Creek, St. Vincent's	2.3	35.6	18.2	24.6	19.3	3.80
Provost, Municipal	10.3	36.0	27.4	18.9	7.4	3.70
Radway, St. Joseph's	8.6	39.0	22.5	24.2	5.7	4.21
Red Deer, Municipal	10.1	40.3	21.1	22.2	6.3	3.96
Rimbey, St. Paul's	1.9	46.2	21.3	27.7	2.9	3.05
St. Paul, St. Theresa	8.7	35.1	19.6	18.7	17.9	3.98
Smoky Lake, Geo. McDougall	4.1	46.4	21.0	26.5	2.0	2.21
Spirit River, Community	1.4	51.5	16.4	12.0	18.7	3.41
Stettler, Municipal	12.2	42.3	20.7	19.2	5.6	3.95
Trochu, St. Mary's	7.2	45.5	19.0	21.2	7.1	3.37
Vegreville, General	3.2	38.2	29.5	19.4	9.7	4.13
Vegreville, R. M. Boswell	1.9	46.2	20.0	30.3	1.6	2.98
Vermilion, Municipal	12.1	35.1	22.8	23.4	6.6	3.38
Viking, Municipal	13.1	38.7	23.0	18.4	6.8	3.73
Vilna, Our Lady's	2.7	37.3	20.5	32.3	7.2	4.32
Vulcan, Municipal	11.9	35.1	25.6	24.0	3.4	5.35
Wainwright, Municipal	10.4	44.9	25.5	15.9	3.3	3.92
Wayne, General	12.4	40.7	27.0	17.3	2.6	2.62
Westlock, Immaculata	2.2	40.6	25.5	25.5	6.2	4.80
Wetaskiwin, Community	10.8	42.4	20.9	23.9	2.0	3.12
	7.9	40.2	23.8	20.8	7.3	\$3.90
Eliminating Isolation, Junior Red Cross, Sanatorium, University and Hospitals operating incurable wards						\$2.88



## Division of Social Hygiene

(HAROLD ORR, O.B.E., M.D., D.P.H., *Director*)

Following the policy inaugurated some ten years ago, we have directed particular attention to the early detection and treatment of neuro-syphilis and cardio-vascular syphilis, the two types which cause the greatest economic loss from incapacitation and early death. During the year we completed the neurological examination of 500 syphilitic individuals, this number representing practically all of the syphilitic patients under treatment in the Edmonton Clinic. The figures for the other clinics have not yet been analyzed. A spinal fluid examination was done on all syphilitic patients whether or not there was clinical evidence of neuro-syphilis. Of the 500 syphilitic patients, 92 (18.4%) had positive cerebral spinal fluids. Only 14 of the 92 presented clinical evidence of neuro-syphilis, leaving 78 patients with positive spinal fluids, but no other evidence of neuro-syphilis. These cases are termed asymptomatic neuro-syphilis. All 14 patients having symptoms and 55 (70.5%) of the asymptomatic cases were given malaria pyrexia treatment. Of these 55 asymptomatic cases treated with malaria, 25 (45.5%) have had a second spinal test twelve months after the completion of the malaria treatment, and 13 of them (52%) have become absolutely normal in all four points in the spinal fluid, 3 (12%) normal in three points, 7 (28%) normal in two points, and 2 (8%) normal in one point. There were no asymptomatic cases in which an improvement in the spinal fluid was not noted following the malaria treatment.

We believe that this work will produce a marked lowering of the incidence of symptomatic neuro-syphilis in years to come, and should be evidenced by a reduction in the number of cases of paresis admitted to our mental institutions.

The following figures briefly indicate the work done in the various clinics during the year.

### EDMONTON CLINIC, 9912 103rd Avenue

Number of Patients .....	693
Sex of Patients: Male .....	528
Female .....	165

#### CLASSIFICATION OF THEIR DISEASES

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	300	228	.....	528
Female .....	114	51	.....	165
Totals .....	414	279	.....	693

Number and results of Wassermann tests: 2671 tests, of which 565 were positive.

Number and results of Cerebrospinal fluid tests: 106 tests, of which 29 were positive.

### CALGARY CLINIC, 713 3rd Street East

Number of Patients .....	1214
Sex of Patients: Male .....	815
Female .....	399

#### CLASSIFICATION OF THEIR DISEASES

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	259	556	.....	815
Female .....	187	212	.....	399
Totals .....	446	768	.....	1214

Number and results of Wassermann tests: 2263 tests, of which 521 were positive.

Number and results of Cerebrospinal fluid tests: 65 tests, of which 19 were positive.

### MEDICINE HAT CLINIC, General Hospital

Number of Patients .....	42
Sex of Patients: Male .....	22
Female .....	20



## CLASSIFICATION OF THEIR DISEASES

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	9	12	1	22
Female .....	12	8	.....	20
Totals .....	21	20	1	42

Number and results of Wassermann tests: 132 tests, of which 50 were positive.

Number and results of Cerebrospinal fluid tests: 8 tests, of which 1 was positive.

## LETHBRIDGE CLINIC, Galt Hospital

Number of Patients .....	89
Sex of Patients: Male .....	75
Female .....	14

## CLASSIFICATION OF THEIR DISEASES

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	38	35	2	75
Female .....	10	4	.....	14
Totals .....	48	39	2	89

Number and results of Wassermann tests: 190 tests, of which 46 were positive.

Number and results of Cerebrospinal fluid tests: 14 tests, of which 4 were positive.

## LETHBRIDGE GAOL, Lethbridge

Number of Patients .....	72
Sex of Patients: Male .....	72

## CLASSIFICATION OF THEIR DISEASES

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	39	33	.....	72

Number and results of Wassermann tests: 528 tests, of which 66 were positive.

Number and results of Cerebrospinal fluid tests: 11 tests, of which 3 were positive.

## FORT SASKATCHEWAN GAOL, Fort Saskatchewan

Number of Patients .....	147
Sex of Patients: Male .....	94
Female .....	53

## CLASSIFICATION OF THEIR DISEASES

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	47	47	.....	94
Female .....	28	25	.....	53
Totals .....	75	72	.....	147

Number and results of Wassermann tests: 1869 tests, of which 156 were positive.

## CASES REPORTED BY DOCTORS IN THE PROVINCE

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	15	38	.....	53
Female .....	6	6	.....	12
Totals .....	21	44	.....	65

## RECAPITULATION

	Syphilis.	Gonorrhoea.	Chancroid.	Totals.
Male .....	707	949	3	1659
Female .....	357	306	.....	663
Totals .....	1064	1255	3	2322

## Sanitary Engineering Division

(R. B. OWENS, B.A., B.E., *Provincial Sanitary Engineer*)

The following is a detailed list of works for which Provincial Board of Health Certificates have been issued, together with the estimated cost of each:

### WATERWORKS

Coleman—Final Certificate No. 377/33, replacements to waterworks system. Estimated cost .....	\$ 2,316.00
Camrose—Per Calgary Power Company, Final Certificate No. 378/33, additions to waterworks system. Estimated cost .....	74,501.35

### HOSPITALS

Vegreville—General Hospital, per Mr. Chas. Gordon, Certificate No. 379/33, additions to Vegreville General Hospital. Estimated cost .....	15,000.00
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### SEWERAGE

Turner Valley—Royalite Oil Company, Limited, per Haddin and Miles, Certificate No. 380/33, reconstruction of sewage disposal field. Estimated cost .....	1,800.00
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Plans and specifications submitted to the Provincial Board of Health for waterworks, sewerage and sewage disposal plants as required under Sections 10, 11, 12, 13, 14 and 15 of The Public Health Act were duly examined, and where approval was given, certificates were issued.

Plans and specifications other than those aforesaid, but required by the Provincial Board of Health, were examined, and the necessary action taken thereon.

Plans and specifications in connection with the sanitary engineering works submitted to the Board of Public Utility Commissioners, were also examined and advice given.

Plans and specifications in connection with the sanitary engineering works connected with hospitals under The Hospitals Act and The Municipal Hospitals Act were examined and advice given thereon.

Sanitary engineering works in connection with the institutions under the administration of the Department of Public Works were visited and advice given where necessary.

Private sewage disposal systems in connection with schools, etc., were examined, and advice given as to maintenance and operation.

Typical plans dealing with sewage disposal, heating, ventilation, water filtration, etc., have been prepared, printed and distributed. These have been available to those who request information on these subjects. It is interesting to note that the demand for this information is increasing as people in rural areas desire to modernize their homes by installing running water and the utilities in connection therewith.

During the year, 1,452 reports on the analyses of water and ice were received from the Director of the Provincial Laboratory. These were examined and, where necessary, action in the matter of prohibiting the use of the supply was taken, or an investigation made for the purpose of advising as to a remedy.

Under the sanitary inspection section of the Sanitary Engineering Branch of the Department, the following work was carried out by our three inspectors (one full time, two part time):



Two hundred and eighteen health districts were visited and inspected. Of this number 74 were inspected a second time, making a total of 292 inspections.

Sixty-three lumber, tie, saw-mill and mining camps were visited and inspected.

Fifteen Dominion and Provincially operated unemployment camps were visited and inspected.

One hundred and eight notices to abate nuisances were issued by our inspectors, and a great number were issued by Local Boards of Health on the advice and recommendation of our inspectors.

During the year, the need for prosecution of offenders against The Public Health Act and Regulations had shown a marked decline. Only three cases were prosecuted. Two were assessed the minimum fine of \$5.00 and costs, the third was assessed a monetary fine and costs or 14 days' imprisonment with hard labour. Owing to the fine and costs not being paid, the accused was committed to jail.

Fifty-three requests for the services of an inspector were received, asking for assistance in clean-up campaigns, selection of nuisance ground sites, sites for cemeteries, slaughter-houses, etc. All were attended to, and satisfactory results were obtained.

Two hundred and seventy pounds of meat were condemned as being unfit for food for human consumption. This was seized and rendered unsaleable as food for human consumption.

In addition to regular sanitary inspections, the services of the inspectors are available and have been used in investigating outbreaks of infectious and contagious diseases.

Of the three inspectors, one is on full-time. One inspector devotes part of his time to dealing with office routine with respect to the system of centralized supervision of purchasing in operation in the Department. Two-thirds of the time of the other inspector is spent in the two full-time health districts.

The Public Health and Institutional Occupational Therapy Exhibit was again held during the Edmonton Exhibition, and was the subject of very favourable comment from exhibition officials and a large number of visitors. The occupational work of patients in our various mental institutions received much admiration, and as this work is increased the need for more room for exhibiting the same has been felt. We have been assured by the Edmonton Exhibition Association of the full use of the whole ground floor for our 1934 exhibit.

The Public Health Regulations are under revision.

## Dental Hygiene Division

(A. E. HEACOCK, L.D.S., D.D.S.)

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During the year 1933 dental treatment was accorded the patients in the Provincial institutions as formerly. The Central Alberta Sanatorium was visited monthly except in August and November. The Provincial Mental Institute was visited at frequent intervals during the year and the Provincial Training School was visited twice, once in June and again in December.

There exists a pressing need for dental service for school children in the outlying districts. An effort was made this year to meet the demands from some of the more isolated points, in so far as available funds would permit. An itinerary was outlined to include Worsley, Notikewin, Slave Lake, Fawcett, Wandering River and Plamondon. In spite of the early advent of winter, making travel somewhat difficult, these points were all visited and successful clinics held.

The following table shows the work done in these districts:

Number of children examined .....	467
Number of children recommended for treatment .....	302
Number of children given treatment .....	285
Number of prophylactic treatments .....	7
Number of fillings .....	149
Number of extractions .....	389



## Mental Health Division

(C. A. BARAGAR, M.D., *Commissioner of Mental Institutions  
and Director of Mental Health*)

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Separate reports are submitted as follows for each branch of this division:

Eugenics Board,  
Mental Health Clinics,  
Provincial Mental Hospital, Ponoka,  
Provincial Auxiliary Hospital, Claresholm,  
Provincial Mental Institute, Edmonton,  
Provincial Training School, Red Deer.  
Psychopathic Ward, University Hospital.

The institutional population again shows a definite increase. On January 1st, 1933, this stood at 1,846—males 1,149, females 697—and on December 31st, 1933, at 1,957—males 1,214, females 743—an increase of 111 during the year. As our ratio of mental patients to population is even yet well below that of at least seven of the nine provinces and of the average for the United States and Canada, a further increase may be expected.

To relieve the congestion on the women's wards at the Provincial Mental Hospital, on October 31st and November 2nd, 100 patients were transferred from that institution to the Claresholm School of Agriculture, which had been taken over, renovated, and redesignated the Provincial Auxiliary Hospital. It was formally opened on November 8th by the Honourable George Hoadley, Minister of Health.

Notwithstanding this additional accommodation, overcrowding except on the women's wards was even more acute at the end of the year than at the beginning. More accommodation is needed especially in the forms of a separate reception and acute treatment unit at the Provincial Mental Hospital, in which under the most suitable environment and with every facility, acute and early cases could be given the benefit of the most modern treatment.

The Provincial Training School is quite unable to cope with the increasing demands on its accommodation. Unfortunately, its efforts have to be confined largely to the care of the more hopeless but more urgent low grade cases rather than to the training of the socially more serious but more hopeful high grades.

Owing to the economic situation the Psychopathic Ward of the University Hospital was closed on March 31st. For the observation and treatment of early and borderline cases, and for the elimination of the necessity of detention of mental cases in police stations, it has been greatly missed. With an improvement in the times it is hoped that this much needed service will be restored.

On May 31st the training school at the Provincial Mental Hospital graduated its first group of psychiatric nurses and attendants, an event that may be regarded as a very important milestone in the history of the mental hospitals of the Province.

The regular mental health clinics have been carried on in Edmonton, Calgary and Lethbridge, as usual, and in addition a fourth one was instituted in Medicine Hat on November 17th. It is expected that this will continue quarterly. Its gratifying success was largely due to the enthusiastic co-operation of the doctors, school and health authorities of the city. The one large section

of the Province that yet remains to be served in this manner is the Peace River district.

On the authority of the Minister the Eugenics Board was constituted a visiting board at the time of the September meeting, and conducted a thorough inspection of the various mental hospitals.

During the year the number of cases submitted to the Eugenics Board and approved increased to 288, and of these, 206 had been operated on. With the appointment on September 22nd of Dr. L. C. Conn of Edmonton and Dr. Robert O'Callaghan of Calgary as honorary consultants to the mental hospital service, and the establishment of a surgical centre at the Provincial Mental Hospital, this work can in future be done at a relatively greatly reduced cost to the Province.

The various addresses and radio talks delivered from time to time by officers of the service constitute an important part of the mental health work of the Department. As a result of all these efforts there would appear to be developing a more intelligent conception of and humane attitude towards mental disease and defect.

In conclusion, I would like to commend to your consideration the splendid work that is being done by the various superintendents and the members of their respective staffs.

May I also express my deep appreciation of the unfailing sympathy and interest manifest and of the advice and encouragement I have received from both yourself and the Deputy Minister when problems of mental health have been under consideration.



## Eugenics Board, Province of Alberta

(J. M. MACEachran, M.A., Ph.D., *Chairman*)

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Under the provisions of the Statute known as The Sexual Sterilization Act the work of the Eugenics Board has proceeded smoothly throughout the year 1933. Four meetings of the Board were held. These included three sessions in Edmonton, four at the Provincial Mental Hospital, Ponoka, two at the Provincial Training School, and two at the Calgary General Hospital, Calgary.

During the year 35 male and 56 female cases were presented and passed, making a total of 288 cases since the Act was proclaimed. During the year 72 operations—22 male and 50 female—were performed. Of these 8 had been passed in 1932.

The operations have continued to prove uneventful.

In September Dr. L. C. Conn and Dr. Robert O'Callaghan, surgeons to the Board, were appointed honorary consultants to the mental hospital service, and a surgical centre was established at the Provincial Mental Hospital, Ponoka. In future, therefore, it is probable that the majority of the operations will be performed there.

Follow-up reports have in general proved satisfactory, and there is no indication that the fact of sterilization has led to increased immorality. In fact, the reverse would appear to be the case with respect to those patients who have been operated on. This is, of course, due largely to the influence of hospital training, and to the greater subsequent supervision. For this reason an increase in the frequency and thoroughness of follow-up contacts is desirable as soon as the financial situation will permit.

No complaints have been received, and there appears to be a steadily growing recognition of the importance of the work carried out under the Act in a mental hygiene programme.

# Psychopathic Ward, University of Alberta Hospital

(C. A. BARAGAR, M.D., *Director*)

Owing to the economic situation the Psychopathic Ward of the University Hospital, which was opened for the reception of patients on January 29th, 1931, was closed March 31st, 1933. The patients were either discharged or, if that was impossible, transferred to one of the Provincial mental institutions. Of the staff the resident physician, the charge nurse, one graduate nurse and two attendants were transferred to the staff of the Provincial Mental Hospital, Ponoka.

In order that the records may be complete the usual tables are appended, but as there are so few patients comment on these is unnecessary.

During the period of its operation this special ward served a useful function as a place for the observation of doubtful cases, and the treatment of incipient and borderline cases. It provided also for a limited amount of psychiatric instruction for students and nurses. Since it was closed the need for such a service has been very keenly felt. Many patients have had to be detained in the police cells for whom such treatment was undesirable, and yet it could not be avoided. Other cases have had to be kept at home who would certainly have benefited by a brief period of hospital care. It is hoped, therefore, that as the financial situation will permit, this service will be restored.

TABLE No. 1

	Male	Female	Total
In residence January 1st, 1933	5	10	15
First admissions during 1933	17	10	27
Re-admissions during 1933	3	1	4
Discharges during 1933	25	21	46
In residence April 1st, 1933			

TABLE No. 2

SHOWING DISTRIBUTION OF THE ADMISSIONS JAN. 1, 1933-APRIL 1, 1933

Mode	M.	%	F.	%	T.	%
Voluntary	13	76.5	7	70.0	20	74.1
Certificate 1	3	17.6	3	30.0	6	22.2
Certificate 2						
Warrant						
From institutions	1	5.9			1	3.7
Total	17		10		27	100.0

TABLE No. 3

SHOWING THE MODE OF DISCHARGE OF PATIENTS ADMITTED,  
JAN. 1, 1933-APRIL 1, 1933

	Male	%	Female	%	Total	%
Recovered	2	8.0	1	4.8	3	6.5
Much improved	1	4.0	3	14.3	4	8.0
Improved	3	12.0	4	19.1	7	14.5
	3	12.0	3	14.3	6	13.1
Unimproved	6	24.0	7	33.3	13	27.6
Observation	6	24.0	3	14.3	9	19.6
	6	24.0	3	14.3	9	19.6
Total Discharged	12	48.0%	10	47.6%	22	47.2%
Admitted to Institutions:						
Ponoka	9	36.0	10	47.6	19	41.3
Red Deer	2	8.0			2	4.3
Isolation Hospital			1	4.8	1	2.2
Deaths	11	44.0%	11	52.4	22	47.8%
	2	8.0			2	4.3
	2	8.0%	21		2	4.3%
Total	25				46	



TABLE No. 4  
SHOWING THE DIAGNOSIS OF THE ADMISSIONS, JAN. 1, 1933-APRIL 1, 1933

Classification	Male	Female	Total	Percentage
Psychoses with brain tumor .....	1	....	1	3.7%
Psychoses due to drugs and other exogenous toxins .....	2	....	2	7.4%
Total organic psychoses .....			— 3	— 11.1%
Manic-depressive psychoses:				
Manic type .....	....	2	2	7.4%
Depressive type .....	2	3	5	18.5%
Dementia praecox:				
Catatonic type .....	....	2	2	7.4%
Paranoid type .....	5	....	5	18.5%
Total functional psychoses .....			— 14	— 62.9%
Psychoses with epilepsy .....	....	1	1	3.7%
Psychoneuroses and neuroses .....	1	....	1	3.7%
Psychopathic personality .....	2	1	3	11.1%
Without psychoses .....	4	1	5	18.5%
Total .....	17	10	27	— 100.0%





TABLE No. 6  
SHOWING BY WHOM PATIENTS REFERRED

Referred by	Male	Female	Total
Edmonton physicians .....	7	5	12
Other physicians .....	.....	3	3
Mental Hygiene Clinics .....	1	2	3
Juvenile court .....	2	.....	2
Edmonton city police .....	1	.....	1
Royal Canadian Mounted Police .....	1	.....	1
Provincial Mental Hospital, Ponoka .....	1	.....	1
Y. M. C. A. ....	1	.....	1
Member Legislative Assembly .....	1	.....	1
Workmen's Compensation Board .....	1	.....	1
Unknown .....	1	.....	1
Total .....	17	10	27

## NUMBER OF CONSULTATIONS

	Male	Female	Total
Consultations .....	75	69	144
Re-examined consultations .....	31	29	60
Total .....	106	98	203

## WHERE PATIENT SEEN

Where Seen	Male	Female	Total
General hospitals .....	23	32	55
In own home .....	1	8	9
Patient not seen but reported by relatives and friends in consultation .....	6	2	8
In Edmonton police station .....	12	3	15
R.C.M.P. guardroom .....	7	2	9
Provincial Gaol .....	1	.....	1
Psychopathic Ward, University Hospital, Edmonton .....	5	1	6
In city physician's offices .....	.....	2	2
In central office, Administration Building .....	8	6	14
Welfare institutions .....	.....	5	5
General hospitals outside of the City of Edmonton .....	3	2	5
No stated place of consultation .....	9	6	15
Total .....	75	69	144

NUMBER OF CONSULTATION CASES RECOMMENDED OR ADMITTED TO THE  
PROVINCIAL MENTAL HOSPITALS OR THE PSYCHOPATHIC WARD,  
UNIVERSITY HOSPITAL

Admitted to	Male	Female
Psychopathic Ward .....	4	2
Provincial Mental Hospital, Ponoka .....	10	5
Provincial Mental Institute, Oliver .....	1	.....
Recommended for admission to:		
Provincial Mental Hospital, Ponoka .....	10	9
Psychopathic Ward .....	2	1
Provincial Training School, Red Deer .....	1	2
Admission to an institution ultimately, not now .....	1	.....
Recommended for presentation to the Eugenics Board .....	1	2
Admission to an Old Folks' Home .....	1	.....
Total .....	31	21

## CONSULTATIONS REFERRED

by	Male	Female
Doctors .....	31	50
Parents .....	3	.....
Friends or relatives .....	3	2
Edmonton city police .....	10	2
Royal Canadian Mounted Police .....	7	1
Juvenile court .....	1	.....
Gaol warden .....	1	.....
Attorney General's Department .....	4	2
Child Welfare Department .....	.....	4
Provincial Relief Department .....	1	.....
City Relief Department .....	.....	1
Department of Education .....	2	.....
Department of Pensions and National Health .....	1	.....
Workmen's Compensation Board .....	1	.....
Church of England Bishop .....	1	.....
Member of Legislative Assembly .....	2	1
Civil Service Commissioner .....	1	.....
Sister Superior .....	.....	1
Self .....	.....	2
Not stated .....	6	3
Total .....	75	69—144

## DIAGNOSIS OF CONSULTATIONS

Diagnosis		Male	Female
1	Traumatic psychoses	1	...
2	Senile psychoses	4	...
3	Psychoses with cerebral arteriosclerosis	4	1
4	General paralysis	2	...
5	Psychoses with cerebral syphilis	...	...
7	Psychoses with brain tumour	...	1
8	Psychoses with other brain or nervous disease	1	1
9	Alcoholic psychoses	...	...
10	Psychoses due to drugs and other exogenous toxins	1	1
12	Psychoses with other somatic disease	1	4
13	Manic-depressive:		
	Manic type	2	6
	Depressive type	...	1
	Other types	...	2
14	Involuntional melancholia	...	5
15	Dementia Praecox:		
	Catatonic type	2	...
	Paranoid type	3	2
	No type stated	7	6
16	Paranoia and paranoid conditions	3	4
17	Epileptic psychoses	1	...
18	Psychoneuroses and neuroses:		
	Hysterical type	...	5
	Psychasthenic type	...	3
	Neurasthenia	3	...
	Other types	3	1
19	Psychoses with psychopathic personality	...	...
20	Psychoses with mental deficiency	1	1
21	Undiagnosed psychoses	20	9
22	Without psychoses:		
	Epilepsy without psychoses	1	2
	Alcoholism without psychoses	...	...
	Drug addiction without psychoses	...	...
	Psychopathic personality without psychoses	1	2
	Mental deficiency without psychoses	6	9
	Other conditions	8	3
Total		75	69



## Mental Health Clinics

(C. A. BARAGAR, M.D., *Commissioner of Mental Institutions  
and Director of Mental Health*)

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During the year a fourth clinic in Medicine Hat has been added to the regular clinics previously being held.

The Edmonton Clinic has been conducted by Dr. W. J. McAlister and the Calgary and Lethbridge Clinics by Dr. Geo. A. Davidson, while the Commissioner maintains a close contact with them all.

During the early part of the year Miss Agnes Starkie and Mr. E. J. Kibblewhite, social workers, assisted at the Edmonton and southern clinics respectively. On Miss Starkie's resignation on March 31st, Mr. Kibblewhite was transferred to Edmonton, and has since been in charge of the social work for the Province.

In Edmonton the assistance of Dr. H. E. Smith, of the University of Alberta, as consultant in psychology, and of Miss Young, nurse in charge of the Out-Patient Department, have proved invaluable. Likewise the assistance of Miss Lavell and Miss Craig, public health nurses in Calgary, and of Miss Tilley, who is in charge of the Nursing Mission in Lethbridge, have proved indispensable.

The outstanding event of the year was the inauguration of the new clinic at Medicine Hat. With the sanction of the Minister of Health, and after a preliminary survey by the social worker, it was held on November 17th, 18th and 19th—three full days—and proved an outstanding success. That this was the case was largely due to the interest, initiative, encouragement and support of Dr. F. W. Gershaw, M.P., Mr. Hector Lang, M.L.A., Magistrate W. H. Ellis, the late Inspector F. S. Carr, Mr. Souch, chairman of the School Board; Dr. H. C. Dixon, a member of the Board; Mr. Peasley, senior principal; Mr. Black, Dr. McLeod, health officer, and every medical practitioner in the city without exception. Through the courtesy of Dr. McLeod, Miss Murray, superintendent of the hospital, very kindly placed rooms and equipment in the hospital at our service, and the clinic received the able assistance of Miss Smith, school nurse, and Miss Hagerman, Public Health nurse.

In all, 32 cases were dealt with in the three days, including several outside consultations with the doctors. Through the initiation of Dr. Dixon, part of the time was actually spent in and devoted to the schools. This was a new feature, and in this way it is hoped that the clinic may be of assistance to the school board, teachers and parents in handling their problems.

As will be seen from the tables the work with respect to new cases has again increased, although the unsuitable quarters in Edmonton and the absence of a resident social worker in Calgary have proved somewhat of a handicap. In connection with the Lethbridge and Medicine Hat clinics an interesting fact is the great distances some cases have been brought to attend a clinic.

Patients visiting the clinics receive a physical (especially neurological) and a psychiatric examination, including a psychometric where indicated, and appropriate recommendations are made. For the correction of physical disabilities the patient is referred to his own physician. For problems arising out of a mental or social maladjustment the patient himself, or the parent or guardian or the referring agency is advised how the case may be dealt with. Interviews with

parents or guardians are sought whenever possible in order that their confidence may be won, and their intelligent and sympathetic co-operation secured.

At present we are touching but four centres, yet there are many other centres, particularly in the Peace River district, into which clinics might be introduced with advantage.

Many different agencies have co-operated in referring cases, the chief among these being the Department of Dependent and Neglected Children, parents and guardians, schools and medical practitioners. The interest of these men and women in the mentally and socially handicapped is reassuring.

It will be noted that of the new cases 10.4% were in the pre-school age, 56.4% in the school age, and 33.1% were adults. In 39.2% mental deficiency with or without complications was a factor. In 7.1% epilepsy was a problem, and in 13.5% of the cases there was a behaviour problem with defect. The tendency to refer normal subjects for vocational guidance is still present and is not to be discouraged.

While every possible assistance is given those referring cases to the clinic in solving their problems, it may be inferred from the very nature of the cases that the work of adequately dealing with them is greatly handicapped by lack of accommodation in the Provincial Training School and other appropriate facilities such as supervised hostels for boys and girls, farm colonies and suitable homes. In a new country and particularly at a time of economic distress, one cannot expect to acquire all these facilities suddenly, but they constitute goals toward which we may work.

TABLE No. 1  
SUMMARY OF CASES PRESENTED AND FOLLOW UP REPORTS

Clinic	1932		1933		All Cases Since 1929	
	New Cases	Follow Ups	New Cases	Follow Ups	New Cases	Follow Ups
Edmonton .....	123	363	104	118	571	609
Calgary .....	131	225	118	148	537	573
Lethbridge .....	55	65	72	66	202	184
Medicine Hat .....	.....	.....	32	.....	32	.....
	309	653	326	332	1342	1366
Totals .....	962		658		2708	



TABLE No. 2  
AGE AND SEX CLASSIFICATION

Age	Edmonton			Calgary			Lethbridge			Medicine Hat			Totals			Percentage		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
0-5	6	1	7	6	6	12	...	6	6	2	1	3	14	14	28	7.9	9.4	8.6
6-10	9	11	20	25	11	36	...	5	11	7	4	11	47	31	78	26.4	20.9	23.9
11-15	16	12	28	29	9	38	8	7	15	6	4	10	59	32	91	33.1	21.6	27.9
16-20	7	6	13	3	9	12	5	2	7	2	1	3	17	18	35	9.5	12.1	10.7
21-25	3	7	10	...	5	5	2	4	6	1	...	1	6	16	22	3.4	10.8	6.8
26-30	6	4	10	...	2	2	...	...	...	1	...	1	7	6	13	3.9	4.1	4.0
31-35	...	1	1	...	1	1	1	4	5	...	...	...	1	6	7	0.6	4.1	2.1
36-40	3	1	4	...	1	1	...	3	3	...	...	...	3	5	8	1.7	3.4	2.4
41-45	1	1	2	3	...	3	3	1	4	...	3	3	7	5	12	3.9	3.4	3.7
46-50	2	...	2	2	2	2	2	3	5	...	...	...	6	3	9	3.4	2.0	2.8
51-55	1	...	1	4	2	6	...	4	4	...	...	...	5	6	11	2.8	4.1	3.4
56-60	...	...	...	...	...	...	1	5	6	...	...	...	1	5	6	0.6	3.4	1.9
61	4	...	4	...	...	...	...	...	...	...	...	...	4	...	4	2.2	...	1.2
Unknown	1	1	2	...	...	...	...	...	...	...	...	...	1	1	2	0.6	0.7	0.6
Totals	59	45	104	72	46	118	28	44	72	19	13	32	178	148	326	100%	100%	100%

TABLE No. 3  
CLASSIFICATION ACCORDING TO INTELLIGENCE QUOTIENT,  
I.Q.'s OF 75 AND LESS

I.Q.	Edmonton			Calgary			Lethbridge			Medicine Hat			Total		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
0-25 .....	1	2	3	2	..	2	..	1	1	1	..	1	4	3	7
26-50 .....	4	4	8	3	4	7	3	2	5	4	2	6	14	12	26
51-57 .....	19	18	37	15	18	33	5	9	14	7	6	13	46	51	97
Totals .....	24	24	48	20	22	42	8	12	20	12	8	20	64	66	130

TABLE No. 4  
AGENCIES REFERRING CASES

Agency	Edmonton	Calgary	Lethbridge	Medicine Hat	Total
Child Welfare Department .....	25	3	1	..	29
Children's Aid .....	..	..	4	..	4
Juvenile Court .....	..	24	4	..	28
Other courts .....	..	..	7	..	7
Schools, school nurses .....	27	44	2	8	81
Parents, guardians, friends .....	14	12	10	..	36
Mountview Home .....	..	5	..	..	5
Beulah Home .....	2	..	..	..	2
Salvation Army .....	2	..	..	..	2
Civic Relief Department .....	4	..	..	..	4
Provincial Health Department ..	..	6	3	..	9
Doctors .....	9	12	23	24	68
Other clinics .....	12	5	..	..	17
Pensions Department .....	..	3	..	..	3
Women's Institute .....	..	..	1	..	1
Nursing Mission .....	..	..	9	..	9
Red Cross, Victorian Order .....	..	3	..	..	3
Other agencies .....	9	1	8	..	18
Total .....	104	118	72	32	326

TABLE No. 5  
CLASSIFICATION OF CASES

Classification	Edmonton	Calgary	Lethbridge	Medicine Hat	Total
Pre-School Age:					
Examination only .....	3	3	2	..	8
Mental deficiency .....	2	5	2	1	10
Mental deficiency with be- haviour .....	..	..	1	..	1
Epilepsy .....	1	2	1	..	4
Nerve deafness only .....	..	..	..	1	1
Retarded development .....	..	..	..	1	1
Behaviour problem only .....	2	2	1	..	5
Infantile hemiplegia .....	..	..	1	..	1
Cerebral diplegia .....	..	1	..	..	1
Stammering .....	..	1	..	..	1
Totals .....	8	15	8	3	34
School Age Cases:					
Vocational guidance only .....	..	..	2	..	2
Mental deficiency .....	8	9	2	5	24
Mental deficiency with be- haviour .....	18	12	7	12	49
Mental delinquency with stealing .....	..	1	2	..	3
Mental deficiency with sex delinquency .....	5	1	..	..	6
Mental deficiency with cere- bral diplegia .....	..	1	..	..	1
Backward in school only .....	8	12	1	2	23
Delinquency without defect .....	..	10	3	..	13
Behaviour without deficiency .....	5	18	3	..	26
Epilepsy .....	1	5	1	1	8
Encephalitis with behaviour problem .....	..	1	..	..	1
Personality problem .....	5	1	4	3	13
Habit spasms .....	..	1	..	..	1
No specific trouble .....	7	5	..	..	12
Nervous condition .....	..	..	2	..	2
Totals .....	57	77	27	23	184
Adults:					
Mental deficiency .....	..	2	..	1	3
Mental deficiency with sex delinquency .....	6	6	1	..	13
Mental deficiency with be- haviour problem .....	7	2	1	..	10
Personality problem with psychoneurosis .....	14	9	17	5	45
Excessive nervousness .....	..	1	3	..	4
Alcoholism, drug addiction .....	2	..	1	..	3
Hyperpesia .....	..	..	2	..	2
Epilepsy .....	4	1	6	..	11
Hemiplegia .....	..	..	1	..	1
Encephalitis .....	2	..	..	..	2
Other conditions .....	4	5	5	..	14
Totals .....	39	26	37	6	108
Grand totals .....	104	118	72	32	326



TABLE No. 6  
CAUSES OF MENTAL DEFICIENCY

Cause	Edmonton	Calgary	Lethbridge	Medicine Hat	Total
Some positive heredity known.....	15	6	3	4	28
Sickness, injury, epilepsy .....	5	6	1	2	14
Unknown .....	28	30	16	14	88
Totals .....	48	42	20	20	130

TABLE No. 6A  
MAJOR COMPLICATIONS OF MENTAL DEFICIENCY CASES

Complication	Edmonton	Calgary	Lethbridge	Medicine Hat	Total
Behaviour problems and delinquency without sex delinquency .....	26	15	8	12	61
Sex delinquency .....	8	7	2	....	17
Epilepsy .....	2	2	2	1	7
Speech and hearing defect .....	....	1	1	....	2
Encephalitis with conduct disturbance .....	....	1	....	....	1
Cerebral diplegia .....	....	1	....	....	1
General retardation .....	12	15	7	7	41
Totals .....	48	42	20	20	130

TABLE No. 6B  
MAJOR RECOMMENDATIONS OF MENTAL DEFICIENCY CASES

Recommendations	Edmonton	Calgary	Lethbridge	Medicine Hat	Total
Sterilization and supervision .....	7	6	2	1	16
Institutional training and care .....	17	9	6	3	35
Medical and surgical treatment .....	4	....	2	....	6
Medical treatment, epilepsy .....	....	....	2	....	2
Continue present treatment with periodical return visits to clinic .....	11	10	....	5	26
Modified school work .....	....	....	3	....	3
Special class at school .....	....	10	....	11	21
Placement in good home .....	....	....	5	....	5
Changed methods of discipline and supervision .....	7	6	....	....	13
Other recommendations .....	2	1	....	....	3
Totals .....	48	42	20	20	130

TABLE No. 7  
CHIEF RECOMMENDATIONS AS TO TREATMENT

Recommendations	Edmonton	Calgary	Lethbridge	Medicine Hat	Total
Admission to Provincial Mental Hospital, Ponoka .....	10	5	10	1	26
Admission to Provincial Training School, Red Deer .....	16	4	4	3	27
Treatment by own doctor or other clinic .....	....	7	10	3	20
Treatment given, including direct treatment of epilepsy .....	5	10	13	....	28
Continue home or institutional treatment with periodical visits to clinic .....	22	26	7	4	59
Change in home routine, etc. ....	....	....	4	....	4
Change in home discipline, etc. ....	7	19	8	....	34
Supervision by and report to probation officer .....	1	....	3	....	4
Encourage normal development and wider interests .....	....	....	5	....	5
More vocational work and social activities .....	....	7	3	....	10
Sterilization and supervision .....	9	6	1	1	17
Change in habits and occupation .....	2	....	1	....	3
Modified school programme or special class .....	12	13	....	11	36
Regular life, encouragement and reassurance .....	....	....	....	7	7
Placement in good home .....	6	3	....	....	9
Return to clinic for further examination .....	5	7	....	....	12
Placement in Old Folks' Home .....	3	....	....	....	3
Special school for deaf .....	....	....	....	1	1
Other recommendations .....	6	11	3	1	21
Totals .....	104	118	72	32	326

## Provincial Mental Hospital, Ponoka, Alberta

(G. A. DAVIDSON, M.D., *Medical Superintendent*)

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At the beginning of the year there were 1,217 patients in residence, 621 male and 596 female. This shows an increase of 21 patients as from January 1st, 1932. The actual increase was considerably more than this, however, as 107 patients were transferred to other hospitals—the majority to the Provincial Auxiliary Hospital at Claresholm.

At the end of the year there were 1,226 patients in residence, 683 male and 543 female. These figures show that the increased accommodation provided at Claresholm was only sufficient to look after about one year's increase in patient population. The number of male patients in residence had increased by 62, while the number of female patients in residence had decreased by 53. Both sides of the hospital show quite marked overcrowding, and all available space is being used.

The total number of admissions for the year was 461 as compared with 497 for the preceding year (36 patients less). Of these, 355 (77.1%) were first admissions, and 98 (21.3%) readmissions. Eight (1.08%) were transferred from other institutions.

Of the first admissions, 79 (17.1%) were by voluntary application, while 276 were committed by various methods. Voluntary admissions have decreased by almost 7% as we had fewer patients admitted voluntarily for malarial treatment. This would appear to be due to the fact that the number of untreated neuro-syphilitics in the Province is gradually decreasing.

Of the admissions, 184 (39.9%) were Canadian born, 77 (16.7%) were natives of Great Britain or British Possessions, 89 (19.3%) were natives of the U.S.A., and 111 (24.08%) from all other countries.

A total of 1,680 patients were treated during the year, a decrease of 17 under last year.

During the year 249 patients were discharged, 107 were transferred to other institutions, 30 were deported, 65 died, and 3 eloped, totalling in all 454 patients. The discharge rates as distinct from transfers, deportations and deaths were 54.8% of the total admission rate.

The death rate, based on the total number under treatment and observation, was 3.87%. This is slightly higher than last year (3.59%). Respiratory diseases (including tuberculosis—21 cases) accounted for 60% of the deaths. The number of tuberculous cases is large, but this is partly due to the fact that cases of tuberculosis have been transferred from the Provincial Mental Institute at Oliver to this hospital, as their facilities for caring for these patients is limited. One death only was due to general paresis. One death was due to typhoid fever. Two deaths were unfortunately due to suicide by hanging. Two deaths were accidental, due to injuries from falls.

It is interesting to note that the first Annual Report of Mental Institutions for the year 1932, published by the Dominion Bureau of Statistics, shows Alberta to have the lowest death rate in Canada in proportion to the admissions and separations, and further that Alberta has the lowest mortality rate of any Province in Canada per 1,000 patients under treatment.



## ACCIDENTS

On the male side of the hospital there were two major accidents. One of these was a rather severe burn due to a fall against a radiator, and the other resulted in the patient's death. This patient managed to get through a window onto a roof and, while attempting to escape, fell to the ground and fractured a vertebra. Five other patients suffered fractures, but none proved serious.

On the female side of the hospital, six patients suffered fractures. One female patient succeeded in tearing a guard from a window and, in a period of confusion, jumped to the ground, and she also suffered from a fractured vertebra, which resulted in her death. This was the only fracture that proved fatal.

Fractures seem to occur in direct proportion to the amount of overcrowding on the wards. It would appear that this partly accounts for the greater number of fractures on the female side of the hospital.

Considering the number of patients and the crowded quarters, the number of accidents has been small.

A special form has been introduced to report all cases of injuries, accidents and elopements, and is proving of much benefit in keeping acquainted with these.

## ELOPEMENTS

Twenty-one patients eloped from the male side of the hospital, and with the exception of three, all were returned, most of them within a few hours. There were seven attempts at elopement from the female side, but all were quickly returned without mishap.

## GENERAL HEALTH.

We have been again fortunate in having little sickness among the staff and patients. Again no serious epidemics occurred. Six cases of typhoid occurred, three among patients and three in the staff. A special endeavour was made by the staff to locate any typhoid "carriers," and with the valuable aid and suggestions of Dr. Bow and Dr. McGugan, three carriers were located, and these have all since had their gall bladders removed. No case of typhoid has occurred now for some months, and the last three cases reported were traced to one of the operative cases. More than 800 examinations of stools and urine were made, and the staff deserves much credit for the patience exhibited and the amount of work done. Inoculations of female staff and new admissions has been continued.

Physical examinations of all new members of the staff have been continued.

Sick nurses are now cared for in a separate suite of rooms above one of the wards. This has proved a great advantage, as nurses here can be cared for more readily both as to nursing and medical care. The new quarters also, are much more suitable for the care of the sick.

## STAFF

On July 31st Dr. Anna Martins resigned her position as medical interne. Her position was not filled, but an additional graduate physician, Dr. R. C. Hamilton, was taken on the staff on April 1st, and is serving as junior assistant physician. Otherwise our medical staff has remained unchanged.

Mr. J. W. Stanley, who served the hospital faithfully since May, 1924, in the position of tailor, retired on superannuation, July 22nd, 1933.



## CLINICAL WORK

There has been little change in the method of working up new cases. An endeavour is now made to collect all possible information on new patients within three weeks of admission, when the case is presented to a meeting of the medical staff for diagnosis and discussion. Staff conferences have been continued as formerly.

Prophylactic Malarial treatment has continued. In all, 52 syphilitic cases were given malaria (24 G.P.I. and 28 not psychotic).

The superintendent of the hospital has continued to do about one-half of the Mental Hygiene clinics at Calgary and Lethbridge.

## DENTAL CLINIC

The dental department has continued to do most useful work under the direction of Dr. S. M. Snedden. All patients are examined as a routine following admission, and the patients who have been in hospital for any length of time are examined at intervals. The following is a report of the work done:

Full upper and lower dentures .....	33	Scalings .....	507
Partial upper dentures .....	2	Treatments .....	605
Partial lower dentures .....	2	X-Rayed .....	26
Resetting dentures .....	2	Gold inlays .....	6
Relining dentures .....	2	General anaesthetic .....	
Relieving denture irritation .....	70	Extractions .....	1275
Repaired dentures .....	47	Abscessed teeth .....	88
Prophylaxis .....	134	Examination and treatment .....	1725
Fillings .....	347		

## X-RAY DEPARTMENT

This department, under the direction of Miss Hilda Bennett, Assistant Superintendent of Nurses, has done much useful work during the year and has proved itself a very valuable aid to the medical staff. A total of 305 films of various parts were taken, made up as follows:

Chests:		Kidneys .....	2
Lungs .....	130	Bones:	
Heart .....	1	Arms .....	26
Foreign bodies .....	4	Heads .....	13
Gastro-intestinal .....	6	Spines .....	15
Dental .....	26	Ribs .....	4
Screens .....	9	Pelves .....	5
Skulls .....	19	Legs .....	17
Mastoids .....	2	Feet .....	6
Sinuses .....	4	Jaws .....	1
Gall bladders .....	1	Out-Patients .....	15

## HYDROTHERAPY

There has been little change in this department. Prolonged baths, massage, packs and electrical cabinet treatments have been used in a large number of cases, and in many have proved quite useful.

## OCCUPATIONAL THERAPY

This is one of our most used and most useful forms of therapy. This has been carried almost as far as possible with the number of staff we have. More groups could be put to work outside, more walking parties could be sent out, and the patients in general could be kept more interested with a larger staff. This is something that we hope may be stressed in years to come.

## SOCIAL SERVICE

The hospital social worker has continued to devote most of his time to the Mental Hygiene Clinics, but has made periodic visits to the hospital to do the necessary work in special examinations, etc. He is a valuable aid in the work being done. Follow up work has been done in the Mental Hygiene Clinics, and the custom of seeing many of the relatives of patients in these clinics has been continued. This is a valuable means of contact.



As time goes on it becomes more and more apparent that much more work could be done in tracing out the families of sufferers from mental disease or deficiency, and in many cases steps could be taken to prevent the development of further mental disorder and cases of mental deficiency could be better dealt with. There is a real need for this work, but little more can be done than is being done at present with our limited staff.

#### SURGICAL SERVICE

Our operating room was remodelled and brought up to date during the year. Equipment has been provided which will enable us to do almost any type of surgical procedure, and although the first series of operations was not done until October 5th, things are running very smoothly, and up to the end of the year 17 operations had been performed. These operations were mainly on eugenics cases, although several other surgical operations have been performed (gall bladders removed, herniotomies).

On September 20th, 1933, Dr. Robert O'Callaghan, of Calgary, and Dr. L. C. Conn, of Edmonton, were appointed honorary surgeons to the hospital.

Miss Matilda McCaughey was appointed surgical nurse in charge of the operating room, and spent several weeks in the operating rooms of the Royal Alexandra Hospital, Edmonton, acquainting herself with new procedures.

It is felt that a good start has been made, and we believe that, in equipping a surgical centre in this hospital, the hospital has become much more efficient.

#### NURSES' TRAINING SCHOOL

The training school has continued to operate successfully, and this year saw the first classes graduate and receive their diplomas and certificates in psychiatric nursing. Eight nurses and 23 attendants graduated after having completed three years of training. Classes in both groups should complete their training each year now.

The post-graduate course has been continued, and the time of this course has been increased to cover twelve months of training. This course has been arranged to cover 120 hours of formal instruction and rotation services of the various wards of the hospital. It has been separated entirely from the student nurses training.

Again it is a pleasure to thank the medical and nursing staff for the willingness that they have shown in undertaking the amount of teaching that is necessary in successfully carrying out the lectures in these classes. We feel that the training of staff in the proper care of patients is a work that is second to none that we undertake.

The following were the numbers commencing training in the various classes:

Nurses training:		Attendants training:	
Third year .....	11	Third year .....	12
Second year .....	13	Second year .....	11
First year .....	18	First year .....	5
Post-graduate students .....			10

#### LIBRARIES

A general library has been started for patients and now has about 350 volumes. Although this is not a large number, it is a good start, and the patients have been quick to take advantage of this service. All the books scattered throughout the hospital were gathered up and repaired. Two social functions were held to raise money for the patients' library fund, and we hope to add books from time to time. A few books were donated.

A few volumes have been added to the medical library, and this library has proved a very valuable asset to the medical and nursing staff.



## RELIGIOUS SERVICES

These have continued as in the past, and we are grateful to the ministers for their services and their periodic visits to see our patients.

## RECREATION AND ENTERTAINMENT

Moving picture shows had to be discontinued during the year, as it is no longer possible to get silent pictures which have not been shown. We hope that equipment may be secured so that talking pictures may be shown. It is felt that it would be better to place any new equipment in the recreation hall. As our Dramatic Society is so active, and as there are many occasions when a stage is needed, we hope that before long a permanent stage with dressing-rooms may be erected. With little expenditure a splendid permanent stage could be erected.

Patients' dances were continued fortnightly throughout the fall and winter season. These are much enjoyed and are always looked forward to by the patients. An endeavour has been made to have each patient provided with a good suit of clothes which can be worn to special events such as church, dances and other entertainments. An effort has been made also to provide a greater variety of patterns and styles for the ladies' dresses.

A Dramatic Society and Glee Club were organized during the year. Both of these have done much to provide entertainment for the patients. The following is a summary of the activities of the Dramatic Society during the year 1933:

The society was organized on January 15th, 1933, the following officers being elected: President, Dr. Cassels; secretary-treasurer, Mr. Gill; members, Miss Crysler, Miss Stacey.

The society's first activity was to sponsor a short play, "How He Lied to Her Husband," which was put on by a cast from Edmonton brought down by Mrs. Haynes. On the same evening the society produced a short play, "A Kiss in the Dark."

This was followed by a dramatic competition in which two short plays were given, "Miss Mary Smith" produced by Miss Bennett and Mr. Schragg, and "Monkeyshines in a Doctor's Office" produced by Mr. David. Mr. David's play was judged the best by the judges, Mr. Bowker, Mrs. Gill and Dr. Davidson.

On May 4th a three-act play "The Clay's the Thing," was produced for the patients, and the following evening it was produced at the hospital for the public. The Glee Club contributed some numbers on the programme.

On September 19th a new executive was elected, consisting of: President, Dr. Cassels; vice-president, Dr. Snedden; secretary-treasurer, Mr. Gill; member, Miss Crysler.

On December 3rd three short plays were produced, "Does Mr. Jones Live Here," directed by Dr. Cassels, "My Cousin from Sweden," directed by Miss Martin, "Frank and Erna" directed by Mr. David.

On December 15th Dr. Mason addressed a general meeting of the society, discussing some personal experiences on the stage.

On December 23rd a Christmas play, "Why the Chimes Rang," was produced with the assistance of the Glee Club.

Patients' Sports Day was held on May 23rd, and was again much enjoyed. We are always grateful to our many friends from Ponoka who assist with this function.

The open air skating rink was again much enjoyed by both patients and staff. Recreational classes have been continued as in the past.



The Hospital Football Club, under the direction of Mr. E. S. James, has continued most successful, and again won most of the trophies that were competed for. The following trophies were held during the year by the club: Red Deer Cup, Lacombe Cup, Ponoka Cup, League Cup.

A series of very enjoyable staff dances were again held throughout the year. These were mainly held in the Recreation Hall because of the amount of warping of the floor in the recreation room of the Nurses' Home. The annual staff "At Home" was again a most successful function, and was much enjoyed by both children and adults.

The tennis and badminton clubs again had most successful years.

#### VISITORS

The number of people visiting the hospital seems to increase each year. As in the past, the opportunity of meeting the relatives of patients and getting histories from them has been continued wherever possible. The patient's condition is always discussed frankly with the relatives and, in having them visit, it is felt that there is a much better understanding on all sides.

Again we have had the good fortune of having a number of interested people visit our hospital to learn more of the work that we are doing. This type of visitor is always welcome.

The interest of official, professional and departmental visitors has continued, and we have enjoyed many visits and received much benefit from their visits.

Visits from the Commissioner of Mental Diseases and Director of Mental Health have continued as in the past, and his interest and enthusiasm are always greatly appreciated.

#### VISITING COMMITTEE

The Eugenics Board of the Province was invited by the Minister of Health to act as a special inspecting board. They acted in this capacity on the occasion of one of their regular visits in September. All wards, kitchens, patients' dining rooms, the bake-shop, store-rooms, laundry and the farm colony were visited. It was a pleasure to have the Board act in this capacity, and all suggestions offered were gratefully received.

A committee appointed by the Senate of the University of Alberta visited the hospital during the year to inspect our facilities for the training of nurses. This was done with a view to considering the question of our school affiliating with the general hospitals so that our nurses may receive diplomas in both psychiatric and general nursing. It is hoped that our school will receive favourable consideration.

#### MEDICAL MEETINGS

Unfortunately these were not held as frequently during the past winter, largely because of the pressure of work and lectures. Plans are under way for the formation of a Medical Society in the hospital and district. It is hoped that this will interest many of the medical men in the neighbourhood, and it is planned that they be invited to present papers and cases at these meetings. The organization of this society is planned for the early fall. A special speaker will likely be invited for each meeting also.

#### ACCOMMODATION—ALTERATIONS

During the year accommodation for 100 female patients was provided at Claresholm. This was done by remodelling the Agricultural School at this point. This has made a very satisfactory building, and the wards and day rooms are bright and cheerful.



Fifty patients were transferred to this building on October 31st and 50 more on November 3rd. It is felt that this will be a very useful addition to our present accommodation.

In spite of this, however, it is difficult to see how we can continue much longer without further building. A reception hospital is particularly desired. This should be situated some distance from the other buildings and be made large enough to accommodate all new admissions and to retain all cases that are likely to recover or to make a satisfactory adjustment. In this way recoverable cases could be kept separate from other types while it is necessary for them to undergo treatment.

A one-storey inexpensive building such as our present farm dormitory building would be most useful in caring for aged patients. It would be better to be situated some distance from the general group of buildings, and arranged so that patients could get out of doors easily. A building of this type would do much to relieve our present congestion, and could probably be provided more economically than any other type of building.

#### OPERATING ROOM

Our operating room has been remodelled, and it is felt that this is now most modern and quite satisfactory. Since October practically all eugenic cases have been operated on here. This should mean a large saving in hospital costs. We now have the satisfaction of knowing also that we can care satisfactorily for any type of surgical emergency or necessary surgical procedure. This is also proving very advantageous in the training of our student nurses.

Special dormitories have been provided for known tuberculous patients, and these patients are segregated for the protection of other patients and staff. Balcony accommodation is insufficient and should be provided for in the future, so that these patients may more readily be taken into the open air.

Mr. D. J. Smith, Superintendent of Building Maintenance, has again been instrumental in keeping the buildings in good repair, and has been most co-operative in carrying out any suggestions offered.

Work is continuing on the grounds, and it is hoped to put the new entrance to the hospital into use during the coming year.

#### DEPARTMENTAL ACTIVITIES

##### *Laundry.*

With the inadequate accommodation that the laundry has, it does excellent work. It is taxed to the limit of its capacity, however, and is no longer large enough or suitably equipped to do the necessary work of the hospital satisfactorily, 1,667,000 articles being laundered during the year. This is an increase over last year of about 133,000 pieces. This is an average of almost 139,000 articles laundered monthly.

##### *Tailor Shop.*

Following the retirement of Mr. Stanley, this shop has been under the direction of Mr. W. G. Potter. It has continued to do very good work and keeps many patients occupied.



## SUMMARY OF WORK

Blue uniforms .....	75	Towels .....	608
Blue pants .....	73	Re-covered mattresses .....	64
Corduroy trousers .....	564	Pillow cases .....	813
Corduroy coats .....	449	Strong blankets .....	176
Shirts .....	1162	Mattress cover .....	1
Cooks' trousers .....	72	Rubber sheets .....	151
Cooks' coats .....	62	Bath hammocks .....	17
Cooks' caps .....	3	Pack blankets .....	41
Surgeons' white trousers .....	4	Tablecloths .....	89
White overalls .....	116	Pack mattresses .....	2
Restraint suits .....	31	Bath covers .....	14
Pyjama suits .....	54	Draw sheets .....	171
Nightshirts .....	364	Strong bed cover .....	1
White smocks .....	219	Pack sheets .....	10
Laboratory coats .....	3	Strong sheets .....	40
Kitchen aprons .....	82	Cushion and pillow .....	1
Attendants' white coats .....	175	Pillow ticks .....	51
Rubber aprons .....	30	Billiard table cover .....	1
Ties .....	1202	Re-covered sheepskins .....	13
Sheets .....	2036		

*Occupational Carpenter Shop.*

This department has continued to function as in the past. About 40 patients are occupied here, and much useful work is done, both in repair work and in manufacturing new articles.

*Sewing Room.*

About 12 female patients are kept employed in this department. Patients' dresses, nightgowns, etc., and nurses' uniforms are now made in this department. It has been our wish to provide as much variation in the dresses of the female patients as possible.

*Stores.*

This is a busy department, and the work increases with the increased number of patients. Things continue to run smoothly here.

*Kitchens and Dining Rooms.*

There has been little change in the kitchens during the past year. There is considerable overcrowding here, but the staff does excellent work in spite of this. On the whole, one hears remarkably few complaints about the food.

The cafeterias continue to operate smoothly and provide an ideal way to handle the food of most patients.

*Garden and Grounds.*

Our gardener, Mr. F. H. Mayled, accomplished a great deal with our grounds last year. Thousands of new trees, many rows of hedges and much new work has been undertaken. The grounds are much improved in appearance, and plans are formulated for the continuation of this programme over a period of years.

Flowering plants and cut flowers have been supplied to the wards throughout all seasons and have done much to brighten up the wards.

*Farm.*

A complete report of farm activities is being submitted under separate cover. Many patients are kept pleasantly and usefully occupied in this department.

## CONCLUSION

One the whole, it is felt that one can look back upon the past year with considerable satisfaction, as things have continued to run smoothly, and it is felt that many new things have been done. Outstanding events are the graduating of the first classes of nurses and attendants; the remodelling and opening of the Provincial Auxiliary Hospital at Claresholm, and the establishment of a

surgical centre at this hospital. Much remains to be done, but there is satisfaction in feeling that progress is being made.

There has been excellent co-operation from the officers and employees of the hospital, and it is felt that all are interested in the care of the patients and the work being done.

It is again a pleasure to express appreciation for the sympathetic co-operation that has been received from the Minister and Deputy Minister of Health. The aid of the Commissioner of Mental Institutions and the Director of Mental Health has been invaluable, and has been greatly appreciated.

TABLE No. 1  
MOVEMENT OF PATIENT POPULATION DURING 1933.

	Male	Female	Total	Male	Female	Total
In Residence January 1, 1933 .....	621	596	1217			
Admissions:						
First Admissions:						
(a) Voluntary .....	63	16	79			
(b) Certificate .....	28	55	83			
(c) Warrant .....	135	53	188			
(d) Order .....	3	2	5			
(e) Transfers .....	3	5	8			
Re-admissions:						
(a) Voluntary .....	19	14	33			
(b) Certificate .....	3	7	10			
(c) Warrant .....	36	15	51			
(d) Order .....	1	1	2			
(e) Transfers .....	1	1	2			
Returned from University Hospital .....	—	—	—	292	169	461
				913	767	1680
Discharged during the year:						
(a) As recovered .....	27	22	49			
(b) As improved .....	59	34	93			
(c) As unimproved .....	12	10	22			
(d) As without psychosis .....	61	24	85			
(e) Transferred to other hospitals .....	5	102	107			
(f) Eloped .....	3	—	3			
(g) Departed to other countries:						
As recovered .....	4	1	5			
As improved .....	13	2	15			
As unimproved .....	7	2	9			
As without psychosis .....	1	—	1			
(h) Deaths .....	38	27	65	230	224	454
In residence at end of year .....	683	543	1226			



TABLE No. 2  
SHOWING THE PSYCHOSES IN THOSE ADMITTED DURING 1933

	Male	Female	Total
1 Traumatic psychoses	4	8	12
2 Senile psychoses	21	7	28
3 Psychoses with cerebral arteriosclerosis	25	2	27
4 General paralysis			
5 Psychoses with cerebral syphilis			
6 Psychoses with Huntington's Chorea			
7 Psychoses with brain tumour			
8 Psychoses with other brain or nervous diseases:			
(a) Chronic encephalitis	2	1	3
(b) Disseminated sclerosis	2		2
(c) Tuberculous meningitis	1		1
(d) Undefined	1	1	2
9 Alcoholic psychoses:			
(a) Delirium tremens	2		2
(b) Chronic alcoholism	1		1
(c) Deterioration		1	1
10 Psychoses due to drugs and other exogenous toxins			
11 Psychoses with pellagra			
12 Psychoses with other somatic diseases:			
(a) Post-infectious		1	1
(b) Diabetes	1		1
13 Manic-depressive psychoses:			
(a) Manic phase	10	11	21
(b) Depressive phase	19	15	34
(c) Mixed		3	3
(d) Circular		1	1
14 Involucional melancholia		7	7
15 Dementia Praecox (Schizophrenia):			
(a) Paranoid	24	8	32
(b) Catatonic	51	40	91
(c) Hebeephrenic	1	3	4
(d) Simple	3		3
(e) Mixed	3		3
16 Paranoia and Paranoid conditions	14	7	21
17 Epileptic psychoses	8	3	11
18 Psychoneuroses and neuroses:			
(a) Hysterical type			
(b) Psychasthenic type	2		2
(c) Neurasthenic type		3	3
(d) Anxiety state	1		1
19 Psychoses with psychopathic personality			
20 Psychoses with mental deficiency	18	12	30
21 Undiagnosed psychoses	6	5	11
22 Without psychoses:			
(a) Epilepsy	4		4
(b) Alcoholism	2		2
(c) Drug addiction	6	5	11
(d) Psychopathic personality	5		5
(e) Mental deficiency	21	18	39
(f) Psychoneuroses	2	1	3
(g) Hysterical episodes	1		1
(h) Organic nervous disease	1		1
(i) Disseminated sclerosis	1		1
(j) Sacro-iliac arthritis	2		2
(k) Neuro-syphilis	25	4	29
(l) Sex perversions	1		1
(m) For consideration by Eugenics Board	1	2	3
Total	292	169	461

TABLE No. 3  
MARITAL CONDITION OF PATIENTS ADMITTED DURING 1933 WITH REFERENCE TO PRINCIPAL PSYCHOSES

Psychoses		M. F. T.	Single M. F. T.	Married M. F. T.	Widowed M. F. T.	Separated M. F. T.	Divorced M. F. T.
1	Traumatic psychoses	.....	.....	.....	.....	.....	.....
2	Senile psychoses	.....	.....	.....	.....	.....	.....
3	Psychoses with cerebral arteriosclerosis	.....	.....	.....	.....	.....	.....
4	General paralysis	.....	.....	.....	.....	.....	.....
5	Psychoses with cerebral syphilis	.....	.....	.....	.....	.....	.....
6	Psychoses with Huntington's Chorea	.....	.....	.....	.....	.....	.....
7	Psychoses with brain tumour	.....	.....	.....	.....	.....	.....
8	Psychoses with other brain or nervous diseases:	.....	.....	.....	.....	.....	.....
	(a) Chronic encephalitis	.....	.....	.....	.....	.....	.....
	(b) Disseminated sclerosis	.....	.....	.....	.....	.....	.....
	(c) Tuberculous meningitis	.....	.....	.....	.....	.....	.....
	(d) Undefined	.....	.....	.....	.....	.....	.....
9	Alcoholic psychoses:	.....	.....	.....	.....	.....	.....
	(a) Delirium tremens	.....	.....	.....	.....	.....	.....
	(b) Chronic alcoholism	.....	.....	.....	.....	.....	.....
	(c) Deterioration	.....	.....	.....	.....	.....	.....
10	Psychoses due to drugs and other exogenous toxins	.....	.....	.....	.....	.....	.....
11	Psychoses with pellagra	.....	.....	.....	.....	.....	.....
12	Psychoses with other somatic diseases:	.....	.....	.....	.....	.....	.....
	(a) Post-infectious	.....	.....	.....	.....	.....	.....
	(b) Diabetes	.....	.....	.....	.....	.....	.....
13	Manic-depressive psychoses:	.....	.....	.....	.....	.....	.....
	(a) Manic phase	.....	.....	.....	.....	.....	.....
	(b) Depressive phase	.....	.....	.....	.....	.....	.....
	(c) Mixed	.....	.....	.....	.....	.....	.....
	(d) Circular	.....	.....	.....	.....	.....	.....
14	Involuntional melancholia	.....	.....	.....	.....	.....	.....
15	Dementia Praecox (Schizophrenia):	.....	.....	.....	.....	.....	.....
	(a) Paranoid type	.....	.....	.....	.....	.....	.....
	(b) Catatonic type	.....	.....	.....	.....	.....	.....
	(c) Hebephrenic type	.....	.....	.....	.....	.....	.....
	(d) Simple type	.....	.....	.....	.....	.....	.....
	(e) Mixed type	.....	.....	.....	.....	.....	.....
16	Paranoia and paranoid conditions	.....	.....	.....	.....	.....	.....
17	Epileptic psychoses	.....	.....	.....	.....	.....	.....
18	Psychoneuroses and neuroses:	.....	.....	.....	.....	.....	.....
	(a) Hysterical type	.....	.....	.....	.....	.....	.....
	(b) Psychasthenic type	.....	.....	.....	.....	.....	.....
	(c) Neurasthenic type	.....	.....	.....	.....	.....	.....
	(d) Anxiety state	.....	.....	.....	.....	.....	.....
19	Psychoses with psychopathic personality	.....	.....	.....	.....	.....	.....
20	Psychoses with mental deficiency	.....	.....	.....	.....	.....	.....
21	Undiagnosed psychoses	.....	.....	.....	.....	.....	.....





TABLE No. 4  
AGES OF PATIENTS ADMITTED DURING 1933

Ages	First Admissions		Re-admissions		Total	
	Male	Female	Male	Female	Male	Female
Under 15 years	4	1	1	1	4	1
15 to 19 years	18	10	5	5	23	15
20 to 24	19	17	5	5	24	22
25 to 29	32	21	3	2	35	23
30 to 34	45	16	10	6	55	22
35 to 39	26	14	12	3	38	17
40 to 44	20	19	11	4	31	23
45 to 49	24	8	5	7	29	15
50 to 54	11	6	4	5	15	11
55 to 59	14	7	5	3	19	10
60 to 64	6	4	2	2	8	6
65 to 69	5	6	1	1	6	7
70 and over	8	3	2	1	10	4
Total	232	131	60	38	292	169

TABLE No. 5  
NATIVITIES OF PATIENTS ADMITTED DURING 1933

Nativities	Male		Total				Total
	Male	Female					
Canada	114	70	184	Finland	2	1	3
Newfoundland	1	1	2	Germany	5	4	9
England	19	19	38	Hungary	2	3	5
Scotland	12	9	21	Italy	2	1	3
Ireland	8	2	10	Jugo-Slavia	1	1	2
Wales	1	1	2	Latvia	1	1	2
Channel Islands	1	1	2	Lithuania	1	1	2
Australia	1	1	2	Norway	7	2	9
India	1	1	2	Poland	19	6	25
West Africa	1	1	2	Roumania	1	1	2
Austria	12	3	15	Russia	3	4	7
Belgium	1	1	2	Sweden	4	2	6
Bulgaria	1	1	2	Switzerland	1	1	2
China	5	5	10	Ukraine	2	4	6
Czecho-Slovakia	4	6	10	U. S. A.	59	30	89
Denmark	3	1	4	Total	292	169	461
Esthonia	1	1	2				

TABLE No. 6  
PLACE OF RESIDENCE AT TIME OF COMMITMENT, 1933

Place	Male		Total				Total
	Male	Female					
Acadia Valley	1	1	2	Conjuring Creek	1	1	2
Altario	1	1	2	Conrad	1	1	2
Arbutus	1	1	2	Consort	1	1	2
Ardrossan	1	1	2	Coronation	1	1	2
Armada	1	1	2	Cremona	1	1	2
Arneson	1	1	2	Crossfield	1	1	2
Ashmont	1	1	2	Czar	2	2	4
Balzac	1	1	2	Delburne	2	2	4
Banff	1	1	2	De Winton	1	1	2
Barons	1	1	2	Diamond City	1	1	2
Bashaw	2	2	4	Didsbury	1	1	2
Beaumont	1	1	2	Duvernay	1	1	2
Beiseker	1	1	2	Eaglesham	1	1	2
Bellevue	1	1	2	Eckville	3	3	6
Beverley	1	1	2	Edberg	1	1	2
Big Valley	2	2	4	Edgerton	1	1	2
Bissell	1	1	2	Edmonton	56	30	86
Blackfalds	3	3	6	Edson	3	1	4
Bluffton	1	1	2	Edwaud	1	1	2
Bonanza	1	1	2	Egremont	1	1	2
Bonnyville	1	1	2	Ellerslie	1	1	2
Bottrel	1	1	2	Erin Lodge	1	1	2
Bow Island	1	1	2	Erskine	1	1	2
Breton	1	1	2	Faith	1	1	2
Brooks	1	1	2	Falher	2	2	4
Bruderheim	1	1	2	Fawcett	1	1	2
Bruce	1	1	2	Foremost	1	1	2
Buck Creek	1	1	2	Fort George, B.C.	1	1	2
Cadogan	1	1	2	Fort McPherson	1	1	2
Calgary	50	21	71	Fort Saskatchewan	1	1	2
Camrose	3	3	6	Girouxville	2	2	4
Canmore	1	1	2	Gleichen	1	1	2
Carbon	1	1	2	Glenwoodville	1	1	2
Cardiff	1	1	2	Goodfish Lake	1	1	2
Carmangay	1	1	2	Grande Prairie	2	2	4
Caroline	1	1	2	Grassland	1	1	2
Castor	2	1	3	Grimshaw	1	1	2
Cavendish	1	1	2	Grouard	1	1	2
Cayley	1	1	2	Gunn	4	4	8
Cherhill	1	1	2	Gwynne	1	1	2
Chigwell	1	1	2	Haight	2	2	4
Chinook	1	1	2	Hardisty	1	1	2
Coaldale	1	1	2	Hattonford	1	1	2
Colinton	1	1	2	High Prairie	1	1	2
Compeer	3	3	6	High River	1	1	2



Place	Male	Female	Total	Place	Male	Female	Total
Hines Creek	1		1	Red Deer	4	11	15
Hoadley	1		1	Reno	1		1
Holden	1		1	St. Albert	1	1	2
Hythe	1		1	St. Paul	1	2	3
Innisfail	2	1	3	Sangudo		1	1
Iola	2		2	Scapa	1		1
Jarvie	1		1	Sedalia		1	1
Jasper	1	1	2	Sedgewick	1		1
Jenner	1		1	Sexsmith	1		1
Kahwin		1	1	Shiningbank		1	1
Kaslan		1	1	Silver Heights	1		1
Kimball	1		1	Smoky Lake	2		2
Kinuso		1	1	Spedden	1		1
Lacombe	3	1	4	Stanger		1	1
Lake Isle	1		1	Stanmore	1		1
Leduc	2	1	3	Stavely	1		1
Lethbridge	15	8	23	Stettler	2		2
Linaria		1	1	Stirling	1		1
Lindbergh		1	1	Stony Plain		1	1
Lloydminster	1		1	Strathmore	1		1
Luscar		1	1	Strome	1		1
Macleod	2		2	Stry	1		1
Mannville	1		1	Styal	1		1
Meanook		1	1	Sunset House	1		1
Medicine Hat	2	1	3	Taber	3	1	4
Meeting Creek	1		1	Tees	1		1
Metiskow	1		1	Thelma	1		1
Midlandvale	1		1	Thorsby	1		1
Milk River		1	1	Tofield	2		2
Millet	2		2	Trochu	1		1
Moon Lake		1	1	Valhalla Centre	1		1
Morinville		2	2	Vegreville		2	2
Morrin	1		1	Viking		1	1
Mountain Park	1		1	Vilna		1	1
Nanton	1		1	Vimy	1		1
Newbrook		1	1	Warburg		1	1
Newcastle		1	1	Warner	1		1
Nordeg	1		1	Warwick	1		1
Northmark	1		1	Waskatenau	1		1
Notlkewin	1		1	Wayne	1		1
Ogden	1		1	Westlock	1		1
Olds	2	2	4	Wetaskiwin	1	1	2
Peace River	3	3	6	Whitford		1	1
Pibroch		1	1	Winfield	1	1	2
Pincher Creek	1	2	3	Winterburn	2		2
Ponoka	2	5	7	Wood River		1	1
Provost		2	2	Wostock	1		1
Radway	3		3	Westmount Park	1		1
Ranfurly		2	2	Yates	1		1
Roselea	1		1				
Ross Creek	1	2	3				
Redcliff	1		1				
				Total	292	169	461

TABLE No. 7  
DISCHARGES, CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES AND CONDITION ON DISCHARGE  
FOR THE YEAR 1933

Psychoses		Total		Recovered		Improved		Unimproved			
		Male	Female	M.	F.	M.	F.	M.	F.	T.	
1	Traumatic	.....	.....	.....	.....	.....	.....	.....	.....	.....	
2	Senile	.....	.....	.....	.....	.....	.....	.....	.....	.....	
3	With cerebral arteriosclerosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	
4	General paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	
5	With cerebral syphilis	.....	.....	.....	.....	.....	.....	.....	.....	.....	
6	With Huntington's Chorea	.....	.....	.....	.....	.....	.....	.....	.....	.....	
7	With brain tumour	.....	.....	.....	.....	.....	.....	.....	.....	.....	
8	With other brain or nervous diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	
9	Alcoholic	.....	.....	.....	.....	.....	.....	.....	.....	.....	
10	Due to drugs and other exogenous toxins	.....	.....	.....	.....	.....	.....	.....	.....	.....	
11	With pellagra	.....	.....	.....	.....	.....	.....	.....	.....	.....	
12	With other somatic disease	.....	.....	.....	.....	.....	.....	.....	.....	.....	
13	Manic-depressive	.....	.....	.....	.....	.....	.....	.....	.....	.....	
14	Involitional melancholia	.....	.....	.....	.....	.....	.....	.....	.....	.....	
15	Dementia Praecox (Schizophrenia)	.....	.....	.....	.....	.....	.....	.....	.....	.....	
16	Paranoia and paranoid conditions	.....	.....	.....	.....	.....	.....	.....	.....	.....	
17	Epileptic	.....	.....	.....	.....	.....	.....	.....	.....	.....	
18	Psychoneuroses and neuroses	.....	.....	.....	.....	.....	.....	.....	.....	.....	
19	With psychopathic personality	.....	.....	.....	.....	.....	.....	.....	.....	.....	
20	With mental deficiency	.....	.....	.....	.....	.....	.....	.....	.....	.....	
21	Undiagnosed	.....	.....	.....	.....	.....	.....	.....	.....	.....	
22	Without psychoses	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	Total	187	95	282	31	23	54	74	20	12	32



TABLE No. 8  
DISCHARGES DURING 1933, SHOWING DURATION OF RESIDENCE

Psychoses	Total		Under 3 months		Under 6 months		Under 9 months		Under 12 months		Under 18 months		Under 2 years		Over 2 years	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.
1 Traumatic	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 Senile	9	5	2	3	2	1	1	1	1	1	2	2	1	1	2	2
3 With cerebral arteriosclerosis	16	16	9	9	4	4	4	4	2	2	1	1	1	1	1	1
4 General paralysis																
5 With cerebral syphilis																
6 With Huntington's Chorea	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 With brain tumour	3	2	3	1	4	4	4	4	1	1	1	1	1	1	1	1
8 With other brain or nervous diseases	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9 Alcoholic																
10 Due to drugs and other exogenous toxins																
11 With pellagra																
12 With other somatic disease	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13 Manic-depressive	22	25	8	7	15	5	5	10	2	3	1	2	3	5	3	2
14 Involutional melancholia	1	3	1	2	3	1	1	1	1	1	1	1	1	1	1	1
15 Dementia Praecox (Schizophrenia)	42	23	8	7	15	10	7	17	4	4	7	2	9	1	4	2
16 Paranoia and paranoid conditions	6	2	2	2	4	2	2	2	1	1	1	1	1	1	1	1
17 Epileptic	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
18 Psychoneuroses and neuroses	2	3	1	2	3	1	1	1	1	1	1	1	1	1	1	1
19 With psychopathic personality	14	1	1	1	1	6	6	6	1	1	1	1	1	1	3	3
20 With mental deficiency	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21 Undiagnosed	62	24	47	17	64	8	4	12	1	1	1	1	1	1	1	1
22 Without psychoses																
Total	187	95	84	44	128	38	18	56	12	5	17	13	8	21	13	4

TABLE No. 9

## RECORD OF DEATHS DURING 1933

Register No.	Sex.	Age.	Time in Hospital.			Cause of Death
			Years.	Months.	Days.	
5524	M	72	....	11	18	Broncho-pneumonia; generalized arterio-sclerosis with thrombosis.
1179	M	31	15	7	....	Pulmonary tuberculosis; tuberculous peritonitis, enteritis and laryngitis.
4023	M	62	4	11	17	Perforated jejunal ulcer with peritonitis.
4596	F	22	3	4	21	Typhoid fever with haemorrhage from bowel.
5791	M	27	....	5	19	Pulmonary tuberculosis; repeated haemorrhages.
4604	M	56	3	5	....	Cerebral haemorrhage; cerebral arterio-sclerosis.
5964	M	73	....	1	10	Broncho-pneumonia; general paresis; left-sided parotitis.
5751	M	49	....	7	2	Pulmonary embolus; rheumatic carditis.
5526	M	29	1	....	28	Pulmonary tuberculosis; mongolism.
3304	M	56	6	3	26	Tuberculous broncho-pneumonia; pulmonary tuberculosis.
3318	F	54	7	3	11	General peritonitis; intestinal (faecal) obstruction.
637	F	63	18	8	28	Pulmonary tuberculosis; tuberculous enteritis.
2666	M	38	9	11	6	Pulmonary tuberculosis.
5941	M	77	....	2	26	Gangrene of foot (occlusive vascular disease); early broncho-pneumonia.
3923	M	68	5	4	27	Paralysis agitans with exhaustion.
4147	F	65	3	9	3	Broncho-pneumonia; cardiac asthma; Huntington's chorea.
6025	M	72	....	....	14	Generalized arteriosclerosis; cardiac decompensation; myocarditis.
4757	M	25	3	1	15	Pulmonary tuberculosis.
6027	M	37	....	....	11	Tuberculous meningitis.
5939	M	42	....	3	14	Streptococcal sore throat.
545	M	50	18	11	9	Fracture of spine, 8th dorsal, from fall from roof; accidental.
3582	M	34	6	6	....	Pulmonary tuberculosis.
5759	F	38	....	8	11	Shock with numerous injuries; fractured spine, ankle, rib; fell from window.
5166	M	60	2	1	21	Cardiac decompensation; mitral stenosis.
877	F	41	15	3	29	Pulmonary tuberculosis; tuberculous enteritis.
4003	F	31	5	2	27	Pulmonary tuberculosis; tuberculous peritonitis and enteritis.
2831	F	31	9	5	....	Pulmonary tuberculosis.
3807	F	34	5	10	10	Tuberculous peritonitis; bilateral psoas abscess.
5565	M	65	1	2	28	Broncho-pneumonia; generalized arterio-sclerosis; inanition.
5145	F	52	2	4	13	Pulmonary tuberculosis; diffuse tuberculous peritonitis.
6053	F	67	....	2	8	Pulmonary thrombosis; generalized arterio-sclerosis; coronary sclerosis.
6124	F	76	....	....	15	Generalized arteriosclerosis.
6115	F	44	....	....	22	Suffocation by hanging; self-inflicted.
5785	M	55	....	10	6	Bilateral pulmonary tuberculosis; exhaustion; Huntington's chorea.
5825	M	26	....	8	18	Pulmonary tuberculosis.
5928	M	67	....	7	12	Cerebral haemorrhage.
4179	M	55	5	....	14	Pulmonary embolism; epilepsy; generalized arteriosclerosis.
2819	F	69	9	8	18	Chronic myocarditis with severe secondary anaemia.
5038	M	33	2	9	4	Tuberculous meningitis; bilateral pulmonary tuberculosis.
6121	F	21	....	2	11	Tuberculosis of the intestine; exhaustion; Schizophrenia.
109	F	60	29	1	13	Aortic insufficiency; paranoia and paranoid conditions.
137	F	76	23	7	....	Generalized arteriosclerosis; paranoia and paranoid conditions.
6209	F	48	....	....	13	Broncho-pneumonia; general paresis.
6218	M	43	....	....	7	Suicide by hanging; asphyxiation.
5880	M	48	1	5	14	Broncho-pneumonia; general paresis.
4513	M	63	5	7	12	Broncho-pneumonia; acute suppurative parotitis; staphylococci.
262	F	53	21	3	....	Broncho-pneumonia; gastric carcinoma; exhaustion.
6258	M	74	....	....	3	Broncho-pneumonia; arteriosclerosis.
3002	M	26	9	1	4	Intestinal obstruction; general peritonitis.
4387	M	52	4	7	18	Broncho-pneumonia.
4643	M	53	3	11	7	Chronic hydronephrosis.
4503	M	39	4	3	18	Tuberculous broncho-pneumonia; tuberculous peritonitis.
5827	F	35	2	3	16	Pulmonary tuberculosis; general paralysis.
4954	F	28	3	3	8	Pulmonary tuberculosis.
6338	M	39	....	....	4	Uraemia.



TABLE No. 9—Continued

Register No.	Sex.	Age.	Time in Hospital.			Cause of Death
			Years.	Months.	Days.	
5309	F	41	2	4	8	Chronic chorea (congenital chorea and athetosis with exhaustion).
5856	M	53	....	7	9	Broncho-pneumonia; cerebral arteriosclerosis.
6136	M	62	....	5	14	Primary carcinoma of lung; general paresis.
2156	F	35	12	7	10	Pulmonary tuberculosis.
652	F	72	18	3	29	Broncho-pneumonia; senile exhaustion.
4158	F	40	5	10	6	Pulmonary tuberculosis; subthyroidism.
3858	M	48	6	4	17	Pulmonary tuberculosis.
6312	M	62	....	1	25	Arteriosclerosis with exhaustion.
5201	F	71	2	8	17	Lobar pneumonia; bronchiectasis.
4941	F	71	3	5	6	Arteriosclerosis; exhaustion.

## Provincial Mental Institute, Edmonton

(W. J. McALISTER, M.D., *Medical Superintendent*)

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In considering the general activities of the Institution for the year in their relation to the movement of patient population, one is once more impressed by the chronic type of mental disease from which practically all our patients suffer; 73% of the cases are psychogenic in character, 55% are schizophrenics, 14% show a basic state either of senility, epilepsy or of mental deficiency, and of the total population 14% have been in the Alberta Mental Hospitals for a period of twenty years or more. Such a picture at once suggests an institution almost wholly custodial in nature where constructive activity, because of mental deterioration and other associated degenerative factors, must necessarily be very limited.

A study of Table 1 of this report shows a total movement of population outward of only 16 patients for the entire year. Of these, 50% were due to deaths. As all vacancies were filled, the number on our books remained the same at the close as at the beginning of the year, namely, 424.

No very serious difficulties in administration arose during the year, although the predominantly custodial nature of our work tends to create special problems not so frequently met in institutions where more active treatment is carried on and where the prognosis is more hopeful.

We had only one case of elopement. This patient eloped twice, but returned each time voluntarily. There was one case of suicide by hanging. This was a patient who had been on parole several months, and who at no time manifested any marked tendency which would suggest suicide. In view of the fact that we had on parole a total of 108 patients throughout the year, the above record is a very satisfactory one.

Routine clinical activities were carried on, stress being particularly laid on the prevention of disease.

A series of lectures were given to the attendant staff covering all phases of their work.

Religious services were conducted regularly each Sunday afternoon, a group of three clergymen alternating. Roman Catholic services were held the first Monday of each month.

Recreation, consisting principally of moving picture shows, received due attention. These were discontinued towards the end of the year owing to our inability to secure silent films. The possibility of installing sound films has been discussed. We feel some definite action should be taken as soon as possible as a psychotherapeutic measure.

The Superintendent was in regular attendance at the Mental Hygiene Clinic during the year. This work serves as a very important extra-institutional link between the institutions and those mental defective, psychotic, prepsychotic and behaviour problem cases with which the various child welfare, school and social agencies come in contact, the disposal of which constitutes a real problem to them.

### *Health Services.*

The year 1933 was a very satisfactory year from the point of view of the general health of the patients.



There were two cases which demanded emergency treatment at the University Hospital. One was a patient who accidentally fractured his thigh as a result of a fall, and the other was an emergency operation for acute appendicitis. Credit must again be given to the medical officer and attendant staff for this very excellent showing. Our death rate was again kept within fairly normal bounds. The deceased patients were for the most part elderly, and with the exception of the case of suicide, all suffered from what must sooner or later prove to be terminal diseases.

A close check-up was kept on the possible further incidence of tuberculosis. Only one case definitely developed, and he was transferred to Ponoka. This showing is agreeably surprising in spite of a situation where it is practically impossible for several months of the year to get the patients off the wards. A large recreation field was laid out, but this was of no value in dealing with a certain type of patient, namely, the disturbed case and those who are very much deteriorated or who are physically unable to go any long distance from the institution. We still hope that this state of affairs may soon be corrected, and that all patients may have the opportunity of a certain amount of freedom and exercise in the open air under as favourable conditions as it is possible to give them.

#### *Nursing Service.*

With a population such as we have here, there are many cases more or less chronically ill, whom we find necessary to admit to the sick ward from time to time. This means that there are a number continuously ill, and who require more or less special nursing attention. I still feel that this could be done more efficiently and more acceptably by a graduate nurse, and trust that arrangements may be made whereby this improvement in our nursing service may be effected.

#### *Occupational Therapy.*

General industrial work including special work in the various departments—the power house, barns, garden and grounds, etc.—were carried on throughout the year. Every effort was made to include in this group those of our patients whom we felt should and could be occupied in some way other than just the routine work on the wards. In addition, a great deal of work was carried on in the Occupational Therapy Department. Some additions to our equipment enabled us to increase the numbers employed, and the result has been quite gratifying. We hope we may be able to extend this special occupational therapy to cover certain patients who are unable to leave the wards. Table 3 shows that the bulk of our patients are of the type that can do only simple routine work. Even of those who are assigned to the garden and grounds and other activities, many are quite deteriorated and unable to do very much in a constructive way. I still feel that much more could be done provided we were in a position to divide our workers into smaller groups. This would necessitate, of course, an increase in staff. There is no question, however, that it is impossible to supervise a large group of more or less deteriorated patients and hope to get the maximum work from them at the same time.

#### *Dental Services.*

Table 6 shows that much work was done by Dr. Heacock in dental prophylaxis and treatment. This work has been a real contribution to the question of maintenance of general health and to general therapy.

#### *Special Services.*

Arrangements were made for Dr. Levey, Eye, Ear, Nose and Throat Specialist, to visit the institution. This visit was made in January and approximately 20 cases were checked over at that time, many of whom were suffering



from errors of refraction. We trust this contact with the specialist services of the city may be continued.

#### *Administration.*

The work in all departments of the institution functioned very satisfactorily throughout the year. Departmental heads, possibly with one exception, have shown a splendid sense of co-operation, and there is a keen interest in all phases of the work on the part of every member of the staff. I take this opportunity to thank each departmental head and the staff executive for their continued devotion to duty. I also wish to thank the Department of Public Works for their efficient co-operation. Mr. McDonald, Superintendent of Maintenance and Construction, has always evinced a keen interest in the institution and has been a great help to us on many occasions. I also wish to thank the Commissioner, Dr. Baragar, for his interest and help in a number of problems which arose during the course of the year's administration.

#### *Institutional Progress.*

New construction was practically nil during the year. Certain alterations were made of a minor character, such as two cubicles in No. 3 Building for the use of disturbed patients, and general repairs with minor alterations in the other units.

Dr. Valens, who had worked very acceptably throughout the year, was promoted and transferred in October to take charge of the newly opened institution for female patients at Claresholm. His place was taken by Dr. Newcombe, who at the time was on the temporary staff at Ponoka.

Under existing conditions, with the institution practically filled to capacity, we cannot hope for much additional progress until new construction is undertaken.

#### *Institutional Requirements.*

There is little that is urgently required, as the institution, as it now stands, may be said to be practically complete. We would like to have the tunnel completed between No. 3 Building and the dining room of the Service Building. At present the only protection the patients have going to and fro is an unheated overhead temporary structure. This has served its purpose well, but we trust the Government will not look upon it as a permanent fixture.

We have been approached from time to time to admit more patients from Ponoka. We do not see how this can be done unless further steps are taken to increase accommodation, and accommodation can only be increased by overcrowding or by new construction.

#### *Finances.*

The financial statement as submitted by our Bursar, Mr. Murray, shows the cost down eight cents per patient per day. The net expenditure is \$577.64 less in spite of the fact that there were 16,971 more hospital days. The end of the financial year shows a saving of \$8,053.56 from the budget as provided for in the estimates. Food and clothing costs were up about \$3,000.00 on the previous year. This is due to the extra number of hospital days and slightly higher living costs. The following credits, however, offset this increase of expenditure to a certain extent:

Stock Account .....	\$2,300.00
Garden and Grounds .....	400.00
Transportation .....	300.00
General House Expenditure .....	250.00
Amusements .....	150.00
Travelling Expenses .....	175.00



These credits reflect most favourably upon our office staff, as practically all of them are due to the close supervision made of expenditure throughout the year.

#### *Closing Remarks.*

We have had many visitors—relatives coming to see patients and others who were interested in special activities of an institution of this kind. All seemed much impressed with the spirit with which the work was carried on and the *esprit de corps* shown by the members of the staff. This is very gratifying, all the more so because of the difficulties under which all members of the staff have been labouring. In view of the arduous nature of the work, I trust the Government will soon see their way clear to restore those monetary advantages which they felt necessary to take away prior to 1932.

TABLE No. 1  
MOVEMENT OF INSANE POPULATION

Patients on Books Jan. 1st, 1933:	Males	Females	Total
(a) In Hospital .....	424	....	424
(b) On Probation .....	....	....	....
Total .....	424	....	424
Admissions during Year:			
(a) First Admissions .....	9	....	9
(b) Readmissions .....	2	....	2
(c) Transfers .....	5	....	5
Total .....	16	....	16
Total Received during Year:			
(a) Transfers .....	5	....	5
(b) Readmissions .....	2	....	2
(c) By Warrant .....	3	....	3
(d) By Voluntary Application .....	4	....	4
(e) By Certificate .....	2	....	2
Total .....	16	....	16
Total on Books during Year .....	440	....	440
Discharged during Year:			
(a) As Recovered .....	....	....	....
(b) Improved .....	6	....	6
(c) Unimproved .....	1	....	1
(d) Without Psychoses .....	....	....	....
(e) Transfers .....	1	....	1
(f) Died during Year .....	8	....	8
Total .....	16	....	16
Patients on Books end of Year:			
(a) In Hospital .....	423	....	423
(b) On Probation .....	1	....	1
Total .....	424	....	424
Total Admitted since opening .....	613	....	613
Total Discharged since opening .....	136	....	136
Total Died since opening .....	67	....	67

TABLE No. 2  
NUMBER OF OFFICERS AND EMPLOYEES

	Males	Females	Total		Males	Females	Total
Medical Superintendent ..	1	....	1	Social Workers .....	....	....	....
Medical Officer .....	1	....	1	Teachers .....	....	....	....
Dentist .....	1	....	1	Occupational Therapist ..	1	....	1
Administrative Assistant ..	1	....	1	Kitchen and Bakery .....	3	....	3
Bursar .....	1	....	1	Laundry .....	1	1	2
Storekeeper .....	1	....	1	Gardeners & Assistants ..	3	....	3
Stenographer .....	....	1	1	Engineers & Mechanics ..	9	....	9
Night Supervisor .....	1	....	1	Other Male Employees ..	7	....	7
Graduate Nurses .....	....	....	....	Other Female Employ's ..	....	....	....
Other Female Nurses .....	....	....	....				
Male Attendants .....	42	....	42	Total .....	73	2	75

TABLE No. 3

## PSYCHIATRIC AND INDUSTRIAL CLASSIFICATION OF PATIENTS

	Males	Females	Total
Patients Insane .....	407	.....	407
Epileptic (not insane) .....	.....	.....	.....
Mental Deficiency (not insane) .....	17	.....	17
Alcoholics (not insane) .....	.....	.....	.....
Drug Addicts (not insane) .....	.....	.....	.....
Neurosyphilitics (not insane) .....	.....	.....	.....
All Other Types .....	.....	.....	.....
<b>Total Population</b> .....	<b>424</b>	<b>.....</b>	<b>424</b>
Industrial Workers .....	34	.....	34
Garden Workers .....	37	.....	37
Internal Workers .....	247	.....	247
External Workers .....	12	.....	12
Doing No Work .....	94	.....	94
<b>Total Population</b> .....	<b>424</b>	<b>.....</b>	<b>424</b>

TABLE No. 4

## NATIVITY OF PATIENTS IN RESIDENCE

	Males	Females	Total		Males	Females	Total
Canada .....	134	.....	134	Japan .....	2	.....	2
Australia .....	1	.....	1	Norway .....	17	.....	17
Austria .....	32	.....	32	Poland .....	2	.....	2
Belgium .....	3	.....	3	Roumania .....	4	.....	4
China .....	3	.....	3	Russia .....	19	.....	19
Denmark .....	4	.....	4	Scotland .....	18	.....	18
England .....	57	.....	57	Sweden .....	10	.....	10
Finland .....	3	.....	3	Switzerland .....	3	.....	3
France .....	2	.....	2	United States .....	55	.....	55
Germany .....	10	.....	10	Wales .....	3	.....	3
Holland .....	2	.....	2	Other Countries .....	12	.....	12
Hungary .....	1	.....	1	Unascertained .....	12	.....	12
Ireland .....	10	.....	10				
Italy .....	5	.....	5	<b>Total</b> .....	<b>424</b>	<b>.....</b>	<b>424</b>

TABLE No. 5

## CITIZENSHIP OF PATIENTS IN RESIDENCE

	Males	Females	Total
Citizen by Birth .....	134	.....	134
Citizen Naturalization .....	17	.....	17
Aliens .....	178	.....	178
Unascertained .....	6	.....	6
British Birth Out-Canada .....	89	.....	89
<b>Total</b> .....	<b>424</b>	<b>.....</b>	<b>424</b>

TABLE No. 6

## DENTAL REPORT

	Males	Females	Total
Patients Examined .....	472	.....	472
Patients Treated .....	303	.....	303
Prophylactic Treatments .....	193	.....	193
Fillings .....	76	.....	76
Extractions .....	163	.....	163
New Dentures .....	8	.....	8
Dentures Repaired .....	7	.....	7



TABLE No. 7  
AGE AT ADMISSION AND PRINCIPAL PSYCHOSES

Psychoses	Total		Under 15 years		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1 Traumatic	12	12	1	1	1	1	1	1	1	1	1	1	1	1
2 Senile	8	8	1	1	1	1	1	1	1	1	1	1	1	1
3 Cerebral Arteriosclerosis	15	15	1	1	1	1	1	1	1	1	1	1	1	1
4 General Paralysis	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 With Cerebral Syphilis	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 With Huntington's Chorea	5	5	1	1	1	1	1	1	1	1	1	1	1	1
7 With Brain Tumour	5	5	1	1	1	1	1	1	1	1	1	1	1	1
8 With Other Brain Diseases	5	5	1	1	1	1	1	1	1	1	1	1	1	1
9 Alcoholic	5	5	1	1	1	1	1	1	1	1	1	1	1	1
10 Due to Drugs	2	2	1	1	1	1	1	1	1	1	1	1	1	1
11 With Pellagra	2	2	1	1	1	1	1	1	1	1	1	1	1	1
12 With Other Somatic Diseases	20	20	1	1	1	1	1	1	1	1	1	1	1	1
13 Manic Depressive	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14 Involution Melancholia	235	235	1	1	8	8	43	43	60	60	52	52	30	30
15 Dementia Praecox	59	59	1	1	1	1	1	1	1	1	1	1	1	1
16 Paranoia and Paranoid Conditions	11	11	1	1	1	1	2	2	4	4	1	1	2	2
17 Epileptic Psychoses	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18 Psychoneuroses and Neuroses	4	4	1	1	2	2	5	5	4	4	5	5	3	3
19 With Psychopathic Personality	24	24	1	1	1	1	1	1	1	1	1	1	1	1
20 With Mental Deficiency	2	2	1	1	2	2	1	1	4	4	4	4	4	4
21 Undiagnosed Psychoses	19	19	1	1	2	2	1	1	4	4	4	4	4	4
22 Without Psychoses	424	424	4	4	15	15	53	53	76	76	75	75	47	47
Total	424	424	4	4	15	15	53	53	76	76	75	75	47	47

TABLE No. 7A  
AGE AT ADMISSION AND PRINCIPAL PSYCHOSES

Psychoses	40 to 44		45 to 49		50 to 54		55 to 59		60 to 64		65 to 69		70 & over		Unascertained	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1 Traumatic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 Senile	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 Cerebral Arteriosclerosis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 General Paralysis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 Cerebral Syphilis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 Huntington's Chorea	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 Brain Tumour	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8 Other Brain Diseases	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9 Alcoholic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10 Due to Drugs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11 Pellagra	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12 Somatic Diseases	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13 Manic Depressive	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14 Involutional Melancholia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15 Dementia Praecox	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16 Paranoia and Paranoid Conditions	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17 Epileptic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18 Psychoneuroses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19 Psychopathic Personality	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20 Mental Deficiency	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21 Undiagnosed	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22 Without Psychoses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	42	42	34	34	28	28	18	18	10	10	6	6	10	10	6	6



TABLE No. 8  
DEGREE OF EDUCATION OF FIRST ADMISSIONS WITH PRINCIPAL PSYCHOSES

Psychoses	Total		Illiterate		Reads and Writes		Common School		High School		University		Unascertained	
	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.
1 Traumatic	12	12	1	1	5	5	5	5	1	1				
2 Senile	8	8			5	5	1	1	1	1			1	1
3 Senile Arteriosclerosis	15	15	1	1	8	8	4	4	2	2				
4 General Paralysis	1	1			1	1								
5 With Cerebral Syphilis														
6 With Huntington's Chorea														
7 With Brain Tumour														
8 With Other Brain Diseases	5	5			2	2	3	3						
9 Alcoholic	5	5	1	1	2	2					1	1	1	1
10 Due to Drugs														
11 With Pellagra														
12 With Other Somatic Diseases	2	2			1	1	1	1						
13 Manic Depressive	20	20			5	5	13	13	1	1			1	1
14 Involuntional Melancholia	1	1					1	1						
15 Dementia Praecox	235	235	15	15	106	106	76	76	8	8	1	1	29	29
16 Paranoia and Parnold Conditions	59	59	3	3	27	27	19	19	3	3			7	7
17 Epileptic Psychoses	11	11	3	3	3	3	3	3					2	2
18 Psychoneuroses and Neuroses	1	1			1	1								
19 With Psychopathic Personality	4	4			2	2	2	2						
20 With Mental Deficiency	24	24	2	2	9	9	8	8	2	2			3	3
21 Undiagnosed Psychoses	2	2					1	1	1	1				
22 Without Psychoses	19	19	6	6	6	6	3	3					4	4
Total	424	424	32	32	183	183	140	140	19	19	2	2	48	48

TABLE No. 9  
ENVIRONMENT OF FIRST ADMISSIONS WITH PRINCIPAL PSYCHOSES

Psychoses		Total		Urban 2,500 and over			Rural		Unascertained.		
	M.	F.	T.	M.	F.	T.	M.	F.	M.	F.	T.
1 Traumatic	12	12	24	3	3	6	9	9	1	1	2
2 Senile	8	8	16	2	2	4	6	6	1	1	2
3 Cerebral Arteriosclerosis	15	15	30	7	7	14	8	8	1	1	2
4 General Paralysis	1	1	2	1	1	2	1	1	1	1	2
5 With Cerebral Syphilis	1	1	2	1	1	2	1	1	1	1	2
6 With Huntington's Chorea	1	1	2	1	1	2	1	1	1	1	2
7 With Brain Tumour	1	1	2	1	1	2	1	1	1	1	2
8 With Other Brain Diseases	5	3	8	3	3	6	1	1	1	1	2
9 Alcoholics	5	3	8	3	3	6	2	2	1	1	2
10 Due to Drugs	1	1	2	1	1	2	1	1	1	1	2
11 With Pellagra	2	2	4	2	2	4	2	2	1	1	2
12 With Other Somatic Diseases	20	20	40	5	5	10	15	15	1	1	2
13 Manic Depressive	1	1	2	1	1	2	1	1	1	1	2
14 Involutional Melancholia	235	235	470	53	53	106	161	161	21	21	42
15 Dementia Praecox	59	59	118	13	13	26	44	44	2	2	4
16 Paranoia and Paranoid Conditions	11	11	22	2	2	4	8	8	1	1	2
17 Epileptic Psychoses	1	1	2	1	1	2	1	1	1	1	2
18 Psychoneuroses and Neuroses	4	4	8	3	3	6	1	1	1	1	2
19 With Psychopathic Personality	24	24	48	4	4	8	19	19	1	1	2
20 With Mental Deficiency	2	2	4	2	2	4	2	2	2	2	4
21 Undiagnosed Psychoses	19	19	38	7	7	14	9	9	3	3	6
22 Without Psychoses	424	424	848	107	107	214	238	238	29	29	58
Total	424	424	848	107	107	214	238	238	29	29	58



TABLE No. 10  
ECONOMIC CONDITION OF FIRST ADMISSIONS WITH PRINCIPAL PSYCHOSES

Psychoses	Total		Dependent			Living on Daily Earnings			Comfortable, Ample for 4 Months			Unascertained	
	M.	F.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.
1 Traumatic	...	...	...	...	...	...	...	...	...	...	...	...	...
2 Senile	12	12	6	6	12	3	3	6	2	2	4	1	1
3 Cerebral Arteriosclerosis	8	8	5	5	10	1	1	2	2	2	4	1	1
4 General Paralysis	15	15	9	9	18	3	3	6	2	2	4	1	1
5 With Cerebral Syphilis	1	1	1	1	2	...	...	...	...	...	...	...	...
6 With Huntington's Chorea	...	...	...	...	...	...	...	...	...	...	...	...	...
7 With Brain Tumour	...	...	...	...	...	...	...	...	...	...	...	...	...
8 With Other Brain Diseases	5	5	3	3	6	1	1	2	1	1	2	...	...
9 Alcoholic	5	5	2	2	4	2	2	4	1	1	2	...	...
10 Due to Drugs	...	...	...	...	...	...	...	...	...	...	...	...	...
11 With Pellagra	...	...	...	...	...	...	...	...	...	...	...	...	...
12 With Other Somatic Diseases	2	2	1	1	2	...	...	...	...	...	...	...	...
13 Manic Depressive	20	20	6	6	12	13	13	26	1	1	2	...	...
14 Involuntary Melancholia	1	1	1	1	2	...	...	...	...	...	...	...	...
15 Dementia Praecox	235	235	69	69	138	146	146	292	6	6	12	14	14
16 Paranoid and Paranoid Conditions	59	59	19	19	38	37	37	74	3	3	6	...	...
17 Epileptic Psychoses	11	11	9	9	18	1	1	2	1	1	2	...	...
18 Psychoneuroses and Neuroses	1	1	...	...	...	...	...	...	...	...	...	...	...
19 With Psychopathic Personality	4	4	2	2	4	2	2	4	...	...	...	...	...
20 With Mental Deficiency	24	24	8	8	16	14	14	28	2	2	4	...	...
21 Undiagnosed Psychoses	2	2	2	2	4	...	...	...	...	...	...	...	...
22 Without Psychoses	19	19	17	17	34	1	1	2	1	1	2	...	...
Total	424	424	160	160	320	225	225	450	23	23	46	16	16

TABLE No. 11  
USE OF ALCOHOL BY FIRST ADMISSIONS WITH PRINCIPAL PSYCHOSES

Psychoses	Total		Abstinent		Temperate		Intemperate		Unascertained	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1 Traumatic	12	12	2	2	6	6	2	2	2	2
2 Senile	8	8	1	1	5	5	1	1	1	1
3 Cerebral Arteriosclerosis	15	15	1	1	12	12	1	1	2	2
4 General Paralysis	1	1	1	1						
5 With Cerebral Syphilis										
6 With Huntington's Chorea	5	5			3	3	1	1	1	1
7 With Brain Tumour	5	5					5	5		
8 With Other Brain Diseases										
9 Alcoholic										
10 Due to Drugs	2	2	1	1	1	1				
11 With Pellagra	20	20	1	1	12	12	2	2	5	5
12 With Other Somatic Diseases	1	1					1	1		
13 Manic Depressive	235	235					19	19	52	52
14 Involutional Melancholia										
15 Dementia Praecox	59	59	8	8	35	35	11	11	5	5
16 Paranoia and Paranoid Con- ditions	11	11	2	2	8	8			1	1
17 Epileptic Psychoses	1	1								
18 Psychoneuroses and Neuroses	4	4	1	1	2	2			1	1
19 With Psychopathic Personality	24	24	4	4	13	13	5	5	2	2
20 With Mental Deficiency	2	2			1	1	1	1		
21 Undiagnosed Psychoses	19	19	6	6	9	9			4	4
22 Without Psychoses										
Total	424	424	50	50	249	249	49	49	76	76



TABLE No. 12  
MARITAL CONDITION OF FIRST ADMISSIONS WITH PRINCIPAL PSYCHOSES

	Total		Single		Married		Widowed		Separated		Divorced		Unascertained	
	M. F.	T.	M. F.	T.	M. F.	T.	M. F.	T.	M. F.	T.	M. F.	T.	M. F.	T.
1 Traumatic	12	12	5	5	2	2	4	4					1	1
2 Senile	8	8	6	6	1	1	1	1						
3 Cerebral Arteriosclerosis	15	15	3	3	12	12								
4 General Paralysis	1	1			1	1								
5 With Cerebral Syphilis														
6 With Huntington's Chorea														
7 With Brain Tumour														
8 With Other Brain Diseases	5	5	3	3	2	2								
9 Alcoholic	5	5	1	1	4	4								
10 Due to Drugs														
11 With Pellagra														
12 With Other Somatic Diseases	2	2	1	1	1	1								
13 Manic Depressive	20	20	7	7	10	10	2	2					1	1
14 Involutional Melancholia	1	1	1	1										
15 Dementia Praecox	235	235	193	193	31	31	1	1	3	3	3	3	7	7
16 Paranoia and Paranoid Conditions	59	59	35	35	18	18	1	1			2	2		
17 Epileptic Psychoses	11	11	7	7	4	4								
18 Psychoneuroses and Neuroses	1	1	1	1										
19 With Psychopathic Personality	4	4	4	4										
20 With Mental Deficiency	24	24	22	22	1	1	1	1						
21 Undiagnosed Psychoses	2	2	1	1	1	1								
22 Without Psychoses	19	19	17	17	2	2								
Total	424	424	307	307	90	90	10	10	3	3	5	5	9	9

TABLE No. 13

## DISCHARGE OF PATIENTS ACCORDING TO PRINCIPAL PSYCHOSES WITH CONDITION OF DISCHARGE

Psychoses	Total			Recovered			Improved			Unimproved		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1 Traumatic	1											
2 Senile			1									
3 Cerebral Arteriosclerosis							1		1			
4 General Paralysis												
5 With Cerebral Syphilis												
6 With Huntington's Chorea												
7 With Brain Tumour												
8 With Other Brain Diseases												
9 Alcoholic												
10 Due to Drugs												
11 With Pellagra												
12 With Other Somatic Diseases												
13 Manic Depressive	1		1				1		1			
14 Involutional Melancholia												
15 Dementia Praecox	3		3				2		2	1		1
16 Paranoia and Paranoid Conditions	1		1				1		1			
17 Epileptic Psychoses												
18 Psychoneuroses and Neuroses												
19 With Psychopathic Personality												
20 With Mental Deficiency	1		1				1		1			
21 Undiagnosed Psychoses												
22 Without Psychoses												
Total	7		7				6		6	1		1

TABLE No. 14

## CAUSES OF DEATH CLASSIFIED ACCORDING TO PRINCIPAL PSYCHOSES—AGE AT DEATH—DURATION OF HOSPITAL LIFE

Cause of Death	Total			Cerebral Arterio-sclerosis			General Paralysis			Manic Depressive			Dementia Praecox			Paranoia & Paranoid Conditions			With Mental Deficiency			Age	Duration Hospital Life	
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.			
Chronic Myocarditis	2		2	1		1				1												76	5	1½
Arteriosclerosis																						77	3	4
Chronic Bronchitis	1		1							1			1									61	21	9
Coronary Thrombosis	1		1										1									45	8	4½
Suicide by Hanging	1		1										1									75	8	9
General Paralysis	1		1				1		1				1									52	4	7
Epilepsy	1		1																1			44	4	1
Total	8		8	1		1	1		1	1		1	3		3	1		1	1		1	38	8	4



TABLE No. 15  
RELIGION OF PATIENTS IN RESIDENCE

	Males	Females	Total
Baptists .....	16	.....	16
Episcopalians .....	54	.....	54
Jews .....	3	.....	3
Presbyterians .....	45	.....	45
Roman Catholics .....	106	.....	106
United Church .....	30	.....	30
Other Denominations .....	134	.....	134
Unascertained .....	36	.....	36
Total .....	424	.....	424

TABLE No. 16  
OCCUPATION OF PATIENTS IN RESIDENCE

	Males	Females	Total
Professional .....	2	.....	2
Commercial .....	13	.....	13
Agricultural .....	134	.....	134
Mechanics, Outdoor .....	29	.....	29
Mechanics, Sedentary .....	23	.....	23
Domestic Service .....	4	.....	4
Education .....	1	.....	1
Miners, Engineers, Rail .....	20	.....	20
Labourers .....	144	.....	144
No Occupation .....	11	.....	11
Unascertained .....	43	.....	43
Total .....	424	.....	424

## Provincial Training School, Red Deer

### STATISTICAL SUMMARY

With a capacity of 204 beds, there were in residence at the commencement of the year 190 patients. At the end of the year, with 210 beds, there were 207 patients (107 male and 100 female). For the greater part of the year all beds were occupied.

The new admissions numbered 36 (18 male and 18 female). Two females were readmitted, one of whom was recalled under the new amendment to the Act as living an undesirable life. Against this there were 21 outgoing patients, made up of 10 discharges (5 male and 5 female), 6 transfers to Ponoka (3 male and 3 female), and 5 deaths (2 male and 3 female).

The majority of the patients admitted had been examined at one or the other of the Mental Hygiene Clinics or visited in their homes by Mr. Kibblewhite, the Social Worker. This is a great advantage to the Training School as it permits of proper selection of patients for the various high grade or low grade sections and with a fuller understanding of the patient's difficulties before admission, treatment after admission can be better directed.

Table 2 shows that we now have 43 Government wards (one-fifth of our population), as against 31 in 1932 and 26 in 1931. It is to be hoped that the recent change in the Act as to residence qualifications will in time correct this tendency.

There are now 176 cases awaiting admission, and 564 on our list of suspects. These, with the 288 cases in our various institutions brings the number of known defectives throughout the Province to 1,099 as against an estimated 5,600, of whom probably one-third need care.

### HEALTH OF PATIENTS AND STAFF

No new cases of diphtheria developed after the beginning of the year, though one case died in the early days of the year from bronchopneumonia following diphtheria. Eleven cases of scarlet fever occurred in March and April, with two deaths from complications. All patient contacts and forty of the staff were Dick tested and those found susceptible protected. All new patients and staff were immunized against diphtheria and typhoid on admission and all others reinoculated against typhoid in September.

Dr. Heacock attended in June and December, and examined all patients' teeth. There were 212 extractions, 126 fillings and 193 prophylactics. Twenty-four general anaesthetics were necessary.

Dr. Wannop, appointed as oculist, visited several times. Many refractions were done. Nineteen cases were provided with glasses; 15 had tonsils and adenoids removed. There was one operation for aural polypi. Both aural and dental services have been of very great benefit, removing much physical discomfort, preventing sickness and facilitating mental development.

Dr. Little of the full time health unit voluntarily and willingly gave his help during the scarlet outbreak, and did much of the Dick testing and immunizing.



Constant attention was given throughout the year to building up and maintaining the general health of the patients at a high level by adequate diet, periodic change of menu, recreation, games, open air activities and summer camp.

The health of the staff, apart from one case of scarlet fever, has been excellent.

#### PATIENTS' ACTIVITIES

On the girls' side, the system of placing patients at work in the various sections and departments in rotation is now firmly established, and has given us a number of girls who can be transferred to any department at a moment's notice in case of necessity, and can carry on without any feeling of strangeness, dislocation of the work or increase of the burden on others.

Beginning in January, a monthly report on each patient's work and conduct has been submitted by all sections. These reports have proved valuable. The staff have been led to a fuller analysis of each patient, a better understanding of his difficulties and many profitable discussions concerning problem cases. The patients, some of whom at first were suspicious and resentful of the reports, now accept them as part of their "training," and in some cases frankly strive for good reports.

This beneficial effect would be greatly enhanced if a sum could be included in the estimates, sufficient to grant a small weekly allowance to all patients whose work and conduct has merited it. Five or ten cents a week would be sufficient. I am confident the money would be exceedingly well spent and would repay the Government in many ways both directly and indirectly. It would make for greater happiness of the patients, would increase their desire to be helpful and build up their self-respect. In saving their pocket money they would lay a foundation of thrift and foresight, and in spending it under supervision, would learn to spend wisely.

On the boys' side, the attendants' duty hours and the allocation of the patients' duties were altered to permit of more continuous supervision. The results have been quite satisfactory, but with some of the older and less capable boys progress is slow. I have no doubt a small weekly allowance granted only to those doing good work and behaving well would be a great incentive to improvement.

The schoolboy group proved themselves particularly useful in the vegetable garden and about the grounds on Saturdays and during the school holidays. Unless they are spoiled by the example of and contact with some of the older, more lazy and more sophisticated boys, they will give a good account of themselves in the years to come and be a credit to the Training School. To prevent the deterioration of the group, any plans for the future expansion of the Training School should provide separate sections for the school children and the adults, to keep them apart.

Grade School and Sense Training Classes were maintained at full strength during the academic year, and did good work.

Except for July and August the occupation classes were held regularly by the teachers, and the usual displays of work made at the Edmonton Exhibition and Red Deer Fair.

Senior and junior classes in elementary practical nursing were again held by Miss Holmes, the Matron, and Miss Carnochan, the surgery nurse. These were thoroughly enjoyed by the girls and are very helpful.

The dining room supervisor, Miss Madison, gave three courses of instruction in cooking. There were eight girls in each class. The courses were of a



thoroughly practical nature, and Miss Madison deserves great praise for the results obtained. She gave freely of her own time, showed great initiative, and her enthusiasm was infectious.

In October regular classes for instruction in carpentry were commenced by the carpenter, Mr. Markwick, with 16 larger boys and some schoolboys attending. From the commencement the venture has been an unqualified success owing to the ability, the personality and the whole-hearted co-operation of Mr. Markwick. Work of a practical and useful nature has been deliberately aimed at from the first, such as repairing and reupholstering furniture, making flats, potato boxes and garden wheelbarrows for the gardener. The boys have found this much more interesting than making toys and fancy articles. Some of these boys were formerly quite destructive. The conversion of their destructive impulses into definitely constructive tendencies is not least amongst the benefits of this group.

In addition to these efforts to keep all patients fully occupied and interested, careful attention has been given to their recreational needs in both summer and winter.

Camp was held this year on the east end of the grounds instead of at Sylvan Lake. Fifty boys and forty-five girls attended in eight groups. Camp close to the institution was greatly preferred by all the patients, without exception, whilst from the administrative side the convenience and economy in transportation is a great advantage, and there were no near-accidents from bathing, such as we have had at the lake.

The usual open air sports were held on May 24th and July 1st. Some fifty patients attended Chautauqua and about 100 were admitted to the Red Deer Fair.

The Christmas concert was up to the usual standard, and the Christmas tree as popular as ever. Very acceptable gifts of toys were received from the Provincial Mental Institute, Oliver, the Provincial Mental Hospital, Ponoka, the Red Deer Rotary Club, the T. Eaton Co., and several individuals.

In the fall, combined social evenings for the high grade boys and girls were begun, the boys entertaining the girls once a month in the cottage and the girls entertaining the boys in the gym. Cards and other games were played and everything done in proper form in an endeavour to make these social evenings not merely recreational, but a training in deportment and manners and a healthy contact with the opposite sex under proper supervision.

In addition to the attention given to the work and recreation of the patients, the character-building activities have also been maintained and extended.

The usual church services were held every Sunday afternoon. Five Sunday school classes met on Sunday mornings, the total attendance averaging between 70 and 80. Several open meetings were held.

The Guides who were registered at Provincial Headquarters as an Extension Group in May 1932, met regularly. Membership increased from 18 to 23. In July they camped as a group. In October Mrs. Pardee, Provincial Commissioner, Mrs. Symes, Provincial Secretary, and Dr. Folinsbee-Newell, Extension Secretary, inspected the company, and gave them an excellent report.

The Clubs and Scouts, though not yet regularly affiliated with the Provincial Headquarters, also had a successful year. There are 23 Cubs and 7 Scouts. Mr. Backman, the Provincial Commissioner, inspected the boys in September, and was greatly pleased with the display they put on for him. This work makes a very definite appeal to the boys, and is doing much to build up healthy interests and attitudes towards life.



Two girls' clubs, a Senior and Junior, were formed by the Matron, and met on alternate weeks throughout the year. This has proved a most valuable contribution to the welfare of the patients. Problems of conduct and deportment under certain circumstances have been discussed, and information (often voluntarily asked for) imparted as to life outside the Training School, thus preparing them to meet problems in a wholesome way when they go out into the world. It has also given the Matron a close personal contact with these girls so that they bring her their many personal problems for discussion. This had made for better adjustment and happier relations all round amongst the girls and *inter alia* a healthier attitude towards sex amongst these adolescents.

#### STAFF ACTIVITIES

There were 19 resignations from the staff as against 11 the previous year. Three of these, however, were temporary positions. There were no dismissals.

During the year the local branch of the C.S.A. of A. held monthly socials or picnics, to which all members of the staff were welcome whether members of the C.S.A. of A. or not. These events, which were well attended, did much to create and foster general happiness and goodwill amongst the staff, and were a very valuable contribution to the social life of the school. I appreciate the continued loyalty of the branch to the standards and ideals of the Training School.

I would like to put on record my sincere appreciation of the increasing interest shown by all members of the staff in the welfare of the patients. In addition to the time and effort given freely and voluntarily to Sunday school, Scout, Cub and Guide work, the Girls' Club and other character building activities, quite a number of patients have been taken to picture shows or for meals down town, or to see the shops, to church services or to friends' homes for entertainment. Many also, in their off duty time, visited the groups in camp or attended the patients' picnics, helping as readily as those on duty, and greatly contributing to their success. Where such service and interest is in evidence, there can be no question as to the humane and kindly treatment of the patients, nor any doubt as to the beneficent influence of such an attitude and conduct on their growing minds.

#### CONSTRUCTION AND ALTERATIONS

With the maintenance staff reduced to one painter and one carpenter, both of them working seven instead of eight hours a day, and with need for the most stringent economy in materials, only such changes and expenditures as were absolutely necessary were undertaken. The greatest credit is due to the Bursar, Mr. Elgood, and the maintenance and boiler room staffs for the satisfactory maintenance of the buildings and equipment under such circumstances.

A new steam sterilizer was installed in the surgery. The old one had been many years in service, and was dangerously inefficient.

Some minor alterations gave us four extra beds and two cots, also accommodation for the evening cooking classes.

A small second-hand heater for the softened water for the laundry was installed.

#### DEPARTMENTAL ACTIVITIES

During the year 308,460 articles were laundered as against 286,660 in 1932 and 255,489 in 1931.

In the sewing room, 2,729 articles were made and 40,941 repaired, as against 2,750 and 38,371 in 1932 and 2,988 and 30,848 in 1931.



Excellent service has been rendered by the kitchen staff. Complaints about the meals have been extraordinarily few and not of a serious nature. Many extra demands for service, over and above the routine meals, such as patients' dances, picnics, etc., have been met cheerfully and willingly.

Another excellent crop was harvested, better even than that of the previous year—the best experienced till then. Dressed pork delivered to the school was 4,435 pounds as against 3,665 pounds the previous year. Seven acres of the new breaking yielded 5,500 oat bundles. The straw was so heavy we had much difficulty in getting it cut. Eight thousand caragana from nursery stock were shipped to Rosedale late in May.

#### GENERAL

The Eugenics Board met at the Training School in March and September. Nine cases were presented (2 male and 7 female), approved of, and 8 cases (1 male and 7 female) were operated on. This brings the total number of Training School cases approved by the Board to 54 (19 male and 35 female), and the number sterilized to 50 (15 male and 35 female). Of these, 34 are still in residence.

A number of visits were paid by Dr. Baragar, Commissioner of Mental Institutions for general institutional and departmental purposes, and as extra-mural examiner in practical nursing. Visits were also paid by Dr. M. R. Bow, Deputy Minister of Health, Dr. McAlister and Mr. D. E. McDonald. To the latter I am much indebted for permission to use the carpenter as instructor for the patients.

Several much-needed amendments to The Mental Defectives' Act were passed in April, one dealing with residence qualifications, another empowering the Medical Superintendent to recall any paroled patient showing undesirable behaviour.

A condensed statement of the maintenance costs is given in Table 21 and a graph of the operating costs for the past six years, prepared by Mr. Elgood, in Table 22. Expenditures have been kept well within the vote, and our revenue exceeded the estimated amounts, giving a favourable balance of approximately \$5,000.00.

#### RECOMMENDATIONS AND GENERAL COMMENTS

Our patients keep growing up. Many who were admitted as children are now adolescent. This raises many problems.

The housing together, in the main building, of types of patients who should be kept separate is also an urgent problem. On the girls' floor, to have low grade cases of all ages and sometimes of the lowest mentality mixing with bright, promising school children of moron or borderline ability is very detrimental to the latter. Mixed together on the boys' floor there are adult low grades, adolescent workers, small school boys and larger boys who cannot be trusted in the Cottage.

Now that we have acquired sufficient ground, a satisfactory solution of this problem would be the ultimate development of the Training School in three separate sections, viz., adult, school and infirmary with, of course, common administrative and service buildings—the female adult section convenient to the laundry, sewing room, kitchen, dining rooms and other female work centres, the male adult buildings convenient to the carpenter and paint shops, boiler rooms, stores, etc., the school sections, male and female (for trainable children under 16) close to the school rooms, and the infirmary section (for the physically and mentally helpless—sexes need not necessarily be separated)—as far from the other two sections and from the public view as possible.



Training under such conditions would give much better results in the numbers returned to extra-institutional life or graduated to farm colonies, hostels, etc., and all those defectives without psychosis and without dangerous tendencies who are now at Ponoka and Oliver could be cared for in the Training School, in cheaper buildings and at less cost.

Too much attention in the past has been paid to the lowest grade cases—the idiots and imbeciles. Though they form but 25% of all defectives and do not damage society, they form 80% of our cases. The morons, who far outnumber them, account for only 20% of our Training School cases. Yet they are a distinct social menace, not because they are vicious, but are easily led. And because they are as easily led right as wrong, the need is all the greater to institutionalize all those who are found in undesirable surroundings and to do so before the age of ten or twelve. If left too long in a faulty environment, habits and desires may be stamped in which even years in an institution may never eradicate. With training begun before the dangerous age of puberty, the great majority of morons should be capable of returning to outside life, happy in themselves and largely, if not entirely, self-supporting. For economic reasons alone, to say nothing of the moral and other sides of the question, it would pay to make ample provision for these young, higher grade cases in a properly organized school section on the lines indicated above. I cannot do better in this connection than give two quotations from the English Board of Control Report for 1932:

"In one way or another," the Board says, "the community must contribute to the support of this defective class, and we believe that the transference of the expenditure to the mental deficiency service is in itself an economy. Unrecognized defectives are still costing the country large sums spent in treating symptoms whilst ignoring the disease. Early recognition and treatment of the primary condition is the only way of preventing present waste and future liabilities. Though mental defectives are seldom actively vicious, their inclination to sink into and inability to struggle out of bad surroundings make them gravitate to the bottom of the social scale. Where their surroundings are immoral and corrupt, they become themselves a source of corruption and of moral, social, and economic danger to the State."

The second quotation is from the report submitted to the Board by one of the English institutions:

"It is a sorry fact that today the children in residence form only 20% of the total number, compared with 60% five years ago. Whenever a vacancy occurs there is an appeal to admit an adult who has caused some social harm or is in moral danger, and in the interests of the community the case must be received. But this enforced policy results in the neglect of the children, and for such neglect the price must sooner or later be paid. In dealing with the problem of mental deficiency there must be adequate facilities for the care and training of children. Seventy-five per cent. of the patients on licence from the institution on March 31st received training in childhood. They are maintaining themselves. Had they been deprived of that early training and come to the institution during adolescence, possibly in consequence of some serious delinquency, they would probably have been a charge to the community for many years, and perhaps for life."

All of which is respectfully submitted:

D. L. McCULLOUGH,  
*Acting Medical Superintendent.*



TABLE 1.

## MOVEMENT OF FEEBLE-MINDED POPULATION

Defectives on books of institution January 1st, 1933:				Male	Female	Total
In the Provincial Training School .....				99	91	190
Total .....				99	91	190
Admissions:				Male	Female	Total
1. First admissions, voluntary .....	18	18	36			
2. Re-admissions .....	2	2	2			
Total number of admissions .....	18	20	38			
Total number of defectives on the books during 1933 ..	117	111	228			
Discharges during 1933 .....	5	5	10			
Transfers to other institutions during 1933 .....	3	3	6			
Died during 1933 .....	2	3	5			
Total number of outgoing patients during 1933 .....	10	11	21			
Defectives on books of the institution at December 31st, 1933 ..	107	100	207			

TABLE 2.

RESPONSIBILITY FOR MAINTENANCE OF PATIENTS IN RESIDENCE  
AT DECEMBER 31, 1933

	In Residence	Percentage
Wards of the Province of Alberta .....	43	20.77
Wards of the Municipal Districts of Alberta .....	132	63.76
Wards of the Department of Municipal Affairs of Alberta .....	23	11.11
Private cases in residence during 1933 .....	2	.97
Wards of the Department of Pensions and Health, Ottawa .....	2	.97
Wards of the Dominion Government .....	2	.97
Wards of the Official Guardian .....	3	1.45
Total .....	207	

TABLE 3.

## MENTAL STATUS OF FIRST ADMISSIONS AND RE-ADMISSIONS

Mental Status	First Admissions			Re-admissions			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Idiot .....	6	5	11	.....	.....	.....	6	5	11
Imbecile .....	4	3	7	.....	1	1	4	4	8
Moron .....	3	5	8	.....	1	1	3	6	9
Borderline .....	3	3	6	.....	.....	.....	3	3	6
Dull .....	1	2	3	.....	.....	.....	1	2	3
Backward .....	1	.....	1	.....	.....	.....	1	.....	1
Totals .....	18	18	36	.....	2	2	18	20	38

TABLE 4.

## NATIVITY OF ADMISSIONS AND OF PARENTS OF ADMISSIONS

Nativity	Patients			Parents of Male Patients			Parents of Female Patients		
	Male	Female	Total	Fathers	Mothers	Total	Fathers	Mothers	Total
Alberta .....	15	14	29	1	.....	1	.....	.....	.....
Other Provinces .....	1	3	4	4	3	7	5	6	11
England .....	1	.....	1	5	4	9	.....	.....	.....
Ireland .....	.....	.....	.....	.....	.....	.....	2	.....	2
Scotland .....	.....	.....	.....	3	3	6	.....	1	1
United States .....	.....	1	1	3	4	7	4	4	8
Germany .....	.....	1	1	.....	.....	.....	1	1	2
Sweden .....	.....	.....	.....	.....	1	1	.....	.....	.....
Denmark .....	.....	.....	.....	.....	1	1	.....	.....	.....
Holland .....	1	.....	1	1	1	2	.....	.....	.....
Austria .....	.....	.....	.....	.....	1	1	3	3	6
Roumania .....	.....	.....	.....	.....	.....	.....	1	1	2
Italy .....	.....	.....	.....	.....	.....	.....	1	1	2
Unascertained .....	.....	1	1	1	.....	1	3	3	6

TABLE 5.

## CITIZENSHIP OF ADMISSIONS

	Male	Female	Total
Citizens by birth .....	16	16	32
Aliens .....	1	1	2
Citizenship unascertained .....	1	3	4
	18	20	38



TABLE 6 (a)  
AGE OF ADMISSIONS CLASSIFIED WITH REFERENCE TO MENTAL STATUS

Age Group.	Idiot		Imbecille		Moron		Borderline		Dull		Backward	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1-4	2	2										
5-9	3	1	4	1	1	2	1	1	1	2		
10-14	1	1	2	2	1	2	3					
15-19		3	3	2	1	2		2	2	4	1	1
20-24						1	1				1	
25-29				1	1		1					
Totals	6	5	11	4	4	8	3	6	9	3	3	1

TABLE 6 (b).  
AGE OF TOTAL POPULATION CLASSIFIED WITH REFERENCE TO MENTAL STATUS

Age Group.	Idiot		Imbecile		Moron		Borderline		Dull		Backward	
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1-4	2	1	3	2	1	3	1	2	3	1	2	3
5-9	5	9	13	11	6	17	4	5	9	2	2	4
10-14	7	6	13	10	7	17	6	8	14	4	3	7
15-19	13	10	23	10	7	17	2	3	5	1	1	2
20-24	11	10	21	8	7	15	2	3	5	1	1	2
25-29	4	4	8	6	11	17	1	3	4	1	1	2
30-34	1	3	4	2	2	4	1	2	2	1	1	2
35-39	1	1	2	2	2	4	1	2	1	1	1	2
40-up	1	1	2	1	1	2	1	1	1	1	1	2
Totals	41	35	76	42	35	77	15	23	38	7	5	12

TABLE 7.  
ENVIRONMENT OF ADMISSIONS

Environment.	Idiot		Imbecille		Moron		Borderline		Dull		Backward		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	
Urban	4	3	7	2	3	4	1	3	4	2	1	3	1
Rural	2	2	4	2	4	6	2	3	5	1	2	3	1
Totals	6	5	11	4	4	8	3	6	9	3	3	6	1

TABLE 8.

## RELIGION OF ADMISSIONS

Religion.	Idiot		Imbecile		Moron		Borderline		Dull		Backward	
	M.	F.	T.	M.	F.	T.	M.	F.	M.	F.	M.	F.
United Church	1	1	1	1	1	2	3	1	4	3	1	4
Church of England	2	2	4	1	1	2	3	1	4	3	1	4
Roman Catholic	1	1	2	2	2	2	2	2	2	1	1	1
Greek Catholic	1	1	1	2	2	2	2	2	2	1	1	1
Baptist	1	1	1	1	1	1	1	1	1	1	1	1
Lutheran	1	1	1	1	1	1	1	1	1	1	1	1
Latter Day Saints	1	1	1	2	1	3	1	1	1	1	1	1
Presbyterian	1	1	1	1	1	1	1	1	1	1	1	1
Pentecostal	1	1	2	1	1	1	1	1	1	1	1	1
Unascertained	1	1	2	1	1	1	1	1	1	1	1	1
Totals	6	5	11	4	4	8	3	6	9	3	3	6

TABLE 9.

## ECONOMIC CONDITION OF FAMILIES OF ADMISSIONS CLASSIFIED WITH REFERENCE TO MENTAL STATUS

Economic Condition	Idiot		Imbecile		Moron		Borderline		Dull		Backward	
	M.	F.	T.	M.	F.	T.	M.	F.	M.	F.	M.	F.
Dependent	3	1	4	1	1	1	1	2	3	1	1	2
Marginal	2	4	6	3	3	6	2	4	6	2	3	5
Comfortable	1	1	1	1	1	1	1	1	1	1	1	1
Totals	6	5	11	4	4	8	3	6	9	3	3	6

TABLE 10 (a).

## DISCHARGES CLASSIFIED WITH REFERENCE TO MENTAL STATUS AND CHRONOLOGICAL AGE

Age Group.	Idiot		Imbecile		Moron		Borderline		Dull		Backward	
	M.	F.	T.	M.	F.	T.	M.	F.	M.	F.	M.	F.
1-4	1	1	1	1	1	1	1	1	1	1	1	1
5-9	1	1	1	1	1	1	1	1	1	1	1	1
10-14	1	1	1	1	1	1	1	1	1	1	1	1
15-19	1	1	1	1	1	1	1	1	1	1	1	1
20-24	1	1	1	1	1	1	1	1	1	1	1	1
25-29	1	1	1	1	1	1	1	1	1	1	1	1
Totals	1	1	1	1	1	1	3	2	5	1	1	1



TABLE 10 (b).  
TRANSFERS CLASSIFIED WITH REFERENCE TO MENTAL STATUS AND  
CHRONOLOGICAL AGE

Age Group.	Idiot		Imbecile		Moron		Borderline		Dull		Backward	
	M.	F.	T.	M.	F.	T.	M.	F.	M.	F.	M.	F.
10-14	1	1	2	1	1	2	1	1	1	1	1	1
15-19	1	1	2	1	1	2	1	1	1	1	1	1
20-24	1	1	2	1	1	2	1	1	1	1	1	1
25-29	1	1	2	1	1	2	1	1	1	1	1	1
30-34	1	1	2	1	1	2	1	1	1	1	1	1
Totals	5	5	10	5	5	10	5	5	5	5	5	5

TABLE 11.

## DEATHS

Causes of Death	Idiot		Age		Length of Time in Institution	
	M.	F.	T.	Years	Years	Months
Bronchopneumonia—Diphtheria	1	1	1	17/7	10	7
Bronchopneumonia—Toxaemia	1	1	1	16/1	8	11
Shock from Burns	1	1	1	16/10	4	4
Myocardial failure—Scarlet Fever	1	1	1	11/9	1	4
Scarlet Fever	1	1	1	9/9	2	2
Totals	5	5	5	—	—	—

TABLE 12.  
SOME OF THE TYPES IN RESIDENCE

Classification	Idiot		Imbecile		Moron		Borderline		Backward		Total	Percentage
	M.	F.	T.	M.	F.	T.	M.	F.	M.	F.		
Infirmary Type:												
(a) Physically helpless	11	5	16	2	3	5	—	—	—	—	21	10.14
(b) Mentally helpless	20	16	36	2	2	4	—	—	—	—	38	18.35
M.D. and Epileptic	16	13	29	5	3	8	—	—	—	—	44	21.26
M.D. and Psychopathic	—	—	—	1	2	3	3	3	—	—	8	3.86
M.D. and Psychotic	—	—	—	—	—	—	—	—	1	1	2	2.41
Mongols	1	3	4	2	1	3	—	—	—	—	7	3.38

TABLE 13.

## APPLICANTS AWAITING ADMISSION

	Male	Female	Total
Applications dated 1923 .....	7	3	10
Applications dated 1924 .....	7	6	13
Applications dated 1925 .....	—	2	2
Applications dated 1926 .....	8	9	17
Applications dated 1927 .....	3	6	9
Applications dated 1928 .....	6	3	9
Applications dated 1929 .....	12	7	19
Applications dated 1930 .....	17	12	29
Applications dated 1931 .....	5	12	17
Applications dated 1932 .....	7	14	21
Applications dated 1933 .....	12	18	30
Totals .....	84	92	176

TABLE 14.

## REPORTED SUSPECTS

	Male	Female	Total
Suspects reported prior to 1923 .....	107	56	163
Suspects reported during 1923 .....	28	33	61
Suspects reported during 1924 .....	20	11	31
Suspects reported during 1925 .....	17	14	31
Suspects reported during 1926 .....	30	21	51
Suspects reported during 1927 .....	12	17	29
Suspects reported during 1928 .....	18	18	36
Suspects reported during 1929 .....	29	27	56
Suspects reported during 1930 .....	22	21	43
Suspects reported during 1931 .....	17	4	21
Suspects reported during 1932 .....	8	12	20
Suspects reported during 1933 .....	10	12	22
Totals .....	318	246	564

TABLE 15.

## SUMMARY OF REPORTED DEFECTIVES

	Male	Female	Total
In residence at Red Deer .....	107	100	207
Discharged, Paroled, etc. (1923-33) .....	37	34	71
Applicants (Table 13) .....	84	92	176
Suspects (Table 14) .....	318	246	564
In residence at Oliver .....	17	—	17
In residence at Ponoka .....	36	28	64
Totals .....	599	500	1099

TABLE 16.

## EUGENICS SUMMARY

	Male	Female	Total
A—Training School Cases:			
Presented and approved .....	19	34	53
Operated on .....	15	34	49
Total .....	15	34	49
Paroled, Transferred, etc. ....	9	15	24
Re-admitted .....	6	19	25
In residence .....	—	2	2
B—Sterilized Prior to Admission .....	6	21	27
Paroled, Discharged, etc. ....	—	—	—
In residence .....	—	14	14
C—Total Sterilized Patients in residence, 16.42% .....	—	7	7
	6	28	34



TABLE 17.

## STAFF

	Male	Female	Total
Medical Superintendents .....	1	....	1
Bursars .....	1	....	1
Dentists (part time) .....	1	....	1
Graduate Nurses .....	....	3	3
Other Nurses .....	....	12	12
Teachers of Grade Subjects .....	....	1	1
Teachers of Special Subjects .....	....	2	2
Matrons .....	....	1	1
Attendants .....	4	....	4
Social Workers (voluntary) .....	1	....	1
Stenographers .....	....	2	2
Clerks .....	1	....	1
Kitchen Staff .....	....	3	3
Dining Room Staff .....	....	2	2
Maids .....	....	3	3
Laundry Room Staff .....	....	3	3
Sewing Room Staff .....	....	2	2
Gardeners .....	1	....	1
Farmers .....	1	....	1
Boiler Room Staff .....	6	....	6
Maintenance Staff .....	2	....	2
Total .....	19	34	53

## Central Alberta Sanatorium

(A. H. BAKER, M.D., *Superintendent*)

The year 1933 saw no great changes in policy or development, but existing services were well maintained.

### *Deaths from Tuberculosis in All Forms.*

Year	Indian	White	Total
1931	157	225	382
1932	163	238	401
1933	183	207	390

As has been mentioned in previous reports, the proportion of Indian deaths in relation to those of the white population greatly exceeds the relative populations. Over 44% of last year's deaths occurred among Indians on the Reserves. Consideration of the white population shows that 207 persons died of tuberculosis, which was a decrease of 31 from 1932, a reduction of about 15%.

The gross tuberculosis death rate in 1932 was about 54 per hundred thousand of population, while in 1933 it was 51.5. Exclusion of the Reserve Indians gives a death rate of 27.5 per hundred thousand of population, a slight reduction.

In common with other parts of Canada, the general trend in the tuberculosis situation is one of improvement. This is due, no doubt, to various agencies, but of first importance must be mentioned the direct anti-tuberculosis activity on the part of the medical profession, hospitals and sanatoria. Supplementary to this is the increased education in health matters on the part of the general public.

The number of deaths can undoubtedly be reduced if greater measures are used to separate the spreaders of disease from the healthy, for tuberculosis can only come from tuberculosis. Herein lies one great advantage of institutional treatment, for many of the sick can by treatment be changed from spreaders of disease to non-spreaders, while others can be properly trained in health habits that tend to reduce their danger to others. Those too sick for recovery when in hospital or sanatorium cease to be a daily menace to their families. The problem of saving the young is largely dependent on keeping them away from gross sources of family infection, which is most easily accomplished, in a population such as we have in Alberta, by placing the sick person in a suitable sanatorium or hospital.

How can this be arranged? The financial burden of keeping one member of a family in a sanatorium or hospital is a very heavy load for any family, and when more than one member requires treatment, the task becomes almost impossible. What is true of the individual family is likewise true of the load to be carried by individual municipalities. This disease is more prevalent in certain areas of the Province than others, so much so that if the infectious cases were to be properly treated, the cost to the local authority would be very heavy, almost unbearable. Since tuberculosis is infectious, the fight to prevent its occurrence is a form of insurance safeguarding every part of the Province.

The greatest need is still the discovery of cases of tuberculosis and the provision whereby they can be made safe for the community.



*Deaths (other than Indian) in Hospital or Sanatorium.*

One hundred and fifty (or 64% of the deaths) occurred in hospital or sanatorium. Undoubtedly proper hospitalization of the advanced infectious case reduces the likelihood of the disease being transmitted to others.

However, this practice adds to the risk of hospital staffs and increases the responsibility of the various hospital boards. It appears that even now nurses in general hospitals have a high incidence of tuberculosis, which fact is receiving considerable attention. The up-to-date hospital which seeks to be a health centre must, in the nature of things, give its primary attention to the efficient care of the patient, but second to this is the obligation to see that its employees are healthy. Employees on engagement should be free from demonstrable disease. The hours of work, the opportunity for leisure, the food and housing as well as the hospital technique in handling all infectious cases, should be such as to reduce to a minimum the danger of tuberculosis in hospital life, which at present is rather a hazardous one. X-ray examination of hospital employees annually, and more frequently if indicated, will help to prevent serious cases of this disease. Such precautions are now being followed in a number of hospitals, and no doubt will tend to reduce the load of staff sickness being carried.

*Tuberculosis Beds.*

Alberta tuberculosis beds are essentially as reported last year. These serve the white population, since the Indians are a Federal responsibility. There are thus 1.4 beds per annual death from tuberculosis. More tuberculosis beds are required, and while sanatorium beds are urgently needed, much could be done if suitable beds in general hospitals were available.

*University Hospital Unit—a Sanatorium.*

On May the 12th, under the authority of The Hospitals Act, the Honourable the Minister of Health designated the University Tuberculosis Unit a Sanatorium. From that date until December 31st, 39 patients were admitted and patient days numbered 3,377. This is a move in the right direction, since it means greater isolation of infectious cases.

*Indian School Survey—Blood Reserve, Cardston.*

This survey was carried out by Drs. G. M. Reid and L. M. Mullen, of the Sanatorium staff, in November, 1933. They report in part as follows:

"On this our fourth annual tuberculosis survey of the children attending the two schools on the Reserve, we met with the same splendid co-operation as in previous years.

"The marked improvement shown by a number of the children in whom we found evidence of disease at previous examinations, bears witness to the care they have had from those in charge of their welfare.

"This improvement shown by some of the diseased children and the exclusion of a few open cases from the schools, thereby lessening to some degree the amount of exposure to infection of the other children, makes us pleased to think our examinations have been of some value.

"This year, as before, we make no claim that our survey has much statistical value. We show accurately the number infected through the result of the tuberculin test; but until we can X-ray everyone we cannot definitely state the number suffering from the disease. However, to the best of our ability we have pointed out the children with open tuberculosis who are a danger to those with whom they come in contact and who require treatment, and also a larger group who show evidence of disease, but with extra care in regard to rest and



food should be able to carry on with their school work with no injury to themselves or those with whom they come in contact. As we increase our percentage of X-rays, this latter group will become larger, for few of them can be picked out by physical examination alone.

"Of the 266 children examined, it is shown that 71 or 26.72%, showed evidence of tuberculosis, varying from the 12 definitely active cases down through the 59 indeterminate, to quiescent cases.

"Of the 71 cases of tuberculosis, the diagnosis had been made on a previous survey in 36 cases; 25 had previously been considered negative, while the remaining 10 cases were among the new admissions. It is interesting to note that ten out of forty-three new admissions, i.e., 23.25% showed evidence of tuberculosis as compared with 26.72% in the general school population."

#### *Clinics.*

The purpose of the tuberculosis clinic or follow-up work, is to re-examine ex-sanatorium patients, to check up contacts, and to see any patients referred by the practicing physicians for opinion as to diagnosis or treatment. Fourteen hundred and thirty-eight such examinations were made, and a diagnosis of tuberculosis made in 102 cases on other than ex-sanatorium patients.

#### *Sanatorium Clinic.*

Weekly Wednesday afternoon clinics were held at the Sanatorium, when 213 patients were examined.

#### *Calgary Clinic.*

In co-operation with the Calgary Tuberculosis Society, 38 half-day clinics were held in the City Health Department, and 241 examinations made.

#### *Edmonton Clinic.*

The fortnightly full day clinic in Edmonton at the University Out-Door Department was again operated 23 times with 294 examinations. The Kinsmen Club, through the Christmas Seal Sale, again provided the services of a full-time tuberculosis nurse for this city.

#### *Okotoks-High River Full Time Health District Clinic*

Two Sanatorium physicians co-operated with Dr. Saunders, Medical Officer of Health, in a two-day clinic at High River, when 60 persons were examined. X-ray examinations were made possible by the splendid assistance of the High River Rotary Club, from its Christmas Seal Sale Fund.

#### *Red Deer Full Time Health District Clinic.*

Clinics were arranged by Dr. G. M. Little, Medical Officer of Health, at Eckville, Bentley and Red Deer; 124 persons were examined. X-ray services were made possible by the Red Deer Red Cross Society, and Municipal District No. 400.

#### *Medicine Hat Clinic.*

Five clinic days were spent in Medicine Hat and 83 patients were examined. Full credit is again due to the Christmas Seal Sale Committee of the city for the provision of funds with which to meet the cost of X-ray examinations of the patients.

#### *Lethbridge Clinic.*

The tuberculosis work in Lethbridge continues to be well conducted by the Nursing Mission. Its nurses make hundreds of house visits annually. It supplies medicine and other necessities in some instances and arranges and



assists with the clinics. These were held on three occasions, and during the six days 99 persons were examined.

#### *Drumheller Clinic.*

One tuberculosis clinic was held at the Drumheller hospital and 23 examinations made.

#### *Central Alberta Sanatorium.*

The year 1933 has seen no structural alterations in this institution, but has witnessed its operation to capacity. There have been no changes in the personnel of Department heads, and taken all in all very few staff changes. The complete statistical section is appended.

Information is frequently sought regarding the nativity, racial origin and length of residence in Alberta of the patients. It is to be noted that 78% of the patients were either born in Alberta or had lived here over five years before seeking treatment.

#### *Nativity of Patients.*

The following table shows the nativity of patients:

Alberta .....	27%
Canada .....	20%
British Isles .....	18%
United States .....	13%
Others .....	22%

#### *Racial Origin.*

Patients of racial origin from the British Isles form 51% of the total.

#### *Length of Residence in Alberta.*

Born in Alberta, 46 patients .....	27%
Less than 2 years, 10 patients .....	6%
From 2 to 5 years, 28 patients .....	16%
Over 5 years, 89 patients .....	51%

Twenty per cent. of the patients discharged were considered as not suffering from tuberculosis, while another 7% had inactive tuberculosis, which did not require treatment. Of patients with active tuberculosis who remained in the Sanatorium over one month, 66% were benefited by treatment, 12% were unimproved, and 22% died. Those admitted during 1933 and diagnosed as active tuberculosis of the lungs, had a positive sputum in 76.2% of cases.

#### *Administration Department.*

The total patient days were 74,807, an increase over 1932 of 266. The per diem cost, inclusive of all institutional and clinic services, was \$2.219. Three hundred and eighty-two patients received treatment in the institution.

#### *Medical and Nursing Services.*

The medical work is essentially of the hospital type. Eighty per cent. of the Sanatorium patient days were spent in infirmary where hospital care is required. This work was carried on as formerly by the Matron and 19 graduate nurses, with non-professional assistance.

The medical staff has remained unchanged. Dr. G. R. Davison, travelling diagnostician, was unfortunately seriously sick for a number of months and prevented from carrying on his usual work throughout the Province. An increasing amount of active treatment has been undertaken with favourable results. Examinations other than on patients numbered 1,534, of which 102 were diagnosed tuberculous.



*Educational Work.*

Five lectures were given to the nursing staff by the medical staff, on the following subjects:

1. History of Tuberculosis Work.
2. Epidemiology.
3. Bacteriology and Pathology.
4. Treatment.
5. Complications.

A corresponding number on Tuberculosis Nursing were given by the Matron.

Dr. Baker gave the following addresses:

"Tuberculosis and the Young," Radio Talk over University Station.

"X-ray Work in Chest Disease," High River Rotary Club.

"Tuberculosis and the High School Age Group," Study Group, Central High School, Calgary.

*Dental Services.*

Dr. A. E. Heacock, Provincial Dentist, made ten visits to this institution, and the details of the work accomplished may be found in the statistical section.

Every patient is examined within one month after admission, and such treatment given as will make possible satisfactory mastication of food. Much prophylactic work is necessary to correct many cases of oral sepsis. Dental care is a part of Sanatorium care and is provided free to the patient except for certain nominal charges for dentures and bridge work. Cases in residence are periodically reviewed.

*Dietary Department.*

The usual attention has been given by the Dietitian to the provision of nourishing, appetizing, and well-balanced meals. Nutrition plays such a large part in the treatment of long standing diseases such as tuberculosis, that close attention must be given daily. The total meals served were 314,451 at an average food cost of 10.71 cents.

*Recreation.*

The many friends of the Sanatorium have contributed very generously to make the life of the patients enjoyable. In the statistical section may be found details of this service. The band concerts, other concerts and lectures, passes to theatres and the Calgary Stampede, automobile drives, library books and magazines as well as Christmas gifts, have all been duly appreciated. The library service is an important part of Sanatorium life, and we have always been glad to receive donations of books. We can always use books in English, but we have still greater need of books in other languages. Our patients represent 25 racial origins, many of which are not represented on our library shelves. Donations of books in any of the languages spoken in Alberta would be appreciated.

*Divine Services.*

The religious services broadcasted bring comfort to many. Religious services have been held regularly by Rev. Father McDonald, Ven. Archdeacon Swanson, and representatives of the United Church, under the direction of Rev. Mr. Aldridge.

The Sanatorium suffered a bereavement in the death of Rev. Capt. Muncaster, who for years had been a devoted minister to our patients. His kindly bearing, his sympathetic devotion to all patients, and his constant interest in the life of the Sanatorium are sadly missed.



May I express appreciation of the kindly interest and help given by the Honourable Mr. Hoadley, Minister of Health, and by Dr. M. R. Bow, Deputy Minister of Health. To the members of the staff my thanks are due for the splendid co-operation given and for unselfish service rendered to the patients throughout another trying year. Dr. G. M. Reid, Assistant Medical Superintendent, Dr. L. M. Mullen, and Dr. G. R. Davison, physicians, Miss E. McPhedran, Matron, Miss S. M. McLeay, Dietitian, Lt.-Col. E. R. Knight, Bursar, Dr. A. E. Heacock, Dentist, and Mr. E. Appleby, Chief Engineer, and every member of their respective staffs, have all loyally and willingly worked together to give the patients entrusted to them the most efficient care possible.

## CLASSIFICATION OF DISCHARGED PATIENTS, 1933

On Admission.			Residence				On Discharge.					
	No.	Total. %	T.B. %	Not over 31 days	Over 31 days	A.	AA.	Q.	I.	U.	D.	
I. No Disease .....	4	.....	.....	2	2	.....	.....	.....	.....	2	.....	
II. Undiagnosed .....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
III. Non-Tuberculous ....	21	.....	.....	8	13	.....	.....	2	5	6	.....	
IV. T.B. Inactive .....	13	.....	.....	9	4	.....	.....	.....	3	1	.....	
Total .....	39	26.6	.....	20	19	.....	.....	2	8	9	.....	
V. T.B. Pulmonary—												
1. Clinical (No bacilli found):												
Minimal	A .....	8	.....	.....	8	.....	2	4	2	.....	.....	
	B .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	C .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Mod. Adv.	A .....	18	.....	.....	18	.....	.....	7	9	2	.....	
	B .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	C .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Far Adv.	A .....	5	.....	1	4	.....	.....	1	2	.....	1	
	B .....	2	.....	.....	2	.....	.....	.....	1	.....	1	
	C .....	2	.....	.....	2	.....	.....	.....	1	1	.....	
Total .....	35	20.2	26.1	1	34	.....	2	12	15	3	2	
2. Positive (bacilli found):												
Minimal	A .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	B .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	C .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Mod. Adv.	A .....	6	.....	.....	6	.....	.....	2	3	1	.....	
	B .....	4	.....	.....	4	.....	.....	.....	4	.....	.....	
	C .....	1	.....	.....	1	.....	.....	.....	1	.....	.....	
Far Adv.	A .....	21	.....	.....	21	.....	.....	1	19	.....	1	
	B .....	36	.....	.....	36	.....	.....	2	16	8	10	
	C .....	21	.....	1	20	.....	.....	1	4	3	12	
Apparently Hopeless ...	7	.....	.....	5	2	.....	.....	.....	.....	.....	2	
Total .....	96	55.5	71.7	6	90	.....	.....	6	47	12	25	
Total Pul. T.B. Active..	131	.....	.....	7	124	.....	2	18	62	15	27	
VI. T.B. Non-Pul. .... 3												
Tot. "Treated" Patients .. 146												
Classification on discharge of 27 patients not in residence over 31 days .....												
	23	.....	.....	27	.....	21	.....	.....	1	.....	5	
Total .....	173	.....	.....	.....	.....	21	2	20	72	25	33	

**Explanation of Abbreviations and Terms Used.**—The standard of classification is that of the National Tuberculosis Association. Minimal, Moderately Advanced and Far Advanced refer to anatomical extent of disease, while "A", "B" and "C" signify symptoms in order of increasing severity. "A" Arrested, "AA" Apparently Arrested, "Q" Quiescent, "I" Improved, "U" Unimproved, and "D" Died.

N.B.—Only those in residence over 31 days are classed as treated.

TOTAL NUMBER OF PATIENT DAYS		INFIRMARY DAYS	
D.P.N.H.	2,247	D.P.N.H.	1,613
Civilian	72,560	Civilian	59,130
	74,807		60,743
Patients in Sanatorium, Jan. 1, 1933		D.P.N.H.	8
Patients treated during 1932		Civilian	196
Remaining in Sanatorium, Jan. 1, 1934			204
			382
			209

## CLASSIFICATION ON ADMISSION OF 173 DISCHARGED PATIENTS

No disease	4	Tuberculosis, Pulmonary, Active	131
Undiagnosed	1	Tuberculosis, Non-Pulmonary	3
Non-Tuberculous	21		
Tuberculosis, Inactive	13		173

## CLASSIFICATION OF 124 "TREATED" CASES OF ACTIVE PULMONARY DISEASE

On Admission		On Discharge		Died
		Benefited	Non-benefited	
Minimal	8	8		
Moderately advanced	29	26	3	
Far advanced	85	48	12	25
Apparently hopeless	2			2
Total	124	82	15	27

## DIAGNOSIS OF NON-TUBERCULOUS CASES

Bronchial Asthma	1	Pulmonary Abscess	1
Bronchiectasis	4	Pyopneumothorax	1
Adhesive Pleuritis	4	Rheumatic Carditis	1
Emphysema	2	Silicosis	1
Infected Tonsils	2	Secondary Anaemia	1
Inguinal Hernia	1		
Post Traumatic Neurosis	1	Total	21
Pneumonitis and Septic Tonsils	1		

## REPORT OF CLINICS HELD

	No. of Clinics.	Ex-Pts. Exam.	New T.B. Cases	Suspects	Total Exams.
Calgary Clinic	38	29	12	19	241
Edmonton Clinic	23	99	23	31	294
Sanatorium	52	59	20	15	213
Throughout Province	10	41	30	56	406
Indian Schools, Cardston	1		17	60	284
Staff at Sanatorium					96
		228	102	181	1,534

## HELIO THERAPY REPORT

	Male	Female	Total
Alpine Lamp Treatments:			
Number under treatment Jan. 1, 1933	15	8	23
Number new cases	15	18	33
Number discontinued	15	14	29
Number under treatment Dec. 31, 1933	15	12	27
Total number of treatments given	3,427	1,887	5,324

	No. Treated.	No. Treatments.	Total Time
Solar Laryngoscopic Treatments	13	1,574	99 hrs. 49 min.
Air Baths	164	14,925	10,408 hrs.
Sun Baths	46	1,985	1,643 hrs.

## OPERATING ROOM REPORT

Summary of Pneumothorax Cases:	
Under treatment January 1st, 1933	46
New cases, 1933	27
Cases under treatment admitted and carried on	6
Total number treated during year	79
Number discontinued during year	26
Number under treatment at end of year	53
Number unsuccessfully attempted	16
Pneumothorax Refills	1,734
Intravenous Injections:	
Calcium Chloride	577
Sanocrysin	40
Saline and Glucose	8
Neosalvarsan	3
Neoskiadan	4
Aspirations from Pleural Cavity:	
Air	21
Fluid	45
Fluid with irrigation and refills	166
Aspiration of Abscess	40
Rib Resection	2
Phrenic Avulsion	10
Phrenic Crushes	2
Lipiodol Treatments	16
Basal Metabolism Test	2
Abdominal Paracentesis	3
Lumbar Punctures	19
Puncture Antrum	2
Tonsillectomy	1
Plaster Casts:	
To body	4
To limb	3
Examinations and Dressings	25



## LABORATORY REPORT

Sputum Examinations:		Blood Counts .....	994
In Patients .....	2,245	Blood Sedimentation .....	666
Out Patients .....	150	Guinea Pig inoculation and	
Staff .....	18	autopsies .....	47
	2,413	Bacteriological Exams .....	317
Other Examinations:		Other Exams .....	14
Urinalysis (Routine and Special) .....	1,692		3,824
Spinal Fluid .....	41		6,237
Pleural Fluid .....	53		178
Number of patients admitted, 1933 .....			
Number with positive sputum on admission .....			109
Number developing positive sputum here .....			8
Number with sputum persistently negative .....			60
Number with sputum not examined .....			1
			178
Number with negative sputum diagnosed non-T.B. ....			28
Number with negative sputum diagnosed non-pulmonary T.B. ....			4
Number with negative sputum diagnosed T.B. inactive .....			3
Percentage of active Pulmonary T.B. with positive sputum on admission .....			76.2

## X-RAY REPORT

Radiographic:		Sternum .....	1
Chest .....	828	Dental .....	57
Sinuses .....	14	Gall Bladder .....	2
Gastro-intestinal .....	57	Foot .....	5
Pelvis .....	2	Jaw .....	2
Kidney .....	11	Fluoroscopic:	
Ribs .....	1	Chest (Gas Cases) .....	1,734
Spine .....	23	(Others) .....	332
Ankle .....	4	(Lipiodol) .....	15
Hand .....	4	Barium Series .....	69
Barium Enema .....	7	Barium Enemata .....	7
Knee .....	6		

## DENTAL REPORT

Patient examinations .....	642	Extractions .....	138
Patient treatments .....	525	New dentures .....	9
Prophylactic treatments .....	220	Dentures repaired .....	5
Fillings .....	321		

## I.—SEX:

Male .....	97
Female .....	76
	173

## II.—SOCIAL:

Single .....	78
Married .....	86
Widowed .....	7
Divorced .....	2
	173

## III.—AGES:

5 to 9 years of age .....	9	30 to 39 years of age .....	47
10 to 14 years of age .....	5	40 to 49 years of age .....	31
15 to 19 years of age .....	15	50 to 59 years of age .....	10
20 to 29 years of age .....	65		173

## IV.—RELIGION:

Baptist .....	9	United .....	39
Church of England .....	20	Seventh Day Adventist .....	1
Greek Catholic .....	11	Mennonite .....	1
Greek Orthodox .....	7	Nazarene .....	1
Lutheran .....	13	Free Methodist .....	1
Hebrew .....	1	Confucian .....	1
Latter Day Saint .....	1	Non-Sectarian .....	8
Presbyterian .....	22		173
Roman Catholic .....	37		

## V.—OCCUPATIONS (FEMALE):

Bookkeeper .....	1	Postmistress .....	1
Baker .....	1	Student .....	11
Clerk .....	1	Teacher .....	2
Housewife .....	39	Telephone Operator .....	1
Housework .....	9	Waitress .....	1
Nurse .....	4	None .....	1
Stenographer .....	4		76

## VI.—OCCUPATIONS (MALE):

Accountant .....	1	Miner .....	4
Actor .....	1	Painter .....	1
Blacksmith .....	1	Physician .....	2
Bookkeeper .....	1	Plumber .....	1
Butcher .....	2	Printer .....	1
Carpenter .....	1	Railway Agent .....	1
Clerk .....	6	Salesman .....	2
Collector .....	1	Surveyor .....	1
Cook .....	3	Steward .....	1
Doorman .....	1	Storekeeper .....	1
Fisherman .....	1	Student .....	3
Farmer .....	27	Teacher .....	2
Gardener .....	1	Trainman .....	3
Grain Buyer .....	1	Telephone Agent .....	1
Insurance Agent .....	2	Vulcanizer .....	1
Jeweller .....	1	Waiter .....	1
Labourer .....	18		
Lineman .....	1		97
Machinist .....	1		

## VII.—NATIVITY:

Alberta .....	46	Lithuania .....	1
Canada .....	34	Norway .....	3
Assyria .....	1	Poland .....	12
Austria .....	1	Russia .....	5
Czecho-Slovakia .....	3	Scotland .....	12
China .....	2	South Africa .....	1
England .....	16	Ukraine .....	1
Germany .....	2	United States .....	23
Hungary .....	2	Wales .....	3
Iceland .....	1	Japan .....	1
Ireland .....	1		
India .....	1		173
Italy .....	1		

## VIII.—LENGTH OF RESIDENCE IN ALBERTA:

Born in Alberta .....	46	15 to 19 years .....	17
Under 1 year .....	4	20 to 24 years .....	23
1 to 2 years .....	6	25 to 30 years .....	9
3 to 5 years .....	28	Over 30 years .....	3
6 to 9 years .....	15		
10 to 14 years .....	22		173

## IX.—RACIAL ORIGIN:

Assyrian .....	1	Jewish .....	1
Belgian .....	1	Lithuanian .....	1
Breed .....	3	Negro .....	1
Chinese .....	3	Norwegian .....	10
Dutch .....	1	Pole .....	9
English .....	32	Russian .....	5
Finnish .....	2	Slav .....	2
French .....	5	Swede .....	3
German .....	8	Scotch .....	31
Hungarian .....	4	Ukrainian .....	19
Irish .....	22	Welsh .....	4
Icelandic .....	1	Unknown .....	2
Italian .....	1		
Japanese .....	1		173

## X.—RESIDENCE:

## CITIES:

Calgary .....	42	Lethbridge .....	3
Edmonton .....	26	Medicine Hat .....	3
Drumheller .....	3	Red Deer .....	2

## TOWNS:

Beverley .....	1	High River .....	1
Brooks .....	1	Lacombe .....	2
Camrose .....	2	Ponoka .....	1
Champion .....	1	Tofield .....	1
Clyde .....	1	Staveland .....	1
Edson .....	1	Vermilion .....	1

## VILLAGES:

Botha .....	1	Munson .....	1
Eckville .....	1	Banff National Park .....	1
Manville .....	1	Jasper National Park .....	1
Onoway .....	5	Transient .....	1

## LOCAL IMPROVEMENT DISTRICTS:

No. 67 .....	1	No. 731 .....	1
No. 96 .....	1	No. 733 .....	1
No. 244 .....	1	No. 796 .....	1
No. 276 .....	6	No. 800 .....	1
No. 403 .....	1	No. 916 .....	1
No. 556 .....	2		



## MUNICIPAL DISTRICTS:

M.D. No. 36	1	M.D. No. 483	1
M.D. No. 65	1	M.D. No. 489	2
M.D. No. 92	1	M.D. No. 513	1
M.D. No. 98	1	M.D. No. 514	1
M.D. No. 190	1	M.D. No. 515	2
M.D. No. 220	2	M.D. No. 520	1
M.D. No. 242	2	M.D. No. 543	1
M.D. No. 303	1	M.D. No. 545	1
M.D. No. 308	3	M.D. No. 546	1
M.D. No. 311	1	M.D. No. 547	2
M.D. No. 312	1	M.D. No. 550	1
M.D. No. 365	1	M.D. No. 551	1
M.D. No. 367	1	M.D. No. 572	1
M.D. No. 400	2	M.D. No. 576	1
M.D. No. 401	1	M.D. No. 579	1
M.D. No. 426	2	M.D. No. 580	1
M.D. No. 428	1	M.D. No. 582	1
M.D. No. 454	1	M.D. No. 609	1
M.D. No. 456	1	M.D. No. 637	1
M.D. No. 457	2	M.D. No. 739	3
M.D. No. 459	1	M.D. No. 857	1
M.D. No. 482	1		

## ENTERTAINMENTS AND DONATIONS

CONCERTS—Orchestra, Mr. James Hogg; Choral, Hudson's Bay Choir; arranged by Mrs. Dingle, Jean de Rimanockzy, Miss Worden, and Mrs. Munroe.

BAND CONCERTS—Elks' Band; Shriners' Band; Salvation Army Band; 2nd Calgary Regiment Band.

PLAYS—Springbank Y.P.I.

ILLUSTRATED LECTURES—Mr. A. E. Ottewell, "Evolution"; Lt. H. Bright, R.N., "Zeebrugge"; Archdeacon Swanson, "Yukon"; Prof. E. A. Corbett, "French Canada."

LECTURE—Mr. A. Calhoun, "On Reading."

MOVING PICTURE FILMS—Department of Interior; Engineering Institute.

PARTIES—Garden Party in July; Hallowe'en Party.

WHIST DRIVES—Recreation Committee; Military Chapter I.O.D.E.

TOURNAMENTS—Cribbage Tournament, Recreation Committee; Billiard Tournament, Recreation Committee.

PASSES—Capitol Theatre; Palace Theatre; Strand Theatre; Grand Theatre; Football Games; Calgary Exhibition and Stampede; Stampede Parade.

DRIVES—Mr. N. Christie; The T. Eaton Company; The Rotary Club.

MAGAZINES and BOOKS throughout the year, anonymously given.

CHRISTMAS DONATIONS—Cheques: Samaritan Club, Mr. H. C. Farthing. Turkeys: Mr. A. Weyers. Home-made Candy: Y.W.C.T.U., Claresholm. Cigarettes and Chocolates: Ontario Laundry. Parcels for Patients: Red Cross Society, Military Chapter I.O.D.E., Catholic Women's League, 50th Batt. Ladies' Auxiliary, Children's Aid Society. Ice Cream: Union Milk Company. Magazines: Canadian Bag Co., Rotary Club. Music for Christmas Dinner: Mr. J. Van Stockum and Friends. Christmas Concert: Calgary Red Cross Society, featuring Alice Murdoch's School of Dancing.





ANNUAL REPORT  
OF THE  
**Vital Statistics Branch**  
OF THE  
DEPARTMENT OF PUBLIC HEALTH  
PROVINCE OF ALBERTA  
1933

ANNUAL REPORT  
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Vital Statistics Branch  
OF THE  
DEPARTMENT OF AGRICULTURE  
AND  
FOREST SERVICE  
FOR THE  
YEAR 1910



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# VITAL STATISTICS BRANCH

(DONALD MACKIE, *Deputy Registrar General*)

The Vital Statistics of the Province of Alberta for the year 1933 show a further considerable decrease in the birth rate, a substantial increase in the marriage rate and a slight decline in the general death rate, but small increases in the maternal and infantile mortality rates.

The birth and death rates are the lowest on record since the formation of the Province; the number of births and deaths is also less than the average for the preceding five years. The maternal mortality and infantile death rates are both higher than the year 1932, but are lower than any other year. The death rates from epidemic and contagious diseases are all lower than the preceding year, and with the exception of influenza have almost reached the vanishing point. Cancer still steadily increases, the deaths from this disease amounting to 13% more than in the preceding year. The rate from accidental and violent deaths is still alarmingly high, having risen from fourth to third place in the frequency of causes of death. The number of deaths from suicide has again decreased.

The population of the Province of Alberta for the year 1933 has been estimated by the Dominion Bureau of Statistics at 757,000; this figure has therefore been used in this report when estimating rates.

The number of living children whose births were registered during the year amounted to 16,123, being equivalent to a birth rate of 21.33 per 1,000 population, and is 867 less than the number for the preceding year.

Comprising the 16,123 births were 8,321 males and 7,802 females, the ratio being 1,053 males to 1,000 females, being approximately the average for the past 10 years. There were 404 twins and 9 triplets. Illegitimate children numbered 623, being 18 more than the number for the previous year, and constituting a rate of 3.9 per 100 births.

Of the total births registered 6,719 occurred in the cities and towns of over 1,000 population, 8,627 in the rural districts, and 777 in Indian reservations. The births registered in the four large cities are as follows: Edmonton 2,085, Calgary 1,624, Lethbridge 517, and Medicine Hat 320.

For comparison, the following are the birth rates for Canada and the Provinces for the year 1933:

Canada .....	20.9	Ontario .....	18.0
Prince Edward Island .....	21.9	Manitoba .....	18.4
Nova Scotia .....	21.3	Saskatchewan .....	21.2
New Brunswick .....	23.9	Alberta .....	21.3
Quebec .....	25.9	British Columbia .....	13.4

Marriages registered in Alberta during the year numbered 5,389. This number is 335 more than that of the previous year, and 73 less than the average of the 5 preceding years, and constitutes a rate of 7.1 per 1,000 population. This is again the highest marriage rate in any Canadian Province, the rate for Canada and the Provinces for the year 1933 being as follows:

Canada .....	6.0	Ontario .....	6.4
Prince Edward Island .....	5.4	Manitoba .....	6.7
Nova Scotia .....	6.3	Saskatchewan .....	5.6
New Brunswick .....	6.1	Alberta .....	7.1
Quebec .....	5.2	British Columbia .....	5.7

Of the 5,389 marriages, 135 were brides of 16 years of age and under, 1,316 between the ages of 17 and 19, and 2,489 brides between the ages of 20



and 24. There were 59 grooms and 36 brides over 60 years of age, 15 of the grooms and 5 of the brides being over 70 years of age. The marriages in the four large cities were as follows: Edmonton 1,137, Calgary 999, Lethbridge 238, and Medicine Hat 151.

The divorces granted by degree absolute during the year numbered 135, which is 14 less than the number for the previous year and 21 less than the average for the preceding 5 years; 56 were granted to husbands and 79 to wives. In addition to the above, 6 decrees of nullity were granted.

The deaths of 5,346 persons (including Indians) were registered in Alberta during the year 1933, of whom 3,165 were males and 2,181 were females. This number is 175 less than in the previous year, and constitutes a death rate of 7.06 per 1,000 population, being a decrease of .40 compared with the previous year; 225 males and 166 females were 80 years of age or over at the time of death, whilst one male and one female were centenarians. The following are the death rates for Canada and the various Provinces during the year 1933.

Canada .....	9.6	Ontario .....	10.0
Prince Edward Island .....	11.6	Manitoba .....	7.6
Nova Scotia .....	11.5	Saskatchewan .....	6.3
New Brunswick .....	11.7	Alberta .....	7.0
Quebec .....	10.7	British Columbia .....	8.7

The most frequent cause of death was *heart disease*, accounting for 14.01 per cent. of the total. *Cancer* was second, having risen from 9.76 to 11.03. *Violent deaths* advanced from 6.18 to 7.07, being 37 more deaths. *Pneumonia* dropped from 6.56 to 6.11, being 35 less deaths from this cause. The rate from *Pulmonary Tuberculosis* was practically stationary, taking fifth place with 5.70 of the total deaths. The rate from *Influenza* shows a considerable decrease over the previous year, being 4.17 of the total deaths as compared with 5.38 for 1932. Deaths from puerperal causes increased by 9, totalling 73, being a rate per 1,000 births of 4.53 compared with 3.76 for the year 1932, which year, however, was the lowest in the history of the Province.

The following table shows in order of frequency those causes of death which during the year or in previous years accounted for at least one per cent. of the total deaths. Both the actual numbers and the percentage of each is given, together with the figures for the three preceding years for the purposes of comparison.

Causes of Death	1933		1932		1931		1930	
	Number	Per Cent. of Total	Number	Per Cent. of Total	Number	Per Cent. of Total	Number	Per Cent. of Total
Diseases of the Heart .....	749	14.01	762	13.80	503	9.49	564	10.26
Malignant Tumours .....	590	11.03	539	9.76	441	8.32	482	8.75
Violent Deaths (suicides excepted) .....	378	7.07	341	6.18	408	7.70	463	8.42
Pneumonia (all forms) .....	327	6.11	362	6.56	410	7.73	468	8.52
Pulmonary Tuberculosis .....	305	5.70	313	5.67	306	5.77	321	5.84
Diseases of the Circulatory System (heart excepted) .....	295	5.52	283	5.13	389	7.34	252	4.59
Influenza .....	223	4.17	297	5.38	186	3.51	130	2.37
Nephritis .....	194	3.63	218	3.95	168	3.17	172	3.13
Appendicitis .....	130	2.43	137	2.48	132	2.49	137	2.49
Apoplexy .....	127	2.37	149	2.70	126	2.38	116	2.11
Diarrhoea and Enteritis (under 2 years of age) .....	89	1.66	131	2.37	153	2.89	128	2.33
Suicides .....	85	1.59	96	1.74	123	2.32	113	2.06
Diseases and Accidents of Pregnancy .....	73	1.36	64	1.16	87	1.64	114	2.07
Whooping Cough .....	55	1.03	34	.62	32	.60	51	.93
Measles .....	6	.11	14	.25	7	.13	13	.24
Diphtheria .....	6	.11	10	.18	25	.47	30	.55
Typhoid Fever .....	6	.11	9	.16	16	.30	16	.29
Scarlet Fever .....	5	.09	4	.07	8	.15	31	.56



The foregoing list comprises 3,643 deaths and amounts to 68.1 of the total deaths for the year.

The deaths of children less than one year old numbered 966, being 31 less than the previous year. This is an infantile mortality rate of 59.9 per 1,000 births, an increase of 1.3 over the year 1932 and 10.0 less than the average of the 5 preceding years.

The following table gives for purposes of comparison the infantile mortality rate for Canada and the Provinces for the year 1933:

Canada .....	73.1	Ontario .....	59.8
Prince Edward Island .....	60.6	Manitoba .....	63.4
Nova Scotia .....	71.1	Saskatchewan .....	61.1
New Brunswick .....	81.8	Alberta .....	59.9
Quebec .....	94.5	British Columbia .....	45.9

There was a further decrease in deaths by suicide, the number being 85 compared with 96 for the previous year. Deaths by murder and manslaughter amounted to 12, an increase of 3 from the previous year. Stillbirths numbered 447 as compared with 484 for the year 1932.

# DIVISIONS OF ALBERTA FOR CENSUS AND VITAL STATISTIC PURPOSES

As the Province of Alberta is not divided into Counties, and the political divisions are not permanently fixed, it has been found advisable to use as smaller areas the Dominion Census Divisions.

These Divisions are fixed, and as the population increases, may be subdivided without destroying their value for purposes of Vital Statistic comparison with preceding years.

The following table shows these Census areas divided into Municipalities, Local Improvement Districts, Cities, Towns and Villages with the 1931 and 1926 official Division population figures.

## POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES FOR CENSUS YEARS, 1931 AND 1926

Census Divisions and Municipalities	Population		Census Divisions and Municipalities	Population	
	1931	1926		1931	1926
<b>Province</b>	<b>731,605</b>	<b>607,599</b>	<b>Division No. 2—Continued:</b>		
<b>Division No. 1: Medicine Hat</b>	<b>28,849</b>	<b>25,624</b>	<b>Towns—Continued:</b>		
1 L.I.D.	90	64	Coleman	1,704	2,044
2 L.I.D.	128	134	Diamond City	119	290
3 L.I.D.	152	127	Granum	329	272
4 L.I.D.	526	554	Macleod	1,447	1,715
5 L.I.D.	1,097	876	Magrath	1,224	1,202
6 L.I.D.	678	482	Pincher Creek	1,024	1,003
31 L.I.D.	38	38	Raymond	1,849	1,779
32 L.I.D.	580	531	Villages	2,161	1,935
33 Flowery Plains	477	513	Coaldale	251	164
34 Burlington	793	773	Coalhurst	953	796
35 L.I.D.	307	215	Cowley	151	148
36 Warner	1,214	956	Frank	268	299
61 L.I.D.	808	799	Monarch	117	97
62 L.I.D.	684	682	Pincher City	45	50
63 L.I.D.	570	449	Stirling	376	326
64 Forty Mile	1,060	1,118			
65 Eureka	1,148	779	<b>Division No. 3: Bow</b>	<b>15,066</b>	<b>12,149</b>
66 L.I.D.	2,082	1,464	96 McLean	713	668
91 L.I.D.	1,115	1,007	121 L.I.D.	452	367
92 Excelsior	905	776	122 L.I.D.	357	364
93 L.I.D.	852	612	123 Sunny South	209	137
94 Bow Island	605	542	124 L.I.D.	30	42
Cities	10,300	9,536	125 L.I.D.	713	130
Medicine Hat	10,300	9,536	126 L.I.D.	620	454
Towns	1,827	1,851	151 L.I.D.	1,097	831
Bow Island	314	299	152 L.I.D.	129	125
Irvine	234	210	153 L.I.D.	135	153
Taber	1,279	1,342	154 L.I.D.	620	145
Villages	813	746	155 L.I.D.	722	650
Burdett	121	112	156 L.I.D.	673	668
Milk River	350	211	181 L.I.D.	1,304	1,199
Warner	342	313	182 L.I.D.	349	355
<b>Division No. 2: Macleod</b>	<b>57,186</b>	<b>51,103</b>	183 Britannia	477	426
7 L.I.D.	369	324	184 L.I.D.	169	138
8 L.I.D.	1,474	1,360	185 L.I.D.	1,634	1,226
9 L.I.D.	1,580	1,495	186 L.I.D.	803	561
10 Cochrane	1,320	1,409	211 L.I.D.	548	436
37 Sugar City	1,993	1,692	<b>Towns</b>	<b>2,515</b>	<b>2,204</b>
38 L.I.D.	1,276	1,156	Bassano	615	777
39 Kerr	2,007	1,522	Brooks	708	511
40 Castle River	540	582	Redcliffe	1,192	916
67 L.I.D.	4,691	3,470	Villages	747	870
68 L.I.D.	2,340	1,435	Alderson	81	79
69 Bright	1,442	1,300	Duchess	114	136
70 Livingstone	1,502	1,511	Empress	314	374
71 L.I.D.	4,282	3,965	Enchant	92	70
99 Argyle	1,900	1,805	Jenner	62	44
100 L.I.D.	677	640	Retlaw	84	91
101 L.I.D.	192	143			
Indian Reserves	1,798	1,694	<b>Division No. 4: Nanton</b>	<b>29,067</b>	<b>24,775</b>
Cities	13,489	10,735	97 L.I.D.	2,258	1,486
Lethbridge	13,489	10,735	98 Little Bow	1,589	1,581
Towns	12,153	12,924	127 Clifton	1,043	820
Blairmore	1,629	1,609	128 Harmony	1,157	1,152
Cardston	1,672	2,034	129 Clear Lake	2,231	2,198
Claresholm	1,156	956	130 L.I.D.	395	306
			131 L.I.D.	46	45



## POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES FOR CENSUS YEARS, 1931 AND 1926—Continued

Census Divisions and Municipalities	Population		Census Divisions and Municipalities	Population	
	1931	1926		1931	1926
<b>Division No. 4—Continued:</b>			<b>Division No. 6—Continued:</b>		
157 Marquis .....	1,923	2,147	278 Carbon .....	5,365	4,160
158 Royal .....	1,751	1,802	279 Norquay .....	2,170	2,354
159 Riley .....	1,959	2,052	280 Rosebud .....	2,177	2,156
160 L.I.D. ....	381	305	281 Beaver Dam .....	1,926	1,665
161 L.I.D. ....	40	39	282 L.I.D. ....	593	508
189 Dinton .....	1,990	1,855	308 Ghost Pine .....	2,129	2,206
190 Sheep Creek .....	1,988	1,861	309 Stauffer .....	2,027	1,975
191 Stockland .....	2,907	1,779	310 Mountain View .....	2,506	2,371
192 L.I.D. ....	8	5	311 Westerdale .....	2,420	2,224
Towns .....	4,343	4,035	Unorganized parts .....	2,238	1,926
Carmangay .....	279	290	Indian Reserves .....	2,109	1,636
High River .....	1,459	1,377	Banff .....	2,519	2,206
Nanton .....	739	729	Cities .....	86,748	61,869
Okotoks .....	760	579	Calgary .....	83,761	65,291
Stavely .....	303	285	Drumheller .....	2,987	2,578
Vulcan .....	803	775	Towns .....	3,475	3,422
Villages .....	3,058	1,306	Didsbury .....	801	785
Arrowwood .....	293	256	Gleichen .....	514	510
Barons .....	284	256	Olds .....	1,056	1,003
Black Diamond .....	683	523	Strathmore .....	523	540
Blackie .....	251	289	Three Hills .....	581	584
Cayley .....	127	191	Villages .....	3,965	3,742
Champion .....	310	287	Acme .....	234	220
Lomond .....	176	147	Airdrie .....	198	191
Milo .....	135	212	Beiseker .....	230	212
Nobleford .....	143	426	Carbon .....	355	426
Turner Valley .....	656	387	Carstairs .....	387	381
<b>Division No. 5: Acadia</b>	<b>26,651</b>	<b>27,247</b>	Cluny .....	134	192
212 L.I.D. ....	697	591	Cochrane .....	293	282
213 L.I.D. ....	398	374	Crossfield .....	321	317
214 Berry Creek .....	581	534	Hussar .....	151	132
215 Bulyea .....	316	336	Irricana .....	161	132
241 Acadia .....	1,029	841	Langdon .....	83	94
242 Cereal .....	1,103	1,025	Newcastle .....	304	281
243 Collholme .....	807	711	Rockyford .....	194	188
244 Flowerdale .....	704	718	Rosebud .....	101	152
245 Lonebutte .....	613	637	Standard .....	218	221
246 L.I.D. ....	1,180	308	Swalwell .....	95	453
271 Bertawan .....	1,186	1,229	Trochu .....	506	453
272 Golden Centre .....	1,227	1,130	<b>Division No. 7: Battle River</b>	<b>38,106</b>	<b>35,991</b>
273 Sounding Creek .....	740	752	331 L.I.D. ....	1,180	1,147
274 Richdale .....	788	721	332 L.I.D. ....	1,015	998
275 Hand Hills .....	1,189	1,099	333 L.I.D. ....	1,255	1,146
277 Michichi .....	2,178	2,015	334 Coronation .....	2,022	1,865
301 Canmer .....	814	1,035	335 Sullivan Lake .....	707	719
302 Stewart .....	372	857	361 Rosenheim .....	1,744	1,563
303 Wiste .....	1,199	1,073	362 Hillcrest .....	1,200	1,218
304 Hiram .....	796	617	363 Stocks .....	1,186	1,133
305 Dowling Lake .....	1,482	1,350	364 Flagstaff .....	1,683	1,841
306 Lambton .....	1,651	1,694	365 Progress .....	1,999	1,896
307 Starland .....	1,446	1,378	391 Sifton .....	1,475	1,537
Towns .....	1,862	4,435	392 Vale .....	958	886
Hanna .....	1,490	1,400	393 Huamha .....	1,233	1,123
Youngstown .....	372	457	394 Asquith .....	1,205	1,222
Villages .....	1,724	1,787	395 Wheatland .....	1,819	1,605
Cereal .....	185	150	421 Ribstone .....	1,452	1,300
Chinook .....	176	198	422 Gilt Edge .....	1,674	1,438
Craigmyle .....	236	232	423 Battle River .....	1,466	1,097
Della .....	286	329	424 Kinsella .....	1,237	1,053
Morrin .....	149	162	425 Stirling .....	1,925	2,110
Munson .....	164	223	455 Iron Creek .....	2,121	1,941
Oyen .....	401	346	Towns .....	2,947	2,892
Richdale .....	44	58	Castor .....	634	651
Rumsey .....	83	89	Coronation .....	738	713
<b>Division No. 6: Calgary</b>	<b>140,624</b>	<b>114,841</b>	Hardisty .....	428	500
216 L.I.D. ....	520	297	Wainwright .....	1,147	1,028
217 L.I.D. ....	794	977	Villages .....	4,603	4,261
218 Blackfoot .....	1,590	1,787	Alliance .....	260	278
219 Bow Valley .....	1,679	1,981	Cadogan .....	128	116
220 Shepard .....	3,048	2,470	Chauvin .....	269	269
221 Springbank .....	2,166	1,716	Compeer .....	94	.....
222 L.I.D. ....	438	372	Consort .....	299	196
247 L.I.D. ....	1,073	945	Czar .....	140	117
248 Grasswold .....	1,448	1,495	Edgerton .....	189	182
249 Keoma .....	1,525	1,440	Forestburg .....	291	209
250 Beddington .....	2,272	2,339	Galahad .....	150	142
251 L.I.D. ....	1,427	931	Hughenden .....	191	159
252 L.I.D. ....	277	249	Irma .....	196	190
			Killam .....	326	365



## POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES FOR CENSUS YEARS, 1931 AND 1926—Continued

Census Divisions and Municipalities	Population		Census Divisions and Municipalities	Population	
	1931	1926		1931	1926
<b>Division No. 7—Continued:</b>			<b>Division No. 9—Continued:</b>		
Lougheed .....	218	265	462 L.I.D. ....	101	16
Monitor .....	137	139	463 L.I.D. ....		1
Provost .....	533	476	464 T. 44-46, R. 13-15, W. 5 ..	2,895	1,765
Sedgewick .....	338	362	Unorganized parts .....	249	
Strome .....	172	182	Indian Reserves .....	1,230	910
Veteran .....	180	167	Jasper .....	2,319	1,926
Viking .....	492	447	Villages .....		
<b>Division No. 8: Red Deer</b> .....	<b>61,016</b>	<b>57,693</b>	Bentley .....	233	211
336 Success .....	1,705	1,592	Bowden .....	233	202
337 Vimy .....	1,074	1,140	Eckville .....	169	178
338 Hays .....	2,364	2,458	North Red Deer .....	318	293
339 Pine Lake .....	2,098	1,974	Rimbey .....	304	280
340 Arthur .....	2,177	1,952	Rocky Mt. House .....	646	467
366 Dublin .....	1,425	1,356	Sylvan Lake .....	416	295
367 Waverly .....	1,995	1,839	<b>Division No. 10: Victoria</b> .....	<b>58,049</b>	<b>51,835</b>
396 Haig .....	1,486	1,456	451 Merton .....	1,792	1,221
397 Lakeside .....	1,622	1,517	452 Grizzly Bear .....	1,396	997
398 Lamerton .....	2,205	2,291	453 Buffalo Coulee .....	1,292	1,067
399 Crown .....	3,689	3,644	454 Lakeview .....	1,525	1,389
426 Melrose .....	2,537	2,425	481 Wellington .....	1,888	1,539
427 Evergreen .....	2,592	2,677	482 Vermilion Valley .....	1,843	1,416
428 Watrglen .....	1,386	1,346	483 Melberta .....	1,992	1,605
429 Fertile Valley .....	3,856	2,080	484 Birch Lake .....	2,312	2,163
456 Parkland .....	2,971	2,851	485 Patricia .....	2,111	1,789
457 Lloyd George .....	2,791	2,702	486 Beaver Lake .....	3,028	2,915
458 Montgomery .....	3,329	3,298	511 Streamstown .....	2,254	1,773
459 Bigstone .....	2,807	2,386	512 Ethelwyn .....	3,035	2,485
Indian Reserves .....	1,141	971	513 Ukraina .....	3,245	2,806
Cities .....	4,469	3,905	514 Sobor .....	3,326	2,933
Red Deer .....	2,344	2,021	515 Norma .....	3,201	3,047
Wetaskiwin .....	2,125	1,884	516 The Pines .....	3,464	2,464
Towns .....	7,455	8,412	545 Eagle .....	4,100	3,896
Big Valley .....	455	767	546 Wostok .....	4,584	4,520
Camrose .....	2,258	2,002	547 Leslie .....	3,725	3,815
Daysland .....	404	490	Towns .....	3,468	3,324
Innisfail .....	1,024	944	Lloydminster (part) .....	539	400
Lacombe .....	1,259	1,151	Vegreville .....	1,659	1,721
Ponoka .....	836	1,931	Vermillion .....	1,270	1,203
Stettler .....	1,219	1,127	Villages .....	4,468	3,671
Villages .....	3,842	3,421	Andrew .....	115	
Alix .....	241	229	Bruderheim .....	280	328
Bashaw .....	385	418	Chipman .....	284	330
Bawlf .....	183	184	Derwent .....	107	
Bittern Lake .....	47	37	Holden .....	230	214
Blackfalds .....	84	105	Innisfree .....	227	219
Botha .....	107	128	Islay .....	141	172
Clive .....	215	208	Kitscoty .....	280	266
Delburne .....	193	151	Lamont .....	507	506
Donalda .....	169	191	Lavoy .....	151	143
Edberg .....	131		Mannville .....	307	314
Elnora .....	153		Minburn .....	119	139
Erskine .....	174	160	Mundare .....	832	820
Ferintosh .....	161	126	Myrnam .....	131	
Gadsby .....	144	162	Ranfurly .....	122	
Halkirk .....	160	165	Ryley .....	236	220
Heisler .....	125	113	Two Hills .....	149	
Millet .....	300	241	Willington .....	250	
Mirror .....	534	431	<b>Division No. 11: Edmonton</b> .....	<b>126,832</b>	<b>106,592</b>
New Norway .....	142	137	487 Cornhill .....	2,753	2,381
Ohaton .....	69	74	488 Black Mud .....	3,797	3,396
Penhold .....	125	161	489 Liberty .....	4,662	4,509
<b>Division No. 9: Rocky Moun-</b>			490 Pioneer .....	2,603	1,493
<b>tain House</b> .....	<b>24,503</b>	<b>20,024</b>	491 L.I.D. ....	907	345
312 Waterloo .....	1,008	665	517 Clover Bar .....	2,754	2,887
341 Poplar Grove .....	2,540	2,366	518 Strathcona .....	3,555	3,363
342 Raven .....	1,712	1,447	519 Spruce Grove .....	3,499	3,168
343 Prairie Creek .....	610	528	520 Inga .....	2,851	2,503
344 L.I.D. ....	48	17	521 Tomahawk .....	1,432	602
371 Golden West .....	2,266	2,110	548 Sturgeon .....	4,302	3,706
400 Lorne .....	2,284	2,162	549 Ray .....	3,558	3,261
401 Lochearn .....	2,221	2,052	550 Woodford .....	2,408	2,031
403 L.I.D. ....	347	269	551 Morthen .....	2,224	1,824
430 Blindman .....	1,376	1,439	Indian Reserves .....	336	782
431 Last West .....	1,074	894	Cities .....	79,197	65,163
432 L.I.D. ....	17	9	Edmonton .....	79,197	65,163
433 L.I.D. ....	24	9	Towns .....	5,401	4,914
434 L.I.D. ....	366	324	Beverly .....	1,111	931
460 Columbia .....	1,104	742	Fort Saskatchewan .....	1,001	943
461 L.I.D. ....	712	344	Leduc .....	900	832



## POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES FOR CENSUS YEARS, 1931 AND 1926—Continued

Census Divisions and Municipalities	Population		Census Divisions and Municipalities	Population	
	1931	1926		1931	1926
<b>Division No. 11—Continued:</b>			<b>Division No. 14—Continued:</b>		
Morinville .....	570	562	578 Opal .....	3,286	2,924
St. Albert .....	825	684	579 Hazelwood .....	3,438	2,958
Stony Plain .....	497	456	580 Lockerbie .....	2,444	1,808
Tofield .....	497	506	581 Pershing .....	1,664	939
Villages .....	593	264	606 L.I.D. ....	131	63
Alberta Beach .....	38	.....	607 L.I.D. ....	887	525
Hay Lakes .....	125	.....	608 Tawatinaw .....	8,147	1,168
Onoway .....	149	70	609 Pibroch .....	2,210	1,660
Seba Beach .....	41	.....	610 Shoal Creek .....	2,095	1,450
Spruce Grove .....	76	.....	611 L.I.D. ....	406	133
Wabamun .....	164	194	636 L.I.D. ....	217	113
<b>Division No. 12: Edson</b> .....	<b>13,815</b>	<b>10,968</b>	637 Cartier .....	1,273	890
493 L.I.D. ....	4	4	638 Nelson .....	1,486	874
496 L.I.D. ....	902	664	639 L.I.D. ....	757	393
522 Rocky Rapids .....	1,148	343	640 L.I.D. ....	687	278
523 L.I.D. ....	13	4	665 L.I.D. ....	1,130	822
525 L.I.D. ....	24	29	667 L.I.D. ....	1,342	645
526 L.I.D. ....	116	156	668 Grasmont .....	886	466
527 L.I.D. ....	244	114	669 L.I.D. ....	79	130
552 Pembina .....	2,041	1,212	696 L.I.D. ....	144	39
553 L.I.D. ....	728	319	697 L.I.D. ....	499	283
554 L.I.D. ....	685	341	698 L.I.D. ....	40	11
555 L.I.D. ....	655	357	699 L.I.D. ....	357	100
556 L.I.D. ....	274	249	726 L.I.D. ....	274	12
557 L.I.D. ....	.....	.....	727 L.I.D. ....	76	60
558 L.I.D. ....	57	70	728 T. 71-74, R. 22-24, W. 4.	.....	25
582 Kitchener .....	2,340	1,906	N. of Athabasca R. ....	120	53
583 L.I.D. ....	654	736	L.I.D. ....	573	435
584 L.I.D. ....	543	349	Towns .....	573	435
586 T. 56-59, R. 19-22, W. 5.	.....	.....	Athabasca .....	1,973	1,625
and S.E. of Athabasca R.	.....	3	Villages .....	222	.....
587 T. 56-58, R. 21-24, W. 5.	.....	.....	Barrhead .....	186	177
and W. of Athabasca R.	.....	.....	Clyde .....	313	437
and St. Berland R.	.....	.....	Lac la Biche .....	350	308
588 L.I.D. ....	6	.....	Legal .....	366	310
612 L.I.D. ....	341	254	Smoky Lake .....	536	393
Territorial Units 615, 585	12	13	Westlock .....	.....	.....
Unorganized parts .....	1,133	2,182	<b>Division No. 15: Clearwater</b> .....	<b>13,664</b>	<b>6,328</b>
Towns .....	1,547	1,493	613 L.I.D. ....	53	.....
Edson .....	1,547	1,493	641 L.I.D. ....	543	161
Villages .....	348	170	642 L.I.D. ....	9	2
Entwistle .....	189	170	705 L.I.D. ....	24	.....
Mayerthorpe .....	159	.....	706 L.I.D. ....	270	22
<b>Division No. 13: Beaver R.</b> .....	<b>24,936</b>	<b>17,174</b>	707 L.I.D. ....	141	99
541 L.I.D. ....	745	492	708 L.I.D. ....	25	.....
542 Lincoln .....	933	631	709 L.I.D. ....	42	28
543 Laurier .....	2,646	2,210	710 L.I.D. ....	78	.....
544 Champlain .....	2,257	1,562	730 L.I.D. ....	175	111
571 L.I.D. ....	65	5	731 L.I.D. ....	363	300
572 Bonnyville .....	1,419	915	732 L.I.D. ....	578	422
573 St. Vincent .....	2,554	1,826	733 L.I.D. ....	504	307
574 St. Lina .....	817	509	734 L.I.D. ....	149	22
575 Vilna .....	3,756	3,502	735 L.I.D. ....	147	3
601 L.I.D. ....	760	136	736 L.I.D. ....	41	2
602 L.I.D. ....	1,105	314	737 L.I.D. ....	23	2
603 L.I.D. ....	615	160	738 L.I.D. ....	414	77
604 L.I.D. ....	497	161	764 L.I.D. ....	1,333	566
605 Ashmont .....	1,616	1,327	765 L.I.D. ....	1,101	393
631 L.I.D. ....	677	350	766 L.I.D. ....	503	58
633 L.I.D. ....	82	33	767 L.I.D. ....	24	1
634 L.I.D. ....	186	111	794 L.I.D. ....	141	54
635 L.I.D. ....	568	239	795 L.I.D. ....	648	307
663 L.I.D. ....	.....	.....	796 L.I.D. ....	2,408	1,061
664 L.I.D. ....	13	14	824 L.I.D. ....	10	.....
666 L.I.D. ....	320	146	825 L.I.D. ....	215	99
695 L.I.D. ....	218	66	826 L.I.D. ....	891	228
Territorial Units 632, 661	5	3	855 L.I.D. ....	477	208
Indian Reserves .....	1,514	1,398	676, 677, 678, 679, 622, 670.	.....	.....
Villages .....	1,568	1,064	and other parts .....	47	20
Bellis .....	117	.....	Indian Reserves .....	909	843
Bonnyville .....	362	.....	Towns .....	1,125	930
St. Paul .....	938	933	Grouard .....	261	348
Vilna .....	151	131	Peace River .....	864	582
<b>Division No. 14: Sturgeon</b> .....	<b>39,508</b>	<b>29,062</b>	Villages .....	253	.....
576 Smoky Lake .....	4,268	4,161	Falher .....	253	.....
577 Unity .....	4,919	4,019	<b>Division No. 16: Peace River</b> .....	<b>27,945</b>	<b>11,352</b>
			739 Grande Prairie .....	2,389	1,274
			740 Bear Lake .....	2,683	1,802

POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES FOR CENSUS YEARS, 1931 AND 1926—Continued

Census Divisions and Municipalities	Population		Census Divisions and Municipalities	Population	
	1931	1926		1931	1926
<b>Division No. 16—Continued:</b>			<b>Division No. 16—Continued:</b>		
741 L.I.D. ....	1,566	638	891 L.I.D. ....	77	.....
742 L.I.D. ....	460	167	916 L.I.D. ....	231	.....
769 L.I.D. ....	514	82	917 L.I.D. ....	298	.....
770 L.I.D. ....	871	236	919 L.I.D. ....	24	19
771 L.I.D. ....	1,730	775	Unorganized parts .....	72	.....
772 L.I.D. ....	1,358	340	Indian Reserves .....	1,068	201
797 L.I.D. ....	549	108	Towns .....	1,464	917
800 L.I.D. ....	296	77	Grande Prairie .....	1,464	917
801 L.I.D. ....	167	.....	Villages .....	1,715	242
827 L.I.D. ....	161	3	Beaver Lodge .....	211	.....
828 L.I.D. ....	381	149	Clairmont .....	110	75
829 Spirit River .....	1,800	893	Fairview .....	260	.....
830 L.I.D. ....	738	77	Grimshaw .....	137	.....
831 L.I.D. ....	487	34	Hythe .....	278	.....
857 Peace .....	1,990	1,377	Sexsmith .....	304	.....
858 Fairview .....	2,264	1,507	Spirit River .....	232	167
859 L.I.D. ....	519	84	Wembley .....	183	.....
886 L.I.D. ....	508	150			
887 L.I.D. ....	525	160	<b>Division No. 17: Athabasca ...</b>	<b>5,788</b>	<b>4,841</b>
888 L.I.D. ....	581	31	Remainder of the Province		
889 L.I.D. ....	425	29	comprising Northern parts	4,312	3,045
890 L.I.D. ....	34	.....	Indian Reserves .....	1,476	1,796



TABLE 1.—GENERAL SUMMARY OF BIRTHS, DEATHS AND MARRIAGES IN THE PROVINCE OF ALBERTA BY DIVISIONS, CITIES AND TOWNS OF 1,000 POPULATION AND OVER, 1933

Divisions, Cities and Towns	Births (Exclusive of Still- births)			DEATHS						Stillbirths	Marriages			
	All Ages			Under 1 year		1-4 years		5 years and over						
				M.	F.	M.	F.	M.	F.					
	Total	M.	F.	Total	M.	F.	Total	M.	F.			Total	M.	F.
TOTAL FOR THE PROVINCE													447	5389
Division No. 1	16,123	8321	7802	5346	3165	2181	573	393	158	118	2434	1670	6	202
Division No. 2	596	320	276	203	109	94	25	13	6	2	78	79	37	500
Division No. 3	1341	688	653	475	283	192	55	29	16	6	212	137	8	71
Division No. 4	278	138	140	78	48	30	7	8	2	4	39	18	10	88
Division No. 5	364	192	172	140	85	55	11	6	3	1	71	48	7	91
Division No. 6	326	170	156	111	64	47	3	3	3	3	58	36	92	1270
Division No. 7	2632	1361	1271	1092	642	450	81	56	18	19	543	375	31	259
Division No. 8	1271	658	597	499	280	219	43	24	11	10	226	185	43	457
Division No. 9	780	399	381	231	143	88	18	11	7	4	118	73	31	72
Division No. 10	1255	658	597	499	280	219	43	24	11	10	226	185	43	457
Division No. 11	420	229	191	123	71	52	8	8	4	6	59	38	11	72
Division No. 12	1369	717	652	311	198	113	55	25	16	6	127	82	36	352
Division No. 13	2974	1489	1485	1127	680	447	95	89	27	29	558	329	66	1299
Division No. 14	314	154	160	73	50	23	12	7	5	2	33	14	8	65
Division No. 15	908	471	437	227	131	96	52	36	11	9	68	51	22	184
Division No. 16	1152	603	549	260	145	115	49	31	9	4	87	80	31	180
Division No. 17	422	211	211	124	64	60	22	19	5	6	37	35	14	76
Division No. 18	721	372	349	176	117	59	26	15	7	3	84	41	23	175
Division No. 19	271	149	122	96	55	41	11	8	8	4	36	29	2	48
CITIES:													67	999
Calgary	1624	831	793	708	414	294	43	21	10	12	361	261	4	55
Drumheller	263	141	122	51	31	20	5	3	1	1	25	16	4	55
Edmonton	2085	1027	1058	870	512	358	51	60	15	22	446	276	46	1137
Lethbridge	517	271	246	198	121	77	20	13	6	...	95	64	20	238
Medicine Hat	320	169	151	123	66	57	10	8	3	2	53	47	4	151
Red Deer	100	41	59	46	26	20	1	2	...	1	25	17	...	78
Wetaskiwin	118	68	50	33	21	12	4	1	1	1	16	10	2	55
TOWNS:													...	...
Beverly	7	5	2	3	2	1	...	1	...	...	2	...	...	...
Blainmore	40	22	18	8	3	5	1	...	...	...	2	3	1	29
Camrose	100	53	47	28	15	13	5	2	...	...	10	11	3	73
Cardston	138	76	62	34	21	13	6	4	...	...	15	6	4	74

TABLE 1.—GENERAL SUMMARY OF BIRTHS, DEATHS AND MARRIAGES IN THE PROVINCE OF ALBERTA BY DIVISIONS, CITIES AND TOWNS OF 1,000 POPULATION AND OVER, 1933—Continued

Divisions, Cities and Towns	Births (Exclusive of Still- births)			DEATHS										Stillbirths	Marriages
	Total	Births		All Ages		Under 1 year		1-4 years		5 years and over					
		M.	F.	Total	M.	F.	M.	F.	M.	F.	M.	F.			
Clareholm	38	22	16	22	11	11	3	1	1	7	11	1	9		
Coleman	38	15	23	19	10	9	4	1	1	5	8	1	19		
Edson	63	31	32	23	15	8	1	1	1	13	5	1	5		
Fort Saskatchewan	28	18	10	7	3	4	1	1	1	3	4	3	46		
Grande Prairie	136	60	76	33	18	15	1	1	1	16	12	6	25		
Hanna	112	57	55	30	17	13	1	1	1	16	8	1	34		
High River	93	52	41	26	12	14	1	1	1	10	13	3	35		
Innisfail	112	56	56	32	21	11	2	1	2	19	8	7	41		
Lacombe	65	31	34	42	23	19	5	4	2	16	13	3	23		
Macleod	39	21	18	38	23	15	3	1	1	19	13	2	11		
Magrath	28	15	13	9	6	3	2	1	1	5	3	2	29		
Olds	70	34	36	20	8	12	2	1	1	6	11	2	12		
Pincher Creek	37	21	16	23	13	10	1	1	1	12	9	2	8		
Raymond	76	34	42	6	3	3	1	1	1	2	2	1	10		
Redcliff	9	3	6	6	4	2	1	1	1	4	2	6	42		
Stettler	84	42	42	31	14	17	1	1	1	11	16	3	17		
Taber	66	33	33	18	8	10	4	1	1	4	9	3	41		
Vegreville	152	80	72	33	25	8	5	1	3	17	7	8	51		
Vermilion	86	45	41	31	20	11	9	2	1	10	8	1	37		
Wainwright	75	36	39	32	19	13	1	1	1	18	10	6			



TABLE 2.—BIRTHS (EXCLUSIVE OF STILLBIRTHS) BY MONTHS, CLASSIFIED AS RURAL AND URBAN, BY DIVISIONS FOR THE PROVINCE OF ALBERTA, 1933

Total	MONTHS											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>ALBERTA</b>	16123	1236	1490	1361	1364	1355	1440	1297	1278	1332	1284	1339
Rural	794	751	868	762	784	763	793	753	738	799	788	811
Urban	553	485	622	599	580	592	647	544	540	533	496	528
<b>DIVISION No. 1—MEDICINE HAT</b>	596	40	65	47	51	55	43	48	48	53	38	52
Rural	210	22	25	18	22	16	12	16	21	17	11	18
Urban	386	34	40	29	29	39	31	32	27	36	27	34
City of Medicine Hat	320	24	32	25	27	34	26	27	16	30	22	30
Town of Taber	66	7	8	4	2	5	5	5	11	6	5	4
<b>DIVISION No. 2—MACLEOD</b>	1341	95	130	131	111	109	123	91	118	105	111	110
Rural	390	30	35	46	27	31	36	30	34	22	29	38
Urban	951	65	95	85	84	78	87	61	84	83	82	72
City of Lethbridge	517	43	56	44	42	40	40	34	52	46	46	35
Town of Blairmore	40	2	3	8	7	2	7	1	2	1	2	4
Cardston	138	10	14	10	14	21	10	7	11	10	13	9
Claresholm	38	2	1	3	1	2	6	2	6	3	6	4
Coleman	38	3	7	4	3	3	3	3	4	2	4	1
Macleod	39	2	5	4	4	2	6	3	1	4	3	2
Magrath	28	4	1	1	2	4	4	3	1	4	4	3
Pincher Creek	37	1	4	3	2	1	7	5	4	5	1	4
Raymond	76	8	4	8	9	3	4	6	4	8	7	10
<b>DIVISION No. 3—BOW</b>	278	15	29	21	22	28	21	20	22	16	28	27
Rural	269	15	29	19	21	28	20	19	21	16	27	25
Urban	9	...	...	2	1	...	1	1	1	...	1	2
Town of Redcliff	9	...	...	2	1	...	1	1	1	...	1	2
<b>DIVISION No. 4—NANTON</b>	364	29	20	29	31	35	40	33	26	28	30	33
Rural	271	24	17	17	23	26	29	21	19	22	24	23
Urban	93	6	3	12	8	9	11	12	7	6	6	10
Town of High River	93	6	3	12	8	9	11	12	7	6	6	10
<b>DIVISION No. 5—ACADIA</b>	326	31	31	28	29	27	33	31	20	24	22	21
Rural	214	22	17	16	21	14	16	21	11	14	20	20
Urban	112	9	14	12	8	13	17	10	9	10	2	1
Town of Hanna	112	9	14	12	8	13	17	10	9	10	2	1

TABLE 2.—BIRTHS (EXCLUSIVE OF STILLBIRTHS) BY MONTHS, CLASSIFIED AS RURAL AND URBAN, BY DIVISIONS FOR THE PROVINCE OF ALBERTA, 1933—Continued

	Total	MONTHS											
		January	February	March	April	May	June	July	August	September	October	November	December
<b>DIVISION No. 6—CALGARY</b>	2632	220	220	223	234	203	236	238	200	199	212	230	217
Rural	675	69	50	48	43	50	61	50	53	58	54	74	65
Urban	1957	151	170	175	191	153	175	188	147	141	158	156	152
City of Calgary	1624	126	131	150	160	125	131	151	132	112	138	134	125
Drumheller	263	15	37	21	22	21	25	32	14	23	16	14	23
Town of Olds	70	10	2	4	9	7	10	5	1	6	4	8	4
<b>DIVISION No. 7—BATTLE RIVER</b>	780	68	52	73	62	69	62	77	58	57	66	56	80
Rural	705	59	49	67	54	65	55	70	50	53	63	51	69
Urban	75	9	3	6	8	4	7	7	8	4	3	5	11
Town of Wainwright	75	9	3	6	8	4	7	7	8	4	3	5	11
<b>DIVISION No. 8—RED DEER</b>	1255	106	91	126	97	116	106	106	89	95	102	98	123
Rural	676	49	54	80	51	64	52	59	40	54	59	50	64
Urban	579	57	37	46	46	52	54	47	49	41	43	48	59
City of Red Deer	100	9	5	7	11	8	11	13	8	7	5	5	11
Wetaskiwin	118	13	8	9	13	8	11	6	10	5	11	13	11
Town of Camrose	100	6	6	11	7	11	6	7	10	8	7	8	13
Innisfail	112	10	6	9	9	9	11	9	8	8	12	10	13
Lacombe	65	10	7	4	3	6	3	6	7	7	3	4	5
Stettler	84	9	5	6	3	13	12	6	5	6	5	8	6
<b>DIVISION No. 9—ROCKY MOUNTAIN HOUSE</b>	420	34	24	43	32	36	37	33	44	26	39	33	39
Rural	420	34	24	43	32	36	37	33	44	26	39	33	39
<b>DIVISION No. 10—VICTORIA</b>	1369	96	120	129	101	132	111	139	123	103	111	92	112
Rural	1131	82	107	110	80	104	93	110	105	86	90	69	95
Urban	238	14	13	19	21	28	18	29	18	17	21	23	17
Town of Vegreville	152	8	9	12	16	20	11	17	10	14	13	12	10
Vermilion	86	6	4	7	5	8	7	12	8	3	8	11	7
<b>DIVISION No. 11—EDMONTON</b>	2974	249	229	280	253	263	239	278	251	259	246	212	215
Rural	854	70	79	77	71	69	61	70	62	74	83	76	62
Urban	2120	179	150	203	182	194	178	208	189	185	163	136	153
City of Edmonton	2085	173	150	202	180	191	173	206	184	181	160	135	150
Town of Beverly	7	6	...	1	...	...	2	1	1	1	1	1	...
Fort Saskatchewan	28	...	...	...	2	3	3	1	4	3	2	...	3



<b>DIVISION No. 12—EDSON</b>	314	32	28	38	23	25	21	26	23	22	30	22	24
Rural	251	28	26	28	20	19	16	20	16	15	24	19	20
Urban	63	4	2	10	3	6	5	6	7	7	6	3	4
Town of Edson	63	4	2	10	3	6	5	6	7	7	6	3	4
<b>DIVISION No. 13—BEAVER RIVER</b>	908	80	72	75	79	78	78	78	77	60	83	81	67
Rural	908	80	72	75	79	78	78	78	77	60	83	81	67
<b>DIVISION No. 14—STURGEON</b>	1152	83	78	113	99	90	92	83	93	102	98	121	100
Rural	1152	83	78	113	99	90	92	83	93	102	98	121	100
<b>DIVISION No. 15—CLEARWATER</b>	422	36	38	42	34	23	34	45	31	25	37	39	38
Rural	422	36	38	42	34	23	34	45	31	25	37	39	38
<b>DIVISION No. 16—PEACE RIVER</b>	721	68	53	43	65	66	61	56	66	78	58	53	54
Rural	585	53	46	32	57	53	45	41	56	61	54	46	41
Urban	136	15	7	11	8	13	16	15	10	17	4	7	13
Town of Grande Prairie	136	15	7	11	8	13	16	15	10	17	4	7	13
<b>DIVISION No. 17—ATHABASCA</b>	271	22	23	30	26	19	24	21	19	18	24	18	27
Rural	271	22	23	30	26	19	24	21	19	18	24	18	27

TABLE 3.—BIRTHS (EXCLUSIVE OF STILLBIRTHS) CLASSIFIED AS LEGITIMATE OR ILLEGITIMATE FOR THE PROVINCE AND IN CITIES OF 5,000 POPULATION AND OVER, 1933

Province and Cities	Total Births			Legitimate			Illegitimate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total for the Province.....	16123	8321	7802	15500	7980	7520	623	341	282
Cities:									
Calgary .....	1624	831	793	1526	785	741	98	46	52
Edmonton .....	2085	1027	1058	1837	895	942	248	132	116
Lethbridge .....	517	271	246	511	268	243	6	3	3
Medicine Hat .....	320	169	151	315	165	150	5	4	1

TABLE 4.—PLURAL BIRTHS CLASSIFIED TO SHOW THE NUMBER OF CHILDREN BORN ALIVE AND STILLBORN BY SEX, IN THE PROVINCE OF ALBERTA, 1933

Classification of Births	Total
CASES OF TWINS .....	202
Two males (both living) .....	69
One male and one female (both living) .....	58
Two females (both living) .....	54
One male living and one male stillborn .....	6
One male living and one female stillborn .....	3
One male stillborn and one female living .....	3
One female living and one female stillborn .....	3
Two males (both stillborn) .....	2
One male and one female (both stillborn) .....	1
Two females (both stillborn) .....	3
CASES OF TRIPLETS .....	3
Two males and one female (all living) .....	1
Three females (all living) .....	2
Total multiple confinements .....	Number 205
Male .....	221
Female .....	192
Total single living births .....	Number 15737
Male .....	8114
Female .....	7623
Total single stillbirths .....	Number 420
Male .....	245
Female .....	175
Total confinements .....	16362





TABLE 5.—BIRTHS (EXCLUSIVE OF STILLBIRTHS) CLASSIFIED ACCORDING TO BIRTHPLACE OF PARENTS, 1933—Continued

Birthplace of Father	Birthplace of Mother																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	Canada										British Isles			Europe												Asia		United States	Various	Not Specified																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	P.E. Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Prov. not specified	England	Ireland	Scotland	Wales	Other	Newfoundland	Other Possessions	Austria	Belgium	Denmark	Finland	France	Germany	Holland	Hungary	Italy	Norway				Poland	Roumania	Russia	Sweden	Other	China	Japan	Other																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Total	76	1	2	1	1	1	2	11	2	10	4	2	9	1	1	1	1	2	1	5	1	2	2	8	1	45	78	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	





TABLE 6.—BIRTHS (EXCLUSIVE OF STILLBIRTHS) CLASSIFIED ACCORDING TO AGES OF PARENTS, 1933—Continued

Age of Father	AGE OF MOTHER																				50 & over	Not stated																							
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49					
53	64							1				1	1	2	3		1	3	1	3	3	2	3	2	3	1	2	5	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1		
54	43														2		3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
55	25																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
56	17																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
57	25																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
58	19																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
59	10																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
60	14																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
61	7											1																																	
62	9																																												
63	8																																												
64	16																																												
65 and over	8																																												
Not stated																																													
Children born to married mothers	15500										926	945	988	972	962	888	873	755	784	582	609	553	474	439	435	378	315	274	263	154	175	102	78	43	12	13	10	3	3	15					
Children born to un- married mothers	623	1	2	3	19	23	34	72	86	66	44	54	29	30	20	23	17	15	9	9	5	9	10	8	8	5	2	5	2	3	3	4	2									1			
Children born to all mothers	16123	1	2	3	19	53	161	376	597	747	868	980	974	1018	992	985	905	888	764	793	587	618	563	482	447	440	380	320	276	266	157	179	104	78	43	12	13	10	3	3	16				









TABLE 8.—TOTAL BIRTHS (EXCLUSIVE OF STILLBIRTHS) AND BIRTHS IN INSTITUTIONS, SHOWING THE NUMBER OF MOTHERS NON-RESIDENT IN THE PROVINCE OF ALBERTA, 1933

	All Births		In Institutions	
	Total	Births to Mothers non-resident in Province	Total	Births to Mothers non-resident in Province
Total for the Province .....	16,123	115	7,605	91

TABLE 9.—BIRTHS (EXCLUSIVE OF STILLBIRTHS) TO RESIDENT AND NON-RESIDENT MOTHERS AND BIRTHS IN INSTITUTIONS, IN CITIES OF 5,000 POPULATION AND OVER IN THE PROVINCE OF ALBERTA, 1933

Cities	All Births				Births in Institutions				Births elsewhere than in Institutions			
	Total	To resident mothers	To mothers non-resident in city or town where birth occurred and		Total	To resident mothers	To mothers non-resident in city or town where birth occurred and		Total	To resident mothers	To mothers non-resident in city or town where birth occurred and	
			Resident in Province	Non-resident in Province			Resident in Province	Non-resident in Province			Resident in Province	Non-resident in Province
Calgary .....	1624	1298	313	13	1344	1049	285	10	280	249	28	3
Edmonton .....	2085	1353	696	36	1884	1195	654	35	201	158	42	1
Lethbridge .....	517	245	270	2	457	196	260	1	60	49	10	1
Medicine Hat .....	320	128	175	17	266	92	160	14	54	36	15	3

TABLE 10.—ORDER OF BIRTH OF LEGITIMATE CHILDREN BORN IN 1933 (INCLUDING STILLBORN CHILDREN),  
BY AGE OF MOTHER

Order of Birth of Children	Total	Age of Mother										45 years and over	Age not stated
		Under 15 yrs.	15 years	16 years	17 years	18 years	19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
Total	15920												16
1st child	3862			34	132	311	523	1000	4448	4537	3097	1914	816
2nd	3495		33	117	255	355	355	760	1874	854	269	88	16
3rd	2547		1	13	50	152	152	216	1491	1149	455	149	28
4th	1741			2	6	16	16	24	729	1019	485	219	62
5th	1238								241	703	500	228	64
6th	916								91	427	406	229	78
7th	662								16	217	350	234	91
8th	496								4	100	281	180	86
9th	338								1	15	109	127	91
10th	202									2	32	100	59
11th	151										17	84	45
12th	109										5	57	38
13th	77										6	31	31
14th	34											13	19
15th	14											2	11
16th	18										2	4	9
17th	5											1	2
18th	3											1	1
19th	1											1	1
20th and over	5											4	1
Not stated	6								1		2	1	1



TABLE 11.—INFANTILE DEATH RATES, ETC., BY DIVISIONS, 1933

Divisions and Cities	Death rate of children under one year of age to each 1,000 births			Births with or without a physician in attendance		Rate of stillbirths to each 1,000 births	
	Rate per 1,000 births	Number of deaths	Total births	With physician	Without physician	Number of stillbirths	Rate per 1,000 births
Division No. 1—Medicine Hat (City of Medicine Hat excepted)	72.5	20	276	168	107	2	7.2
Division No. 2—Macleod (City of Lethbridge excepted)	61.9	51	824	644	180	17	20.6
Division No. 3—Bow	54.0	15	278	205	73	8	28.8
Division No. 4—Nanton	46.7	17	364	328	36	10	27.5
Division No. 5—Acadia	33.7	11	326	219	106	7	21.5
Division No. 6—Calgary (Cities of Calgary and Drumheller excepted)	87.2	65	745	573	172	21	28.2
Division No. 7—Battle River	37.2	29	780	676	104	31	39.7
Division No. 8—Red Deer (Cities of Red Deer and Wetaskiwin excepted)	56.9	59	1037	826	209	41	39.5
Division No. 9—Rocky Mountain	38.1	16	420	295	124	11	26.2
Division No. 10—Victoria	58.4	80	1369	798	567	36	26.3
Division No. 11—Edmonton (City of Edmonton excepted)	82.1	73	889	488	399	20	22.5
Division No. 12—Edson	60.5	19	314	143	169	8	25.5
Division No. 13—Beaver River	96.9	88	908	353	555	22	24.2
Division No. 14—Sturgeon	69.4	80	1152	465	686	31	26.9
Division No. 15—Clearwater	97.2	41	422	183	239	14	33.2
Division No. 16—Peace River	56.9	41	721	414	307	23	31.9
Division No. 17—Athabasca	70.1	19	271	61	209	2	7.4
City of Edmonton	53.2	111	2085	2056	29	46	22.1
City of Calgary	39.4	64	1624	1604	20	67	41.3
City of Lethbridge	63.8	33	517	504	13	20	38.7
City of Medicine Hat	56.3	18	320	303	17	4	12.5
City of Red Deer	30.0	3	100	99	1	...	...
City of Wetaskiwin	42.4	5	118	117	1	2	16.9
City of Drumheller	30.4	8	263	259	4	4	15.2
Divisions	65.2	724	11096	6839	4242	304	27.4
Cities	48.1	242	5027	4942	85	143	28.4
Whole Province	59.9	966	16123	11781	4327	447	27.7

## CAUSES OF DEATH

[illegible]















TABLE 16.—POPULATION, BIRTHS, DEATHS, RATES AND SELECTED CAUSES OF DEATH (EXCLUDING INDIANS) BY MUNICIPALITIES (EXCLUDING CITIES), 1933—TRANSFERRED TO REGULAR RESIDENCE

Municipality No.	Population, 1933	Number of Births			Birth Rate per 1,000 Population			Number of Deaths			Death Rate per 1,000 Population			Number of Deaths (under 1 year)			Infant Mortality Rate (per 1,000 births)			Number of Stillbirths			Typhoid and Paratyphoid			Measles			Scarlet Fever			Whooping Cough			Diphtheria			Influenza			Acute Poliomyelitis			Meningococcal Meningitis			Pulmonary Tuberculosis			Tuberculosis (other forms)			Cancer (all forms)			Diabetes			Pericious Anaemia			Apoplexy, Cerebral Hemorrhage & Thrombosis			Heart Diseases (all forms)			Diseases of the Arteries			Pneumonia (all forms)			Diarrhoea and Enteritis (under 2 years of age)			Diarrhoea and Enteritis (over 2 years of age)			Appendicitis			Nephritis (acute and chronic)			Puerperal State			Violent Deaths (suicides and homicides excepted)																																																																																																																																																																																																																																																																																																																																																																									
		Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000	Number of Deaths	Population	Birth Rate per 1,000

TABLE 16.—POPULATION, BIRTHS, DEATHS, RATES AND SELECTED CAUSES OF DEATH (EXCLUDING INDIANS) BY MUNICIPALITIES (EXCLUDING CITIES), 1933—TRANSFERRED TO REGULAR RESIDENCE—Continued

## DIVISION No. 2 MACLEOD

Municipality No.	Population, 1933	Number of Births	Birth Rate per 1,000	Number of Deaths	Death Rate per 1,000	Population	Number of Deaths (under 1 year)	Infant Mortality Rate (per 1,000 births)	Number of Stillbirths	Typhoid and Paratyphoid	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Acute Poliomyelitis	Meningococcal Meningitis	Pulmonary Tuberculosis	Tuberculosis (other forms)	Cancer (all forms)	Diabetes	Periculous Anaemia	Apoplexy, Cerebral Haemorrhage & Thrombosis	Heart Diseases (all forms)	Diseases of the Arteries	Pneumonia (all forms)	Diarrhoea and Enteritis (under 2 years of age)	Diarrhoea and Enteritis (over 2 years of age)	Appendicitis	Nephritis (acute and chronic)	Puerperal State	Violent Deaths (suicides and homicides excepted)	
7	382	7	18	3	8	8	2	67	3							1			1	1	3		1	1	1	1	1					1	
8	1526	30	20	6	4	4	7	99	2							1			1				1	4	1	2	1					1	
9	3454	30	20	6	6	6	33	33	3							1			1				1	1	1	1	1					1	
10	1382	30	22	8	6	4	4	47	3							1			2		4	1	1	1	1	1	1					1	
37	4511	149	33	20	4	5	2	26	3							1			1				1	3	3	1	1					1	
38	2665	76	29	14	5	5	2	47	3							1			1				1	2	6	1	1					1	
39	3090	43	14	27	9	9	2	47	3							1			1				1	2	1	1	1					1	
40	544	3	6	4	8	8	9	65	3			1						1		1	1	1	4	1	2	1					1		
67	5159	138	27	32	6	6	9	41	3							1			1				2	13	1	1	1					1	
68	3767	73	20	12	3	3	6	105	2					1		1			1		8	2	2	3	2	2	1					1	
69	2961	57	19	47	16	6	3	64	2							1			1		1	1	3	2	2	2	1					1	
70	1715	17	10	5	3	3	1	59	2							1			1		6	1	1	2	2	4	1					1	
71	8150	140	17	46	6	6	9	98	1							1			1		8	2	3	2	2	2	2					1	
99	3484	61	18	36	10	10	6	98	1							1			1		1	1	1	2	2	2	1					1	
100	680	2	3	3	3	3	3	3	3							1			1		1	1	1	2	2	2	1					1	
101	193	1	5	3	3	3	3	3	3							1			1		1	1	1	2	2	2	1					1	
Total	43572	898	20.6	282	6.5	55	55	61.2	19	2	1	1	1	1	6	1	2	4	4	4	40	6	13	42	8	18	3			2	10	5	18
Death Rate per 100,000 Population														2	14	2	5	9	9	92	14		30	96	18	41	7		5	23	11	41	



## DIVISION No. 3—BOW RIVER

96	808	6	78	5	6	2	333																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</
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DIVISION No. 4—NANTON

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#### DIVISION No. 7—BATTLE RIVER

331	1335	6	4	3	79	1	28	38	.....
332	1340	10	6	1	24	1	27	42	.....
333	1497	11	7	..	..	1	16	24	.....
334	2880	17	6	2	29	2	24	69	.....
335	708	2	3	..	..	..	4	3	.....
336	1793	7	4	4	111	..	20	361	.....
337	1505	12	8	1	36	..	19	28	.....
338	1209	17	6	1	48	..	17	21	.....
339	1695	1	1	..	..	1	6	10	.....
340	2706	13	5	1	30	4	12	33	.....
341	2103	16	8	1	22	1	22	46	.....
342	1191	12	10	1	37	3	23	191	.....
343	1941	18	9	2	57	..	18	35	.....





428	1404	21	15	1	1	1	48																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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DIVISION No. 9—ROCKY MOUNTAIN HOUSE

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DIVISION No. 10—VICTORIA

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DIVISION No. 12—EDSON

[illegible]

## VITAL STATISTICS BRANCH

TABLE 16.—POPULATION, BIRTHS, DEATHS, RATES AND SELECTED CAUSES OF DEATH (EXCLUDING INDIANS) BY MUNICIPALITIES (EXCLUDING CITIES), 1933—TRANSFERRED TO REGULAR RESIDENCE—Continued

## DIVISION No. 13—BEAVER RIVER

Municipality No.	Population, 1933	Number of Births	Birth Rate per 1,000	Population	Number of Deaths	Death Rate per 1,000	Number of Deaths (under 1 year)	Infant Mortality Rate (per 1,000 births)	Number of Stillbirths	Typhoid and Paratyphoid	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Acute Poliomyelitis	Meningococcal Meningitis	Pulmonary Tuberculosis	Tuberculosis (other forms)	Cancer (all forms)	Diabetes	Pernicious Anaemia	Apoplexy, Cerebral Haemorrhage & Thrombosis	Heart Diseases (all forms)	Diseases of the Arteries	Pneumonia (all forms)	Diarrhoea and Enteritis (under 2 years of age)	Diarrhoea and Enteritis (over 2 years of age)	Appendicitis	Nephritis (acute and chronic)	Puerperal State	Violent Deaths (suicides and homicides excepted)		
541	765	18	24	4	5	7	3	77	2							4		1	1	1	1		1	1	1	1				1	1	1		
542	1028	26	25	7	7	7	15	143	6				1							1	1		1	1	1	1				2	1	1		
543	3795	105	28	34	3	8	3		1												1													
544	2376	58	24	8	3		6														1													
571	65	113	19																															
572	1995	69	26	18	7	8	8	53	1			1				1									5									
573	2699	25	29	4	5	3	9	116																										
574	863	25	29	4	5	3	9	67	2				1			1																		
575	4299	135	30	30	5	5	3	143								1																		
601	782	21	27	4	5	4	3	59	1																									
602	1192	51	43	7	6	3	3	150																										
603	639	20	31	4	6	3	1	67	1																									
604	527	15	28	4	8	1	5	72	4																									
605	1716	69	40	13	8	8	2	77																										
631	730	26	36	4	5	2																												
632																																		
633	82																																	
634	186	1	5	1	5																													
635	579	10	17	2	3	1	1	100	1																									
661																																		
663																																		
664	13																																	
666	337	8	24	3	9	1	1	125																										
695	218																																	
Total	24886	770	30.9	166	6.7	62	62	80.5	19			1	2		6			8	2	13				2	8	6	12	2		2	5	5	10	
Death Rate per 100,000 Population												4	8		24			32	8	52				8	32	24	48	8		8	20	20	40	



DIVISION No. 14—SURGEON

[illegible]

DIVISION No. 15—CLEARWATER

[illegible]

TABLE 16.—POPULATION, BIRTHS, DEATHS, RATES AND SELECTED CAUSES OF DEATH (EXCLUDING INDIANS) BY MUNICIPALITIES (EXCLUDING CITIES), 1933—TRANSFERRED TO REGULAR RESIDENCE—Continued

## DIVISION No. 15—CLEARWATER—Continued

Municipality No.	Population, 1933	Number of Births	Birth Rate per 1,000	Population	Number of Deaths	Death Rate per 1,000	Population	Number of Deaths (under 1 year)	Infant Mortality Rate (per 1,000 births)	Number of Stillbirths	Diseases														Heart Diseases (all forms)										Violent Deaths (suicides and homicides excepted)		
											Typhoid and Paratyphoid	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Acute Poliomyelitis	Meningococcal Meningitis	Pulmonary Tuberculosis	Tuberculosis (other forms)	Cancer (all forms)	Diabetes	Pernicious Anaemia	Apoplexy, Cerebral Haemorrhage & Thrombosis	Heart Diseases (all forms)	Diseases of the Arteries	Pneumonia (all forms)	Diarrhoea and Enteritis (under 2 years of age)	Diarrhoea and Enteritis (over 2 years of age)	Appendicitis	Nephritis (acute and chronic)	Puerperal State					
708	25																																				
709	42																																				
730	176	2	11	11	1	3																															
731	381	6	16	16	4	7																															
732	615	18	29	29	4	8																															
733	522	12	23	23	4																																
734	150	1	7	7																																	
735	153	8	52	52	2	13	2	250	1																												
736	42	1	24	24																																	
737	23																																				
738	447	22	49	49	2	4	1	45																													
764	1637	24	15	15	3	2																															
765	1158	41	35	35	14	12	4	98	2																												
766	520	9	18	18	2	4	1	111																													
767	24																																				
794	143	1	7	7																																	
795	658	14	21	21	6	9	3	214	1																												
796	2878	96	33	33	15	5	6	63	1																												
825	217	1	5	5	1	3	1	40																													
826	931	25	27	27	3	3	1		2																												
855	1435	44	31	31	7	5																															
Total	13301	352	26.5	65	4.9	19	53.9	10						1	2	1		3	3	5	1		2	6	1	2	4				3	1	4				
Death Rate per 100,000 Population															7	15	7		23	23	38	7		15							23	7	30				





TABLE 16.—POPULATION, BIRTHS, DEATHS, RATES AND SELECTED CAUSES OF DEATH (EXCLUDING INDIANS) BY CITIES, 1933—TRANS-FERRED TO REGULAR RESIDENCE—Continued

CITIES

Municipality No.	Population, 1933	Number of Births	Birth Rate per 1,000	Number of Deaths	Death Rate per 1,000	Population	Number of Deaths (under 1 year)	Infant Mortality Rate (per 1,000 births)	Number of Stillbirths	Typhoid and Paratyphoid	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Acute Poliomyelitis	Meningococcic Meningitis	Pulmonary Tuberculosis	Tuberculosis (other forms)	Cancer (all forms)	Diabetes	Pernicious Anaemia	Apoplexy, Cerebral Haemorrhage & Thrombosis	Heart Diseases (all forms)	Diseases of the Arteries	Pneumonia (all forms)	Diarrhoea and Enteritis (under 2 years of age)	Diarrhoea and Enteritis (over 2 years of age)	Appendicitis	Nephritis (acute and chronic)	Puerperal State	Violent Deaths (suicides and homicides excepted)
Edmonton	79231	1330	16.8	592	7.5	84	63.2	30	1	1	1	5	1	15	18	9	81	11	8	14	104	40	24	7	4	14	18	5	26			
Death Rate per 100,000 Population									1			6	1	19	23	11	102	14	10	18	131	50	30	9	5	18	23	6	33			
Calgary	83761	1324	15.8	601	7.2	56	42.3	62				2		23	20	4	86	9	4	13	111	62	28	6	2	6	25	5	30			
Death Rate per 100,000 Population												2		27	24	5	103	11	5	16	133	74	33	7	2	7	30	6	36			
Drumheller	3000	105	35.0	28	9.3	4	38.1	3						1	3	2				4	2			1	1	3	1		1			
Death Rate per 100,000 Population														33	100	67				133	67			33	33	100	33		33			
Lethbridge	13639	283	20.7	126	9.2	18	63.6	11						5	2		18	3		1	16	6	6	4	2	3	6	1	9			
Death Rate per 100,000 Population														37	15	131	22		7	117	44	44	29	15	22	44	7	66				

As this table has been given one page to itself, title has been altered in accordance therewith.



Medicine Hat	10000	136	13.6	77	7.7	9	66.2	2	1	8	4	5	1	18	4	4	1	4	5
Death Rate per 100,000 Population									10	80	40	50	10	180	40	40	10	40	50
Red Deer	2250	55	24.4	20	8.9	2	36.4			1				4	4	2			1
Death Rate per 100,000 Population										44				178	178	89			44
Wetaskiwin	2200	38	17.3	16	7.3	4	105.3				2	3		2			1		
Death Rate per 100,000 Population											91	136		91			45		





































[illegible]





CLASS XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION					
	Total	Male	Female	1	2
154 Osteomyelitis .....	10	2	8	1	1
155 Other diseases of the bones (tuberculosis ex- cepted) .....	7	1	6	1	1
156 (a) Diseases of the joints (tuberculosis and rheumatism excepted) .....	1	1		1	
(b) Diseases of other organs of locomotion .....	1		1		
Total .....	77	74	3	1	1
Male .....	44	42	2	1	1
Female .....	33	32	1		
CLASS XIV.—CONGENITAL MALFORMATIONS					
157 (a) Congenital hydrocephalus .....	5	4	1	1	
(b) Spina bifida and meningocele .....	2	2			
(c) Congenital malformations of the heart .....	2	7			
(d) Abnormalities .....	15	2	13		
(e) Others under this title .....	17	16	1		
Total .....	45	44	1		
Male .....	27	26	1		
Female .....	18	18			
CLASS XV.—DISEASES OF EARLY INFANCY					
158 Congenital debility .....	38	38			
159 Premature birth .....	11	11			
160 Injury at birth .....	138	138			
Total .....	111	111			
(a) With record of Caesarean operation .....	35	35			
(b) Without record of Caesarean operation .....	23	23			
Other diseases peculiar to early infancy (under 3 months) .....	1	1			
Atelectasis .....	34	34			
Total .....	23	23			
Male .....	60	60			
Female .....	39	39			
Atelectasis .....	11	11			
Total .....	6	6			













TABLE 18.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITIONS AND NATIVITY, FOR THE WHOLE PROVINCE, 1933

CAUSES OF DEATH	Conjugal Condition										Nativity							
	Total	Single					Married					Canada	British	U.S.A.	Other	Not Stated		
		Under 15 years					15-24 years	25-44 years	45-64 years	65 years and over	Widowed							
		15-24 years	25-44 years	45-64 years	65 years and over	Not Stated												
DEATHS—ALL CAUSES	Total	5346	1460	259	194	191	142	1	46	515	941	748	849	2915	904	592	901	34
	Male	3165	849	172	166	175	113	1	5	212	568	520	384	1707	517	332	577	32
	Female	2181	611	87	28	16	29	...	41	303	373	228	465	1208	387	260	324	2
CLASS I.—INFECTIOUS AND PARASITIC DISEASES	Total	776	291	85	68	19	7	...	14	96	112	31	53	518	75	70	110	3
1 Typhoid fever	Male	432	155	50	53	18	4	...	...	39	67	19	27	280	44	36	69	3
5 Undulant fever	Female	344	136	35	15	1	3	...	14	57	45	12	26	238	31	34	41	...
6 Smallpox	Male	4	1	1	...	1	...	...	...	2	...	...	...	...	1	...	3	...
7 Measles	Female	2	1	1	...	...	...	...	...	1	...	...	...	1	...	...	1	...
8 Scarlet fever	Male	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9 Whooping cough	Female	4	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10 Diphtheria	Male	26	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Female	29	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Male	4	3	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...
	Female	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11 Influenza	Male	118	44	1	8	4	3	...	...	4	22	14	18	68	17	14	19	...
(a) Sole cause	Female	105	36	2	3	1	2	...	1	15	16	10	19	61	19	13	12	...
(b) With bronchitis	Male	19	11	...	...	...	...	...	...	1	1	1	4	15	1	1	2	...
	Female	17	8	...	...	...	...	...	...	1	1	2	4	10	3	1	3	...
(c) With pneumonia	Male	6	2	...	...	...	2	...	...	1	1	...	1	3	2	1	1	...
	Female	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) With other respiratory diseases	Male	46	17	1	6	2	...	...	...	3	3	8	6	25	8	8	5	...
	Female	43	15	1	...	1	...	...	...	5	8	4	9	27	6	6	4	...
(e) With intestinal complications	Male	11	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
	Female	4	1	...	...	...	...	...	1	...	...	1	1	1	1	1	1	...
	Male	7	5	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
	Female	3	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...



(f) With other causes	Male	Female	Total
13 Dysentery	1	1	2
15 Erysipelas	1	1	2
16 Poliomyelitis and polioencephalitis (acute)	1	1	2
17 Epidemic or lethargic encephalitis	1	1	2
18 Epidemic cerebrospinal meningitis	1	1	2
22 Tetanus	1	1	2
23-32 Tuberculosis	1	1	2
23 Tuberculosis of the respiratory system	1	1	2
24 Tuberculosis of the meninges and central nervous system	1	1	2
25 Tuberculosis of the intestines and peritoneum	1	1	2
26 Tuberculosis of the vertebral column	1	1	2
27 (a) Tuberculosis of bones (vertebral column excepted)	1	1	2
27 (b) Tuberculosis of joints	1	1	2
28 Tuberculosis of the skin and sub-cutaneous cellular tissue	1	1	2
29 Tuberculosis of the lymphatic system (mesenteric, retro-peritoneal and bronchial glands excepted)	1	1	2
30 Tuberculosis of the genito-urinary system	1	1	2
31 Tuberculosis of other organs	1	1	2
32 (a) Disseminated tuberculosis (acute)	1	1	2
(b) Disseminated tuberculosis (chronic)	1	1	2
(c) Disseminated tuberculosis (not specified)	1	1	2
34 Syphilis	1	1	2
35 Gonococcus infection and other venereal diseases	1	1	2
36 Purulent infection, septicaemia (non-puerperal)	1	1	2







TABLE 18.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITIONS AND NATIVITY, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Total	Conjugal Condition								Nativity							
		Under 15 years	Single				Married				Canada	British	U.S.A.	Other	Not Stated		
			15-24 years	25-44 years	45-64 years	65 years and over	Not Stated	15-24 years	25-44 years	45-64 years						65 years and over	
																	Widowed
(m) Of unspecified or unknown location	Male	1									1	1					
	Female	1														1	
54 Non-malignant tumours	Male	10									5	1				4	
(a) Of the ovary	Female	22	1	2				7	8	1	3	10	3	4	5	2	
(b) Of the uterus	Female	6		1				2		1	2	2		2	2		
(c) Of other female genital organs	Female	9						3	6			4	1	2	2		
(d) Of the brain	Female																
(e) Of the thyroid gland	Male	4	1	1				1		1		2		2			
(f) Of the prostate gland	Female	4	1	1													
	Male	3						1	1	1	1	2		2	2		
(g) Of other or unspecified sites	Male	3													1		
	Female							1	1			2	1				
55 (d) Tumours of the brain (nature not specified)	Male	3	1							1		1					
	Female	1	1										1				
55 (g) Of other or unspecified sites (nature not specified)	Male	1												1			
	Female																
CLASS III.—RHEUMATIC DISEASES, DISEASES OF NUTRITION AND OF THE ENDOCRINE GLANDS AND OTHER GENERAL DISEASES	Total	124	35	7	1	4	1	1	9	23	20	23	18	17	21	1	
	Male	58	20	4	1	4	1		3	11	7	8	4	8	12	1	
	Female	66	15	3			1	1	6	12	13	15	14	9	9		
56 Acute rheumatic fever	Male	12	4	4	1				1	1		1	8	1	2		
	Female	8	3	1				1	1	1	1		6	1	1		
57 Chronic rheumatism, osteo-arthritis	Male																
	Female	2															
59 Diabetes mellitus	Male	25	2			4			1	6	7	5	7	7	8	1	
	Female	32	1	1					3	7	9	11	9	9	7		





TABLE 18.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITIONS AND NATIVITY, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Total	Conjugal Condition								Nativity						
		Under 15 years	Single				Married				Widowed	Canada	British	U.S.A.	Other	Not Stated
			15-24 years	25-44 years	45-64 years	65 years and over	15-24 years	25-44 years	45-64 years	65 years and over						
CLASS VI.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE	Total	276	52	12	8	11	9	1	17	50	64	52	143	53	35	45
78 Encephalitis (non-epidemic)	Male	153	35	6	5	11	6	1	7	25	41	17	80	31	19	23
79 Simple meningitis	Female	123	17	6	3	3	3	1	10	25	23	35	63	22	16	22
80 Progressive locomotor ataxia	Male	4	1	1	1	1	1	1	1	2	1	2	2	1	1	1
81 Other diseases of the spinal cord	Female	5	2	1	1	1	1	1	1	1	1	1	4	1	1	1
82 Cerebral haemorrhage, cerebral embolism or thrombosis	Male	12	2	1	1	1	1	1	1	2	4	1	5	3	1	1
(a) Cerebral haemorrhage	Female	7	1	1	1	1	1	1	1	3	1	1	1	1	1	1
(b) Cerebral embolism or thrombosis	Male	66	1	1	1	4	3	2	2	13	29	14	20	21	11	14
(c) Softening of the brain	Female	61	1	1	1	3	2	2	2	12	17	28	20	12	12	17
(d) Hemiplegia and other paralysis (cause not specified)	Male	58	1	1	3	3	2	2	2	10	27	12	18	19	9	12
83 General paralysis of the insane	Female	54	2	2	2	2	2	2	2	12	14	24	17	9	12	16
84 (a) Dementia praecox	Male	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
(b) Other psychoses	Female	5	1	1	1	1	1	1	1	1	1	4	1	3	1	1
85 Epilepsy	Male	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1
86 Convulsions (under 5 years of age)	Female	2	1	1	1	1	1	1	1	2	2	1	2	1	1	2
87 Other diseases of the nervous system	Male	4	1	1	2	2	1	1	1	1	2	2	2	2	1	1
Total	Female	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Male	8	1	3	1	4	1	1	1	2	3	2	5	2	1	1
	Female	12	1	2	1	1	1	1	1	1	1	2	5	3	1	1
	Male	9	18	1	1	1	1	1	1	2	2	2	5	3	1	1
	Female	18	6	6	1	1	1	1	1	3	7	6	17	6	4	1
	Male	16	3	1	1	1	1	1	3	3	1	1	11	4	1	1
	Female	11	1	1	1	1	1	1	1	1	1	2	8	2	1	1









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TABLE 18.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITIONS AND NATIVITY, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Conjugal Condition										Nativity					
	Total	Under 15 years	Single					Married			Canada	British	U.S.A.	Other	Not Stated	
			15-24 years	25-44 years	45-64 years	65 years and over	Not Stated	15-24 years	25-44 years	45-64 years						65 years and over
(b) Ulcer of the duodenum	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
118 Other diseases of the stomach	17	6	1	2	3	...	2	1	1	2	2	3	3	1	...	...
Male	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
119 Diarrhoea and enteritis (under 2 years of age)	53	53	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	36	36	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	17	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...
120 (a) Diarrhoea and enteritis (2 years and over)	9	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	9	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Ulceration of the intestines (2 years and over)	8	1	2	1	...	...	1	1	1	1	3	1	1	2	...	...
Male	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
121 Appendicitis	77	24	15	13	3	2	...	9	9	1	48	9	9	11	...	...
Male	53	15	7	1	...	...	18	7	7	3	32	7	8	6	...	...
Female	20	2	2	2	1	...	1	1	1	2	6	4	4	10	...	...
122 (a) Hernia	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Intestinal obstruction	18	4	5	1	1	...	...	...	...	...	...	...	...	...	...	...
Male	19	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
123 Other diseases of the intestines	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
124 (a) Cirrhosis of the liver, specified as alcoholic	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Cirrhosis of the liver, not specified as alcoholic	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
125 (a) Yellow atrophy of the liver	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Other diseases of the liver	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
126 Biliary calculi	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
127 Other diseases of the gall-bladder and biliary passages	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	18	...	1	2	1	1	...	5	8	2	7	4	4	3	5	5
Female	21	...	1	...	...	...	...	2	5	2	3	5	4	6	4	3
128 Diseases of the pancreas	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
129 Peritonitis, cause not specified	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	5	3	...	...	...	...	1	...	1	...	3	2	...	...	...	...



CLASS X.—DISEASES OF THE GENITO-URINARY SYSTEM		Total	287	12	4	4	8	16	2	29	64	75	73	113	71	49	53	1
130 Acute nephritis (including unspecified, under 10 years of age)		Male	180	5	2	2	8	14	2	9	41	59	38	74	41	31	33	1
		Female	107	7	2	2	4	2	2	20	23	16	35	39	30	18	20	...
131 Chronic nephritis		Male	13	3	...	2	1	...	...	2	2	1	2	6	3	1	3	...
		Female	8	3	1	...	...	...	...	2	1	1	...	5	1	1	1	...
132 Nephritis not specified (10 years and over)		Male	80	1	2	2	5	6	...	3	19	25	17	34	18	13	15	...
		Female	81	3	1	...	...	2	...	12	19	12	31	29	24	13	15	...
133 Other diseases of the kidneys and ureters		Male	9	...	...	...	...	...	...	1	4	2	2	5	2	2	2	...
		Female	3	...	...	...	...	...	...	1	1	1	1	1	1	1	1	...
134 Calculi of the urinary passages		Male	10	1	...	...	...	...	...	1	4	3	1	6	2	2	2	...
		Female	4	1	...	...	...	...	...	1	1	1	1	1	1	1	1	...
135 Diseases of the bladder (tumours excepted)		Male	4	...	...	...	...	...	...	2	2	1	1	2	1	1	1	...
		Female	3	...	...	...	...	...	...	1	1	1	1	1	1	1	1	...
136 (a) Stricture of the urethra		Male	3	...	...	...	...	...	...	1	1	1	1	1	1	2	...	...
		Female	2	...	...	...	...	...	...	1	1	...	1	1	1	...	...	...
137 Diseases of the prostate		Male	59	...	...	...	2	8	...	...	8	27	14	20	13	10	15	1
139 (a) Of the ovary, Fallopian tube and parametrium		Female	4	...	...	...	...	...	...	1	2	...	1	1	1	2	...	...
(b) Of the uterus		Female	2	...	...	...	...	...	...	1	1	...	...	...	1	1	...	...
CLASS XI.—DISEASES OF PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE		Total	73	...	2	1	...	...	11	57	1	...	1	30	6	14	23	...
140 (a) Abortion (with septic conditions)		Female	12	...	...	...	...	...	...	12	...	...	...	2	1	5	4	...
(b) Self-induced abortion (with septic conditions)		Female	4	...	...	...	...	...	...	4	...	...	...	1	1	...	2	...
141 (a) Abortion without mention of septic conditions (haemorrhage included)		Female	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
(b) Self-induced abortion		Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
142 (a) Ectopic gestation, with septic conditions		Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Without mention of septic conditions		Female	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
143 Other accidents of pregnancy (haemorrhage excluded)		Female	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
144 (a) Placenta praevia		Female	2	...	...	...	...	...	...	2	...	...	...	1	...	...	1	...
(b) Other puerperal haemorrhage		Female	13	...	1	...	...	...	1	11	...	...	...	4	2	3	4	...
145 (a) Puerperal septicaemia (not specified as consequent upon abortion)		Female	9	...	...	1	...	...	1	6	1	...	...	4	...	1	4	...
146 Puerperal albuminuria and eclampsia		Female	10	...	...	...	...	...	3	7	...	...	...	5	1	3	1	...

TABLE 18.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITIONS AND NATIVITY, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH																	
		Total	Conjugal Condition								Nativity						
			Under 15 years	Single				Married				Widowed	Canada	British	Nativity		
				15-24 years	25-44 years	45-64 years	65 years and over	15-24 years	25-44 years	45-64 years	65 years and over				U.S.A.	Other	
147	Other toxæmias of pregnancy	Female	8							2	6			4	1	3	Not Stated
148	(a) Puerperal phlegmasia alba dolens and thrombosis	Female	1							1					1		
	(b) Puerperal embolism	Female	2								2			2			
	(c) Puerperal, sudden death	Female	1								1					1	
149	(a) Caesarean section	Female	2							1	1			1		1	
	(b) Dystocia	Female	1								1					1	
	(c) Instrumental delivery	Female	2								2					1	
150	(b) Other or unspecified condition of the puerperal state	Female	3		1					2				3		1	
CLASS XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE																	
	Total		18	5	2	1	1	1	1	2	3	1	1	11	2	2	3
	Male		13	5	2	1	1	1	1	2	1	1	1	9	2	1	3
	Female		5							1				2			
151	Carbuncle	Male	5	1	1						2	1		2		1	2
	Female		1							1				1			
152	Cellulitis, acute abscess	Male	4	1	1	1	1							4			
	Female		1									1		1			
153	Other diseases of the skin and annexa and of the cellular tissue	Male	4	3										1	3		1
	Female		3					1				2			2	1	
CLASS XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION																	
	Total		10	5		2					1			2	7	1	1
	Male		3	1		1					1			1	1	1	
	Female		7	4		1								2	6		1
154	Osteomyelitis	Male	2	1	1						1				1		1
	Female		5	4											4		











TABLE 18.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITIONS AND NATIVITY, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Conjugal Condition												Nativity			
	Total	Single					Married				Canada	British	U.S.A.	Other	Not Stated	
		Under 15 years	15-24 years	25-44 years	45-64 years	65 years and over	Not Stated	15-24 years	25-44 years	45-64 years						65 years and over
193 Accidental electric shocks	Male	2										1	1			
	Female															
194 Other accidents	Male	8	1		1				2	2	1	4	1	1	1	
(a) Foreign body	Female	6	2						1			4	1	1		
(b) Others under this title	Male	1										1				
195 Violent deaths of which the nature (accident, suicide, homicide) is unknown	Female	8	1		1				2	2		4	1	1	2	
	Female	5	1						1		1	3	1	1		
198 Capital punishment	Male	1			1										1	
	Female	2		1						1		1		1		
	Female															
CLASS XVIII.—ILL-DEFINED CAUSES OF DEATH	Total	51	27	2	3			1	1	7	8	34	4	5	8	
	Male	30	14	1	3					5	6	17	4	3	6	
	Female	21	13	1	1			1		2	2	17		2	2	
199 Sudden death	Male	12	2		1					3	2	5	4		3	
	Female	4			1			1			2	2		2		
200 Cause of death not specified or ill-defined	Male	18	12									12		3	3	
	Female	17	13								4	2		3	2	









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TABLE 19.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Total	MONTHS											
		January	February	March	April	May	June	July	August	September	October	November	December
43 Mycoses	2					1	1						
(a) Chickenpox	1			1									
(b) German measles													
(c) Other infectious or parasitic diseases	1								1				
	1			1									
<b>CLASS II.—CANCER AND OTHER TUMOURS</b>													
45-53 Cancer and other malignant tumours	627	50	46	51	49	46	51	46	55	39	71	61	62
45 Cancer of the buccal cavity and pharynx	339	30	25	22	26	21	26	25	28	23	42	37	34
46 (a) Of the oesophagus	288	20	21	29	23	25	25	21	27	16	29	24	28
(b) Of the stomach and duodenum													
(c) Of the rectum													
(d) Of the liver and biliary ducts													
(e) Of the pancreas													
(f) Of the peritoneum													
(g) Of other organs													
47 (a) Of the larynx	325	29	24	22	24	20	23	25	27	23	39	36	33
(b) Of the lung	265	19	19	26	23	23	23	20	26	16	25	20	25
(c) Of the mediastinum	11	1	1	1	1			1	1	1	2	1	1
	5												
	4			1	1	1						1	
	104	9	15	10	6	6	4	6	10	5	14	11	8
	47	4	4	6	3	4	5	2	4	4	4	1	6
	18	1			2		3	1			2	4	5
	15	3			1	3	1	1			2	1	
	19	1	1	2	1			3	3	1	2	3	2
	15	1	2	1			3	1	3	1	1	3	
	8	1			1							2	1
	1												
	1												
	37	4	1	2	4	2	4	2	2	6	3	5	2
	30		3	4	4		4		3	4	2	5	1
	1											1	
	12		1		2		1	2	1		2	1	2
	4		1					2	1			1	1
	5		1		1			2					
	1							1					



(d) Of other organs of the respiratory system	Male	1	3	1	2	1	1	2	5	3	1	1	5	5	4	...
48 (a) Of the uterus	Female	35	1	1	1	2	1	4	1	1	1	1	1	1	1	...
(b) Of the cervix uteri	Female	11	1	1	3	1	2	2	1	1	1	1	1	1	1	...
49 Cancer of other female genital organs	Female	9	1	1	1	1	2	1	1	1	1	1	1	1	1	...
50 Cancer of the breast	Male	1	3	2	6	10	10	5	4	6	1	4	5	1	6	...
51 (a) Of the bladder	Female	58	1	2	2	1	2	2	3	2	2	4	2	1	4	...
(b) Of the kidney	Male	22	1	1	1	1	2	2	1	1	1	4	4	1	2	...
(c) Of the prostate gland	Male	11	1	1	1	1	1	2	1	1	1	1	4	2	2	...
(d) Of the testicle	Male	23	2	1	1	1	1	1	1	2	5	2	3	3	3	...
(e) Of other male genito-urinary organs	Male	1	1	1	1	1	1	1	1	1	1	1	1	1	1	...
52 Cancer of the skin	Male	1	1	1	1	1	1	1	1	1	1	1	1	1	1	...
53 (a) Of the eye and orbit	Female	7	1	1	1	1	1	2	1	1	1	1	1	1	1	...
(b) Of the circulatory system	Male	1	1	1	2	1	1	1	1	1	2	1	1	1	1	...
(c) Of the glandular system	Female	2	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(d) Of the female urinary organs	Male	4	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(e) Of the bones and joints	Female	2	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(f) Of the brain	Male	6	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(g) Of the spine and spinal cord	Female	7	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(h) Of the neck	Male	12	2	1	1	1	1	2	1	1	1	1	2	1	1	...
(i) Of the abdomen	Female	8	1	1	1	1	1	1	1	1	1	1	3	1	1	...
(j) Of other specified organs	Male	3	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(k) Multiple cancer	Female	2	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(m) Of unspecified or unknown location	Male	3	1	1	1	1	1	1	1	1	1	1	1	1	1	...
54 Non-malignant tumours	Female	4	1	1	1	1	1	1	1	1	1	1	1	1	1	...
(a) Of the ovary	Male	20	1	1	1	1	1	1	2	1	1	1	2	1	1	...
(b) Of the uterus	Female	22	1	1	1	1	1	2	3	1	1	1	3	1	2	...
	Female	6	1	1	1	1	1	2	3	1	1	1	1	1	1	...
	Female	9	1	1	1	1	1	2	3	1	1	1	1	1	1	...







TABLE 19.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Total	MONTHS											
		January	February	March	April	May	June	July	August	September	October	November	December
82 Cerebral haemorrhage, cerebral embolism or thrombosis	Total	66	7	10	3	2	8	5	7	7	4	6	2
(a) Cerebral haemorrhage	Male	61	3	7	8	6	5	2	4	5	5	10	3
(b) Cerebral embolism or thrombosis	Female	58	7	9	3	1	6	3	6	7	4	5	3
(c) Softening of the brain	Male	54	2	6	6	5	5	2	4	5	10	2	2
(d) Hemiplegia and other paralysis, cause not specified	Female	5			2	1	1				1	1	
83 General Paralysis of the insane	Male	6		1		1		2	1				
84 (a) Dementia praecox	Female	2	1	1					1				
(b) Other psychoses	Male	2		1					1	1			
85 Epilepsy	Female	1							1				1
86 Convulsions (under 5 years of age)	Male	12	1	1	1	1	1	1	2			1	
87 Other diseases of the nervous system	Female	18	1	2	1	1	3	2	1	1	1	1	1
(a) Chorea	Male	16	1	1	1	2	2	2	1	1	1	1	1
(b) Neuritis	Female	11	1	1	1	2	1	1	1	1			
(c) Paralysis agitans	Male	1											
(d) Disseminated sclerosis	Female	3		1	1		1	1	1				
(e) Others under this title	Male	4	1	1		2			1	1	1	1	1
88 Diseases of the organs of vision	Female	5	1	1	1	2	2	2					
89 (a) Otitis	Male	3											
(b) Mastoid process	Female	6	1	1	1				1			1	2





TABLE 19.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Total	MONTHS											
		January	February	March	April	May	June	July	August	September	October	November	December
98 Gangrene	Male 11	1	4	1	2		2						1
99 Other diseases of the arteries	Female 2	1						1					
100 Diseases of the veins (varices, haemorrhoids, phlebitis, etc.)	Male 4		1							1			2
101 Diseases of the lymphatic system (lymphangitis, etc.)	Female 1											1	
102 Idiopathic abnormalities of blood pressure	Male 1			1									
103 Other diseases of the circulatory system	Female 40	3	1	2	5	1	5	5	3	2	4	5	4
	Male 38	4	3	2	4	2	6	3	4	3	1	3	3
	Female												
Total	406	56	45	53	37	33	25	13	17	24	25	35	43
CLASS VIII.—DISEASES OF THE RESPIRATORY SYSTEM	Male 251	37	29	30	23	25	17	9	10	15	10	25	21
	Female 155	19	16	23	14	8	8	4	7	9	15	10	22
104 Diseases of the nasal fossae and annexa	Male 4		2	1								1	
105 (a) Croup	Female 6	1			1				1		2		1
(b) Other diseases of the larynx	Male 1				1								
106 (a) Bronchitis (acute)	Female 3	1	1									1	1
(b) Bronchitis (chronic)	Male 9			2	1	1	1	2		1		2	
(c) Bronchitis (unspecified)	Female 3	1				2						1	
107 (a) Bronchopneumonia	Male 5			2		1			1				
(b) Capillary bronchitis	Female 2										1		1
108 Lobar pneumonia	Male 97	15	15	9	10	9	7	3	3	6	1	10	9
109 Pneumonia (not specified)	Female 59	10	6	8	5	3	4			7	5	3	8
	Male 1			1									
	Female 66	11	7	4	9	7	4	1	4	5	6	3	5
	Male 43	6	7	7	4	1	3	1	2	1	5	2	4
	Female 30	5	2	7	3	2	1	1	1	1	1	2	4
	Male 31	1	1	8	3	1	1	2	4	1	1	2	6



	Male	Female	Total	14	3	36	50	48	43	49	44	39	33	48
110 Pleurisy	2	3	5	14	3	36	50	48	43	49	44	39	33	48
111 (a) Congestion and haemorrhagic infarct of the lung, etc.	3	1	4	2	1	3	3	1	1	1	1	1	1	1
112 Asthma	15	4	19	15	1	16	16	1	1	1	1	1	1	1
113 Pulmonary emphysema	4	1	5	4	1	5	5	1	1	1	1	1	1	1
114 (a) Chronic interstitial pneumonia including occupational diseases of the respiratory system	1	1	2	1	1	2	2	1	1	1	1	1	1	1
(b) Gangrene of the lung	1	1	2	1	1	2	2	1	1	1	1	1	1	1
(c) Other diseases of the respiratory system (tuberculosis excepted)	2	2	4	2	2	4	4	1	1	1	1	1	1	1
115 (a) Diseases of the buccal cavity and annexa	2	1	3	2	1	3	3	1	1	1	1	1	1	1
(b) Diseases of the tonsils	8	10	18	8	10	18	18	2	2	2	2	2	2	2
(c) Other diseases of the pharynx	7	3	10	7	3	10	10	1	1	1	1	1	1	1
116 Diseases of the oesophagus	1	1	2	1	1	2	2	1	1	1	1	1	1	1
117 (a) Ulcer of the stomach	26	2	28	26	2	28	28	1	1	1	1	1	1	1
(b) Ulcer of the duodenum	17	2	19	17	2	19	19	1	1	1	1	1	1	1
118 Other diseases of the stomach	17	1	18	17	1	18	18	1	1	1	1	1	1	1
119 Diarrhoea and enteritis (under 2 years of age)	53	9	62	53	6	59	59	3	3	3	3	3	3	3
120 (a) Diarrhoea and enteritis (2 years and over)	36	3	39	36	3	39	39	2	2	2	2	2	2	2
(b) Ulceration of the intestines (2 years and over)	7	1	8	7	1	8	8	1	1	1	1	1	1	1
121 Appendicitis	3	3	6	3	3	6	6	1	1	1	1	1	1	1
122 (a) Hernia	77	53	130	77	12	89	89	9	9	9	9	9	9	9
(b) Intestinal obstruction	20	8	28	20	2	22	22	2	2	2	2	2	2	2
Other diseases of the intestines	18	19	37	18	2	20	20	4	4	4	4	4	4	4
123 (a) Cirrhosis of the liver, specified as alcoholic	7	2	9	7	1	8	8	3	3	3	3	3	3	3
(b) Cirrhosis of the liver, specified as non-alcoholic	2	1	3	2	1	3	3	1	1	1	1	1	1	1





CLASS XI.—DISEASES OF PREGNANCY, CHILDBIRTH AND THE  
PUERPERAL STATE

140 (a) Abortion (with septic conditions)	73	5	2	12	5	11	8	5	8	1	3	9	4
Female	12	1		3	2		1	2		1	1	1	
(b) Self-induced abortion (with septic conditions)	4			1					1			2	
Female													
141 (a) Abortion without mention of septic conditions (haemorrhage included)	1					1							
Female													
(b) Self-induced abortion													
Female													
142 (a) Ectopic gestation, with septic conditions													
Female													
(b) Without mention of septic conditions	1			1									
Female													
143 Other accidents of pregnancy (haemorrhage excluded)	1								1				
Female													
144 (a) Placenta praevia	2	1											1
Female													
(b) Other puerperal haemorrhage	13	3		2		1	1	1	1			3	1
Female													
145 (a) Puerperal septicaemia (not specified as consequent abortion)	9	1		1	1	2			1		1	1	1
Female													
146 Puerperal albuminuria and eclampsia	10		1	1		2	2		2			1	1
Female													
147 Other toxæmias of pregnancy	8			1		3	2	2					
Female													
148 (a) Puerperal phlegmasia alba dolens and thrombosis	1					1							
Female													
(b) Puerperal embolism	2			2									
Female													
(c) Puerperal, sudden death	1				1								
Female													
149 (a) Caesarean section	2					1	1						
Female													
(b) Dystocia	1						1						
Female													
(c) Instrumental delivery	2											1	
Female													
150 (b) Other or unspecified condition of the puerperal state	3								2		1		
Female													
CLASS XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE	18	3	2		4	1	1	1	1	2	1	1	1
Total	13	2	2		2	1	1	1	1	2	1	1	1
Male	5	1			2					1			
Female													
151 Carbuncle	5		1		1	1				1	1		
Male	1												
Female													
152 Cellulitis, acute abscess	4		1				1			1			1
Male													
Female	1				1								

TABLE 19.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, FOR THE WHOLE PROVINCE, 1933—Continued

CAUSES OF DEATH	Total	MONTHS											
		January	February	March	April	May	June	July	August	September	October	November	December
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
153 Other diseases of the skin and annexe and of the cellular tissue	4	2	1	3	1	1	2	1	1	2	1	1	2
<b>CLASS XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION</b>	<b>10</b>	<b>3</b>	<b>7</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>2</b>
154 Osteomyelitis	2	1	1	2	1	1	2	1	1	2	1	1	2
155 Other diseases of the bones (tuberculosis excepted)	3	2	1	3	1	1	2	1	1	2	1	1	2
156 (a) Diseases of the joints (tuberculosis and rheumatism excepted)	1	1	1	2	1	1	2	1	1	2	1	1	2
(b) Diseases of other organs of locomotion	1	1	1	2	1	1	2	1	1	2	1	1	2
<b>CLASS XIV.—CONGENITAL MALFORMATIONS</b>	<b>77</b>	<b>6</b>	<b>10</b>	<b>16</b>	<b>7</b>	<b>4</b>	<b>11</b>	<b>6</b>	<b>5</b>	<b>11</b>	<b>6</b>	<b>4</b>	<b>10</b>
157 (a) Congenital hydrocephalus	5	3	2	5	2	3	5	3	2	5	3	3	6
(b) Spina bifida and meningocele	2	1	1	2	1	1	2	1	1	2	1	1	2
(c) Congenital malformations of the heart	15	1	3	4	1	1	2	3	1	4	1	1	2
(d) Abnormalities	17	3	1	4	2	1	3	3	1	4	1	1	2
(e) Others under this title	17	1	2	3	1	1	2	3	1	4	2	1	3
<b>CLASS XV.—DISEASES OF EARLY INFANCY</b>	<b>455</b>	<b>39</b>	<b>46</b>	<b>85</b>	<b>48</b>	<b>30</b>	<b>78</b>	<b>41</b>	<b>30</b>	<b>71</b>	<b>28</b>	<b>32</b>	<b>60</b>
158 Congenital debility	38	3	4	7	8	2	10	3	3	6	1	2	3
	11	1	1	2	1	1	2	1	1	2	1	1	2



159	Premature birth	Male	138	12	16	8	13	16	11	15	13	9	6	9	10
		Female	111	9	11	15	11	8	10	4	6	14	5	10	2
160	Injury at birth	Male	35	2	4	4	4	6	5	5	1	1	4	3	3
		Female	23	2	4	3	3	2	1	1			3	4	4
	(a) With record of Caesarean operation	Male	1				1								
		Female													
	(b) Without record of Caesarean operation	Male	34	2	4	4	3	6	5	5	1	1	4		3
		Female	23	2	4	3	3	2	1	1			3		4
161	Other diseases peculiar to early infancy (under 3 months)	Male	60	5	6	4	5	3	7	5	1	4	6	7	7
		Female	39	5	4	3	3	6	3	2	5	2	2	3	1
	(a) Atelectasis	Male	11	1	1		1		4	1	1	2	1	2	1
		Female	6	1			1		1	1	1		1	1	1
	(b) Icterus of the new-born	Male	7	1	1	1		1	1		1	2		1	1
		Female	4												
	(c) Sclerema and oedema	Male													
		Female													
	(d) Athrepsia	Male													
		Female													
	(e) Others, including lack of care	Male	22	2	3	3	2	2	2	2	1	1	1	1	4
		Female	14	3	1	1	1	2	2	1	2	1	1	1	1
	(f) Unspecified causes	Male	20	1	1	1	2	1	1	4	1	2	4	3	2
		Female	15	1	3	1	2	3			1	2		2	
	Total		79	6	6	4	5	6	9	9	11	1	9	6	7
	Male		45	4	4	4	1	2	7	5	5	1	5	2	6
	Female		34	2	2		4	4	2	4	6	1	4	4	1
162	(a) With senile dementia (70 years and over)	Male	4		1				1	1			1		
		Female													
	(b) Without senile dementia (70 years and over)	Male	38	3	2	4	1	2	6	3	5		4	2	6
		Female	32	2	2		4	4	2	3	5	1	4	4	1
	(c) Premature senility (55 years but under 70 years)	Male	3	1	1					1	1				
		Female	2												
	Total		463	25	21	34	33	39	56	49	57	28	46	40	35
	Male		354	19	15	25	21	26	43	36	50	23	33	36	27
	Female		109	6	6	9	12	13	13	13	7	5	13	4	8
163-171	Suicides	Male	65	5		5	5	9	11	3	7	6	7	1	6
		Female	20	2		1	3		5	5	2	1	1	1	1
163	Suicide by solid or liquid poisons or by absorption of corrosive substances	Male	10			3	1	1	3			1			1
		Female	10	2			1		2	3	1				1
164	Suicide by poisonous gas	Male	4				1		2				1		
		Female													
165	Suicide by hanging or strangulation	Male	12	2		1	1		1	1	3	2	2		1
		Female	3						1	1	2	1	1		1
166	Suicide by drowning	Male	8					1	2		2	1	1		1
		Female	1												
167	Suicide by firearms	Male	23	3			3	5	2	1	2	2	3	1	2
		Female	3				1		1		1				
168	Suicide by cutting or piercing instruments	Male	1												1
		Female	2						1					1	

## CLASS XVI.—SENILITY

## CLASS XVII.—VIOLENT OR ACCIDENTAL DEATHS





188 Injuries inflicted by animals .....	Male	17	3	2	1	1	4	3	1	2
189 Hunger or thirst .....	Female	1								1
190 Excessive cold .....	Male	1								1
191 Excessive heat .....	Female	8		3		1				3
192 Lightning .....	Male	1								
193 Accidental electric shocks .....	Female	1								
194 Other accidents .....	Male	2								
Total .....	Female	8	1		1	1	2	1	2	
(a) Foreign body .....	Male	6	1		1	1	2	1	2	
(b) Others under this title .....	Female	1								
195 Violent deaths of which the nature (accident, suicide, homicide) is unknown .....	Male	8	1		1	1	2	1	2	
198 Capital punishment .....	Female	5	1		1	1	2	1	2	
Total .....	Male	1								
199 Sudden death .....	Female	2								
200 Cause of death not specified or ill-defined .....	Male	51	5	6	2	5	8	2	7	2
Total .....	Female	30	3	4	1	3	3	1	4	1
Male .....	Male	21	2	2	1	2	5	1	3	2
Female .....	Female	12	2	1			2	1	1	2
Cause of death not specified or ill-defined .....	Male	4								
Total .....	Female	18	1	3	1	3	1	3	3	2
Male .....	Male	17	2	2		1	4	1	3	2
Female .....	Female									

## CLASS XVIII.—ILL-DEFINED CAUSES OF DEATH

## SPECIAL CLASSES OF ACCIDENTAL DEATHS (INCLUDED ALSO IN THE PRECEDING TABLE), 1933

A Accidents in mines and quarries .....	Male	7	1	1	2	1	2	1	2	2
B Accidents caused by machines .....	Female	21		1	1	1	3	5	2	3
C Railway accidents .....	Male	16		1	2		4	2	1	1
D Street car accidents .....	Female									
E Automobile and motorcycle accidents .....	Male	47			5		3	10	5	8
F Other land transportation .....	Female	17					6	3	1	4
G Water transportation .....	Male	22	1	1	1	2	2	1	2	3
H Air transportation .....	Female	2					3	1	1	1
Total .....	Male	6								
Female .....	Female	1								























CLASS X.—DISEASES OF THE GENITO-URINARY SYSTEM	Total	Male	Female
130 Acute nephritis (including unspecified, under 10 years of age)	51 36 15	1	1
131 Chronic nephritis	1	1	1
132 Nephritis not specified (10 years and over)	13 10	1	1
133 Other diseases of the kidneys and ureters	1	1	1
134 Calculi of the urinary passages	1	1	1
135 Diseases of the bladder (tumours excepted)	2 1	2	1
137 Diseases of the prostate	1 19	1	1
CLASS XI.—DISEASES OF PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE	Total	Male	Female
142 (b) Ectopic gestation, without septic conditions	7	2	1
144 (b) Puerperal haemorrhage	1	1	1
146 Puerperal albuminuria and eclampsia	3	2	1
147 Other toxæmias of pregnancy	1	1	1
148 (b) Puerperal embolism	1	1	1
CLASS XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE	Total	Male	Female
151 Carbuncle	6	1	1
152 Cellulitis, acute abscess	5 1	1	1
153 Other diseases of the skin and annæxa and of the cellular tissue	2	2	1
CLASS XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION	Total	Male	Female
154 Osteomyelitis	5	1	1
155 Other diseases of the bones (tuberculosis excepted)	1 4	1	1





CLASS XVII.—VIOLENT OR ACCIDENTAL DEATHS										Total
										Male
										Female
163-171	Suicides	Total	Male	Female	1	4	1	1	2	51
163	Suicide by solid or liquid poisons or by absorption of corrosive substances	Male	1	3	1	1	1	1	2	36
164	Suicide by poisonous gas	Female	1	1	1	1	1	1	1	15
166	Suicide by drowning	Male	1	1	1	1	1	1	1	8
167	Suicide by firearms	Female	1	1	1	1	1	1	1	1
168	Suicide by cutting or piercing instruments	Male	1	1	1	1	1	1	1	1
169	Suicide by jumping from high places	Female	1	1	1	1	1	1	1	1
173-175	Homicides	Total	Male	Female	2	1	1	1	2	2
174	Homicide by cutting or piercing instruments	Male	2	1	1	1	1	1	2	2
176-198	Other violent deaths	Total	Male	Female	26	2	1	1	2	15
179	Other acute accidental poisonings (except by gas)	Male	1	1	1	1	1	1	1	1
181	Accidental burns (conflagration excepted)	Female	3	2	1	1	1	1	1	3
183	Accidental drownings	Male	2	2	1	1	1	1	1	2
184	Accidental injury by firearms	Female	1	1	1	1	1	1	1	1
185	Accidental injury by cutting or piercing instruments	Male	4	1	1	1	1	1	1	4
186	Accidental injuries resulting from falling, crushing or landslide	Female	1	1	1	1	1	1	1	1
188	Injuries inflicted by animals	Male	14	1	1	1	1	1	1	14
194	Other accidents	Female	10	1	1	1	1	1	1	10
CLASS XVIII.—ILL-DEFINED CAUSES OF DEATH										Total
										Male
										Female
199	Sudden death	Male	1	1	1	1	1	1	1	1
		Female	1	1	1	1	1	1	1	1













TABLE 21.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITION AND NATIVITY IN EDMONTON, 1933—Continued

CAUSES OF DEATH	Conjugal Condition										Nativity						
	Total	Under 15 years	Single				Married				Canada	British	Nativity				
			15-24 years	25-44 years	45-64 years	65 years and over	Not Stated	Foreign									
								15-24 years	25-44 years	45-64 years			65 years and over	Not Stated			
															U.S.A.	Other	
(h) Of the neck	Male	1														1	
(i) Of the abdomen	Female																1
(j) Of other specified organs	Male	1		1											1		1
(k) Multiple cancer	Female	1			1												1
54 Non-malignant tumours	Male																
	Female																
	Male	5		1		2				1		3			2		2
	Female	3		1						3	2		1			2	
(a) Of the ovary	Female	1															
(b) Of the uterus	Male																
(d) Of the brain	Female	2		1													1
(e) Of the thyroid gland	Male	1													1		
(f) Of the thyroid gland	Female	1															
(g) Of other or unspecified sites	Male	2				1											
(g) Of other or unspecified sites	Female																
CLASS III.—RHEUMATIC DISEASES, DISEASES OF NUTRITION AND OF THE ENDOCRINE GLANDS AND OTHER GENERAL DISEASES	Total	20	1							3	6	7	3	3	5		
	Male	6	1							2	2	1	2	1	3		
	Female	14								1	4	7	2	3	2		
56 Acute rheumatic fever	Male	1															
57 Chronic rheumatism, osteo-arthritis	Female	1															
59 Diabetes mellitus	Male																
66 (a) Simple goitre	Female	2															
66 (a) Simple goitre	Male	10								1	2	5	2	3	1	2	
(b) Exophthalmic goitre	Female	1															
(b) Exophthalmic goitre	Male	1															
(b) Exophthalmic goitre	Female	2								1		2					1





TABLE 21.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITION AND NATIVITY IN EDMONTON, 1933—Continued

CAUSES OF DEATH	Conjugal Condition												Nativity				
	Total	Single					Married					Canada	British	U.S.A.	Foreign	Other	Not Stated
		Under 15 years	15-64 years				15-24 years	25-44 years	45-64 years	65 years and over	Widowed						
			15-24 years	25-44 years	45-64 years	65 years and over											
CLASS VII.—DISEASES OF THE CIRCULATORY SYSTEM																	
90-95 Diseases of the heart	Total	180	1	3	2	8	11	2	9	54	38	52	91	46	19	24	
90 Pericarditis	Male	123	3	2	2	7	10	2	8	40	32	21	62	32	13	16	
	Female	57	1			1	1		1	14	6	31	29	14	6	8	
91 Acute endocarditis	Male	90		3	2	5	5		7	29	25	14	44	23	9	14	
	Female	40	1			1	1		2	10	4	20	20	10	4	6	
	Male	1								1				1			
92 Chronic endocarditis, valvular diseases	Female	2															
93 Diseases of the myocardium	Male	17		2	1	2			1	5	3	3	5	7	2	3	
	Female	15							2	6	2	5	5	4	3	3	
94 (a) Diseases of the coronary arteries	Male	29				1	4		2	4	11	7	15	9	3	2	
	Female	12				1	1		1	1	1	8	8	3	3	1	
	Male	3				1				1	1	1	2	1			
	Female	2										2	2	4	3	7	
(b) Embolism and thrombosis of coronary arteries	Male	32				1	1		3	16	8	3	18	4	3	7	
	Female	6								3		3	3	2	1		
(c) Angina pectoris	Male	3							1	1	1	1	1	1	1	1	
95 Other diseases of the heart	Female	1										1	1	1			
96 Aneurysm (other than of the heart)	Male	3							2	2	1	2	2	1			
	Female	4	1								2	1	2	1			
97 Arteriosclerosis (of coronary arteries excepted)	Male	2									1	1	1	1			
	Female	17				1	3			5	6	2	11	4	2	1	
98 Gangrene	Male	9									2	7	6	1			
	Female	2										2	1	1			
100 Diseases of the veins (varices, haemorrhoids, phlebitis, etc.)	Male	1										1	1	1			
	Female	1															
102 Idiopathic abnormalities of blood pressure	Male	12				1	2		1	6		2	5	3	2	2	
	Female	6								3		3	2	1		1	

















TABLE 22.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, IN EDMONTON, 1933

CAUSES OF DEATH	Total	MONTHS											
		January	February	March	April	May	June	July	August	September	October	November	December
<b>DEATHS—ALL CAUSES</b>													
Total	870	94	66	65	78	77	78	65	79	56	88	61	63
Male	512	51	40	36	38	48	48	42	53	29	53	34	40
Female	358	43	26	29	40	29	30	23	26	27	35	27	23
<b>CLASS I.—INFECTIOUS AND PARASITIC DISEASES</b>													
1 Typhoid fever	102	19	6	7	6	12	8	4	10	6	7	8	9
Female	57	12	6	3	1	8	4	2	5	2	4	6	4
Male	45	7		4	5	4	4	2	5	4	3	2	5
7 Measles	1					1							
Female													
Male													
8 Scarlet fever													
Female													
Male													
9 Whooping cough	2												
Female	4												
Male	1												
10 Diphtheria													
Female													
Male													
11 Influenza	12	5	1	1		1							
Female	14	5		2		3		1		1	1	2	2
(a) Sole cause	1			1									
Female													
Male													
(b) With bronchitis	2					1						1	
Female													
Male													
(c) With pneumonia	9	4	1										
Female	7	4				2					1	1	2
Male	1	1											
(d) With other respiratory diseases	2			1						1			
Female													
Male													
(e) With intestinal complications	1												
Female	3	1		1		1							
Male													
(f) With other causes													
Female													
Male													
13 Dysentery													
Female													
Male													
15 Erysipelas	2						1					1	
Female	2				1								





TABLE 22.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, IN EDMONTON, 1933—Continued

CAUSES OF DEATH	Total	MONTHS											
		January	February	March	April	May	June	July	August	September	October	November	December
(c) Of the mediastinum	Male	1						1					
(d) Of other organs of the respiratory system	Female												
48 (a) Of the uterus	Male												
	Female	8	1	1		1	1				1	2	1
(b) Of the cervix uteri	Female	4		1		1	2						
49 Cancer of other female genital organs	Female	2			1			1					
50 Cancer of the breast	Male	8			1	1		1	2	1	1		1
51 (a) Of the bladder	Female	5	1			1				1			2
	Male	6	1			2					2		1
(b) Of the kidney	Male	3							1			1	
(c) Of the prostate gland	Male												
(d) Of the testicle	Male												
52 Cancer of the skin	Male	3			1								
53 Cancer of other or not specified organs	Female	1	1	1									
	Male	13	2	1		3	1	2	1	1	2	1	1
(a) Of the eye and orbit	Female	11		1				1	1		4	1	1
	Male												
(d) Of the female urinary organs	Female	2						1					1
	Female	2	1								1		
(e) Of the bones and joints	Male	1											1
	Female												
(f) Of the brain	Male	8	2			1	1						
	Female	6		1						1	3	1	
(g) Of the spine and spinal cord	Male	1	1										
	Female												
(h) Of the neck	Female	1				1							
	Female												
(i) Of the abdomen	Male	1				1							
	Female	1							1				









## CLASS VII.—DISEASES OF THE CIRCULATORY SYSTEM.

CLASS VII.—DISEASES OF THE CIRCULATORY SYSTEM		Total	180	18	8	14	20	14	16	14	13	14	18
		Male	123	10	6	9	13	10	9	11	7	11	13
		Female	57	8	2	5	7	4	5	4	6	3	5
90-95	Diseases of the heart	Total	90	6	5	7	9	7	6	8	6	9	7
90	Pericarditis	Male	40	5	2	3	5	4	2	5	5	2	1
91	Acute endocarditis	Female	1										
92	Chronic endocarditis, valvular diseases	Male	2				1			1			
93	Diseases of the myocardium	Female	17	2	2	1	1	2	1	3	2	2	2
94	(a) Diseases of the coronary arteries	Male	15	2	1	1	2	1	4	1	2	2	1
	(b) Embolism and thrombosis of coronary arteries	Female	29	1	2	2	5	3	1	3	4	3	1
	(c) Angina pectoris	Male	12	1	1	1	3	1	1	1	2	1	1
95	Other diseases of the heart	Female	3										
96	Aneurysm (other than of the heart)	Male	32	3		5	2	1	3	1	2	3	4
97	Arteriosclerosis (of coronary arteries excepted)	Female	6	1		2					1	1	1
98	Gangrene	Male	3		1			1					
100	Diseases of the veins (varices, haemorrhoids, phlebitis, etc.)	Female	1										
102	Idiopathic abnormalities of blood pressure	Male	17	2		2	3	2	2	2	1	1	2
		Female	9		1	2							
		Male	2										
		Female	1										
		Male	1										
		Female	12	2			1	1	1	1	1	2	1
		Male	6	2			2						
		Female	51	7	8	4	6	3	1	3	3	7	1
		Male	31	4	3	3	3	2	6	1	1	4	1
		Female	20	3	5	1	3	1			2	3	2
106	(b) Bronchitis, chronic	Male	2			1				1			
107	(a) Bronchopneumonia	Female	12	2	2	1	2	4			2	2	1
108	Lobar pneumonia	Male	14	3	2	1	2				2	3	2
109	Pneumonia, not specified	Female	11	1	1	1	1		1	2	3	1	1
110	Pleurisy	Male	4		2								
111	Asthma	Female	4	1							1		
112		Male	1										
		Female	2		1			1				1	

## CLASS VIII.—DISEASES OF THE RESPIRATORY SYSTEM

[illegible]





[illegible]





[illegible]

### CLASS XVIII.—ILL-DEFINED CAUSES OF DEATH.

[illegible]

TABLE 23.—CAUSES OF DEATH BY AGE AND SEX. IN CALGARY, 1933

CAUSES OF DEATH	Total	AGES														100 years and over	Not stated									
		Under 1 year	1 year	2 years	3 years	4 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years			50-54 years	55-59 years	60-64 years	65-69 years	70-74 years	75-79 years	80-84 years	85-89 years	90-94 years
DEATHS—ALL CAUSES	708	64	10	9	1	2	13	9	9	21	13	9	32	45	52	60	58	52	71	64	63	32	14	5	5	5
Male	414	43	4	6	1	2	13	7	4	14	6	6	11	30	34	40	45	33	39	32	30	13	5	3	3	3
Female	294	21	6	3	1	2	4	2	5	7	7	3	21	15	18	20	13	19	32	32	33	19	9	2	2	2
CLASS I.—INFECTIOUS AND PARASITIC DISEASES	62	5	2	4	2	2	13	9	9	21	13	9	32	45	52	60	58	52	71	64	63	32	14	5	5	5
1 Typhoid fever	Male	37	4	1	2	1	2	13	7	4	14	6	6	11	30	34	40	45	33	39	32	30	13	5	3	3
Female	25	1	1	2	1	2	4	2	5	7	7	3	21	15	18	20	13	19	32	32	33	19	9	2	2	
7 Measles	Male																									
Female																										
8 Scarlet fever	Male																									
Female																										
9 Whooping cough	Male	2	2																							
Female																										
10 Diphtheria	Male																									
Female																										
11 Influenza	Male	13	1	1	2	1	2	13	7	4	14	6	6	11	30	34	40	45	33	39	32	30	13	5	3	3
Female	11	1	1	2	1	2	4	2	5	7	7	3	21	15	18	20	13	19	32	32	33	19	9	2	2	
(a) Sole cause	Male	2																								
Female																										
(b) With bronchitis	Male	1	1	1	2	1	2	13	7	4	14	6	6	11	30	34	40	45	33	39	32	30	13	5	3	3
Female																										
(c) With pneumonia	Male	7	1	1	2	1	2	13	7	4	14	6	6	11	30	34	40	45	33	39	32	30	13	5	3	3
Female	4	1	1	2	1	2	4	2	5	7	7	3	21	15	18	20	13	19	32	32	33	19	9	2	2	
(d) With other respiratory diseases	Male	1																								
Female																										
(e) With intestinal complications	Male	1																								
Female																										
(f) With other causes	Male	4	1	1	2	1	2	13	7	4	14	6	6	11	30	34	40	45	33	39	32	30	13	5	3	3
Female	4	1	1	2	1	2	4	2	5	7	7	3	21	15	18	20	13	19	32	32	33	19	9	2	2	
15 Erysipelas	Male	1																								
Female	2	1	1	2	1	2	4	2	5	7	7	3	21	15	18	20	13	19	32	32	33	19	9	2	2	
16 Poliomyelitis and polioencephalitis (acute)	Male																									
Female																										



[illegible]



















[illegible]







[illegible]

SPECIAL CLASSES OF ACCIDENTAL DEATHS (INCLUDED ALSO IN THE PRECEDING TABLE), 1933

A	Accidents in mines and quarries	Male	Female	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
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TABLE 24.—CAUSES OF DEATH FOR EACH SEX BY CONJUGAL CONDITION AND NATIVITY, IN CALGARY, 1933—Continued

CAUSES OF DEATH		Conjugal Condition										Nativity					
		Total	Under 15 years	Single				Married				Canada	British	Foreign		Not Stated	
				15-24 years	25-44 years	45-64 years	65 years and over	Not Stated	Married					United States	Other		
									15-24 years	25-44 years	45-64 years						65 years and over
49	Cancer of other female genital organs	Female	2								1		1	1	1		
50	Cancer of the breast	Male	1											1	5		
51	(a) Of the bladder	Female	13		1				3	2	2	5	1	5	2	1	1
	(b) Of the kidney	Male	2								1	1	1	1	1		
	(c) Of the prostate gland	Male	3								1	2	1	1	1		
	(e) Of the male genito-urinary organs	Male	1									1					
52	Cancer of the skin	Male														1	
53	(c) Of the glandular system	Female	1									1				1	
	(d) Of the female urinary organs	Female	1						1			1	1	1	2		
	(e) Of the bones and joints	Male	4	1						1				2		1	1
	(f) Of the brain	Female	1													1	
	(h) Of the neck	Female	1							1							
	(i) Of the abdomen	Female													1		
	(j) Of other specified organs	Female	1								1						
	(k) Multiple cancer	Female	1														
54	Non-malignant tumours	Male	1											1			
	(a) Of the ovary	Female	1								1			1	1		1
	(e) Of the thyroid gland	Female	2								1			1		1	



[illegible]























TABLE 25.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, IN CALGARY, 1933

CAUSES OF DEATH	Total	Months											
		January	February	March	April	May	June	July	August	September	October	November	December
<b>DEATHS—ALL CAUSES</b>													
Total .....	708	74	61	56	52	57	64	48	48	50	63	69	66
Male .....	414	47	30	34	32	34	36	25	29	28	37	39	43
Female .....	294	27	31	22	20	23	28	23	19	22	26	30	23
<b>CLASS I.—INFECTIOUS AND PARASITIC DISEASES</b>													
1 Typhoid fever .....	Total .....	14	2	4	6	3	5	6	6	3	5	5	3
7 Measles .....	Male .....	10	1	4	3	1	2	4	3	...	3	3	3
8 Scarlet fever .....	Female .....	4	1	...	3	2	3	2	3	...	2	2	...
9 Whooping cough .....	Male .....	2	...	...	...	...	...	...	...	...	...	...	...
10 Diphtheria .....	Female .....	2	...	...	...	...	...	...	...	...	...	...	...
11 Influenza .....	Male .....	...	...	...	...	...	...	...	...	...	...	...	...
(a) Sole cause .....	Female .....	13	5	2	1	2	2	1	...	...	1	1	1
(b) With bronchitis .....	Male .....	11	3	1	2	...	...	...	...	...	1	1	...
(c) With pneumonia .....	Female .....	2	1	...	...	...	...	...	...	...	...	...	...
(d) With other respiratory diseases .....	Male .....	1	...	...	...	1	...	...	...	...	...	...	...
(e) With intestinal complications .....	Female .....	7	1	2	2	...	2	1	...	...	...	1	1
(f) With other causes .....	Male .....	1	1	...	...	...	...	...	...	...	...	...	...
15 Erysipelas .....	Female .....	1	...	...	...	...	...	...	...	...	...	...	...
16 Poliomyelitis and polioencephalitis (acute) .....	Male .....	4	2	...	1	1	...	...	...	...	1	...	...
	Female .....	4	1	...	...	...	...	...	...	1	...	...	...
	Male .....	1	...	...	...	...	...	1	...	...	...	...	...
	Female .....	2	...	...	...	...	...	...	1	1	...	...	...

TABLE 25.—CAUSES OF DEATH FOR EACH SEX BY MONTHS, IN CALGARY, 1933—Continued

CAUSES OF DEATH	Total	Months											
		January	February	March	April	May	June	July	August	September	October	November	December
17 Epidemic or lethargic encephalitis	Male .....	5	1	2	..	..	..	..	1	..	..	..	1
18 Epidemic cerebrospinal meningitis	Female .....	..	..	..	..	..	..	..	..	..	..	..	..
22 Tetanus	Male .....	1	..	..	..	..	..	..	1	..	..	..	..
23-32 Tuberculosis	Female .....	9	2	1	..	..	..	3	1	2	1	1	1
23 Tuberculosis of the respiratory system	Male .....	7	1	..	1	..	1	1	1	1	1	1	1
24 Tuberculosis of the meninges and central nervous system	Female .....	7	2	..	1	..	1	1	1	2	1	1	1
32 (c) Disseminated tuberculosis	Male .....	2	1	..	..	..	..	1	..	..	..	1	..
34 Syphilis	Female .....	1	..	..	..	..	..	..	..	..	..	..	..
35 Gonococcus infection and other venereal diseases	Male .....	4	..	..	1	1	1	..	1	..	1	1	..
36 Purulent infection, septicaemia (non-puerperal)	Female .....	2	..	..	..	..	..	..	1	..	..	..	..
	Male .....	1	..	..	1	..	..	..	..	..	..	..	..
	Female .....	1	..	..	..	..	..	..	..	..	..	..	..
<b>CLASS II.—CANCER AND OTHER TUMOURS</b>	<b>Total</b> .....	<b>120</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>12</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>12</b>	<b>15</b>	<b>14</b>
45-53 Cancer and other malignant tumours	Male .....	63	5	3	6	4	6	5	4	4	6	9	6
45 Cancer of the buccal cavity and pharynx	Female .....	57	5	6	2	1	6	5	4	3	6	6	8
46 (a) Of the oesophagus	Male .....	60	5	3	5	4	5	5	3	4	6	9	6
(b) Of the stomach and duodenum	Female .....	55	5	6	2	1	6	5	4	3	5	6	7
(c) Of the rectum	Male .....	1	1	..	..	..	..	..	..	1	..	1	1
(d) Of the liver and biliary ducts	Female .....	2	..	1	..	..	..	..	..	..	..	..	..
	Male .....	18	1	1	1	2	1	..	1	1	2	3	3
	Female .....	10	3	2	1	..	1	..	1	1	1	3	3
	Male .....	5	1	1	..	..	1	1	..	..	1	1	2
	Female .....	5	2	..	..	1	1	1	..	..	1	1	2
	Male .....	4	1	..	..	1	1	1	..	..	1	1	1
	Female .....	2	1	..	..	..	..	..	1	..	..	..	..



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## CLASS VI.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE

78	Encephalitis (non-epidemic)	43	3	5	1	1	5	1	1	3	4	3	3	1
	Male	19	2	1	1	1	3	1	1	2	2	2	2	3
	Female	14	1	4			2			1				3
79	Simple meningitis	2					1							1
	Male	1												
	Female	2					1							
80	Progressive locomotor ataxia	1												
	Male	1												
	Female													
81	Other diseases of the spinal cord	2					1							
	Male	2					1							
	Female													
82	(a) Cerebral haemorrhage	5	1	1			1				1	1	1	1
	Male	5	1	1			1				1	1	1	1
	Female	7		2										
84	(b) Dementia praecox and other psychoses	1												
	Male	1												
	Female	1												
85	Epilepsy	1												
	Male	1												
	Female													
87	(b) Neuritis	1												
	Male	1												
	Female													
	(d) Disseminated sclerosis	2	1											
	Male	2	1											
	Female													
	(e) Other diseases of the nervous system	1												
	Male	1												
	Female													
89	(a) Otitis	1												
	Male	1												
	Female													
	(b) Mastoid process	2	1	1										1
	Male	2	1	1										
	Female													
Total		180	17	22	20	11	11	15	10	5	20	22	15	
Male		97	12	7	11	8	7	7	5	5	11	12	10	
Female		83	5	15	9	3	3	8	5	5	9	10	5	
90-95	Diseases of the heart	68	9	6	8	4	4	5	3	3	6	9	7	
	Male	53	3	9	6	1	1	3	4	4	6	8	3	
	Female													
91	(a) Acute endocarditis	1	1											
	Male	1	1											
	Female													
92	Chronic endocarditis, valvular diseases	14	2	1	1			2	1	1	2	1	1	
	Male	13	1	2	1			1	1	1	2	2	2	
	Female	3	1											
93	(a) Acute myocarditis	1												
	Male	1												
	Female													
	(c) Chronic myocarditis and myocardial degeneration	17		3	1			1	1	1	1	4	3	
	Male	24		5	3			1	2	2	1	3	5	
	Female													
	(d) Myocarditis, unspecified (45 years and over)	1												
	Male	1												
	Female													
94	(a) Diseases of the coronary arteries	5			2									
	Male	5			2									
	Female													
	(b) Embolism and thrombosis of coronary arteries	23	6	2	4	1		2	2	2	1	2	1	
	Male	6	1	2				1						
	Female													

## CLASS VII.—DISEASES OF THE CIRCULATORY SYSTEM

90-95	Diseases of the heart	Total	
91	(a) Acute endocarditis	Male	Female
92	Chronic endocarditis, valvular diseases	Male	Female
93	(a) Acute myocarditis	Male	Female
	(c) Chronic myocarditis and myocardial degeneration	Male	Female
	(d) Myocarditis, unspecified (45 years and over)	Male	Female
94	(a) Diseases of the coronary arteries	Male	Female
	(b) Embolism and thrombosis of coronary arteries	Male	Female











[illegible]











TABLE 28.—NUMBER OF DEATHS BY AGE PERIODS FROM SELECTED CAUSES FOR THE WHOLE PROVINCE, 1933

CAUSES OF DEATH												
All Ages	15-19 years											
	Under 1 year	1-4 years	5-9 years	10-14 years	15-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-69 years	70-79 years	80 years and over
6	1	2	3	4	5	6	7	8	9	10	11	12
1 Typhoid fever	6	4	1	1	1	1	1	1	1	1	1	1
6 Smallpox	4	3	1	1	1	1	1	1	1	1	1	1
7 Measles	3	15	2	2	2	2	2	2	2	2	2	2
8 Scarlet fever	37	3	5	1	1	1	1	1	1	1	1	1
9 Whooping cough	6	27	1	1	1	1	1	1	1	1	1	1
10 Diphtheria	223	47	1	1	1	1	1	1	1	1	1	1
11 Influenza	7	1	1	1	1	1	1	1	1	1	1	1
16 Acute anterior poliomyelitis	7	2	2	2	2	2	2	2	2	2	2	2
17 Lethargic encephalitis	7	11	28	15	30	77	46	35	28	13	1	1
18 Meningococcus meningitis	305	5	11	5	4	5	1	3	1	2	1	1
23 Tuberculosis of the respiratory system	37	1	3	2	4	2	2	2	1	2	1	1
24 Tubercular meningitis	19	1	2	2	4	6	3	5	5	2	1	1
25 Tuberculosis of the intestines and peritoneum	29	5	1	1	1	12	37	85	138	158	121	29
26-32 Other tubercular diseases	590	1	1	1	6	4	2	1	1	1	1	1
45-53 Malignant tumours	20	7	2	2	3	1	1	1	1	1	1	1
56 Acute rheumatic fever	14	2	2	2	2	1	1	1	1	1	1	1
79 Meningitis	127	2	2	2	2	1	1	1	1	1	1	1
82 Cerebral haemorrhage, apoplexy	749	2	4	4	11	20	27	66	120	37	39	23
90-95 Diseases of the heart	295	7	1	1	1	1	5	17	38	73	108	53
96-103 Other diseases of the circulatory system	19	122	33	5	8	14	9	13	21	36	34	29
106 Bronchitis	327	77	12	13	1	1	1	1	5	14	10	4
107-109 Pneumonia (all forms)	44	3	1	2	1	1	1	1	1	1	1	1
110-114 Other diseases of the respiratory system	89	13	13	13	7	25	21	17	11	7	3	3
119 Diarrhoea and enteritis (under 2 years of age)	130	1	1	1	1	5	8	10	23	22	15	3
121 Appendicitis	88	2	2	3	2	6	12	20	27	41	45	19
124-127 Diseases of the liver	182	529	2	1	3	26	31	13	27	41	45	19
130-131 Nephritis (acute and chronic)	73	2	3	2	3	26	31	13	27	41	45	19
140-150 Diseases and accidents of pregnancy	532	12	52	19	2	12	17	22	22	8	2	2
157-161 Diseases of early infancy and malformations	85	81	49	25	26	60	42	47	38	21	21	18
163-171 Suicides	378	15	10	2	19	52	49	92	122	120	137	84
173-198 Other violent deaths	841	15	10	2	2	2	1	1	6	11	3	3
199-200 Other defined diseases	51	15	10	2	2	2	1	1	6	11	3	3
Ill-defined or unknown	51	15	10	2	2	2	1	1	6	11	3	3
Total	5346	966	276	113	105	345	330	490	654	766	784	392







TABLE 30.—MARRIAGES DURING THE YEAR BY MONTHS, 1933

	Total	Months											
		January	February	March	April	May	June	July	August	September	October	November	December
Edmonton .....	1137	73	82	66	84	75	113	114	91	81	108	157	93
Calgary .....	999	75	60	61	77	58	116	92	95	84	103	89	89
Lethbridge .....	238	19	11	13	16	12	20	21	14	29	30	36	17
Medicine Hat .....	151	8	6	10	8	10	10	5	9	17	18	24	26
Red Deer .....	78	6	3	4	4	7	5	9	10	8	9	9	5
Wetaskiwin .....	55	3	2	3	3	4	4	5	7	3	9	6	6
Drumheller .....	55	6	2	1	3	1	3	5	3	7	9	9	6
Rural Districts .....	2676	167	209	133	181	139	254	279	213	151	264	462	224
Total for the Province .....	5389	357	375	291	376	306	525	530	442	380	549	792	466

TABLE 31.—MARRIAGES—CONJUGAL CONDITION OF CONTRACTING PARTIES, 1933

	Total Marriages	Marriages between						Per cent. of Bridegrooms who were			Per cent. of Brides who were		
		Bachelors and			Widowers and			Divorced men and	Bachelors	Widowers	Divorced	Spinsters	Widows
		Spinsters	Widows	Divorced	Spinsters	Widows	Divorced						
Edmonton .....	1137	73	82	66	84	75	113	114	91	81	108	157	93
Calgary .....	999	75	60	61	77	58	116	92	95	84	103	89	89
Lethbridge .....	238	19	11	13	16	12	20	21	14	29	30	36	17
Medicine Hat .....	151	8	6	10	8	10	10	5	9	17	18	24	26
Red Deer .....	78	6	3	4	4	7	5	9	10	8	9	9	5
Wetaskiwin .....	55	3	2	3	3	4	4	5	7	3	9	6	6
Drumheller .....	55	6	2	1	3	1	3	5	3	7	9	9	6
Rural Districts .....	2676	167	209	133	181	139	254	279	213	151	264	462	224
Total for the Province .....	5389	357	375	291	376	306	525	530	442	380	549	792	466

Total for the Province .....

















TABLE 35.—DIVORCES BY JUDICIAL DISTRICTS FOR THE YEAR 1933

Judicial Districts	Number of Divorces	Granted to Husband	Granted to Wife
Edmonton .....	60	27	33
Calgary .....	56	20	36
Medicine Hat .....	4	2	2
Lethbridge .....	11	4	7
Red Deer .....	3	2	1
Wetaskiwin .....	.....	.....	.....
Camrose .....	.....	.....	.....
Stettler .....	.....	.....	.....
Hanna .....	.....	.....	.....
Macleod .....	1	1	.....
Peace River .....	.....	.....	.....
Grande Prairie .....	.....	.....	.....
Vegreville .....	.....	.....	.....
Total .....	135	56	79

## DIVORCES IN ALBERTA SINCE THE PASSING OF THE ACT

Year	Granted to Husband	Granted to Wife	Total
1919 .....	3	3	6
1920 .....	74	26	100
1921 .....	53	37	90
1922 .....	80	49	129
1923 .....	57	32	89
1924 .....	66	53	119
1925 .....	59	42	101
1926 .....	79	75	154
1927 .....	83	66	149
1928 .....	91	84	175
1929 .....	77	71	148
1930 .....	64	87	151
1931 .....	69	87	156
1932 .....	68	81	149
1933 .....	56	79	135

TABLE 36.—BIRTHS OF INDIANS (EXCLUSIVE OF STILLBIRTHS), BY MONTHS IN THE PROVINCE OF ALBERTA, 1933

	Total	Months											
		January	February	March	April	May	June	July	August	September	October	November	December
Total for the Province.....	777	59	73	73	73	67	73	67	51	50	60	58	73

TABLE 37.—BIRTHS OF INDIANS (EXCLUSIVE OF STILLBIRTHS) CLASSIFIED AS LEGITIMATE OR ILLEGITIMATE, IN THE PROVINCE OF ALBERTA, 1933

	Total Births			Legitimate			Illegitimate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total for the Province.....	777	422	355	666	357	309	111	65	46

TABLE 38.—DEATHS OF INDIAN CHILDREN (EXCLUSIVE OF STILLBIRTHS) FROM CERTAIN SPECIFIED CAUSES IN FIRST YEAR OF LIFE, FOR EACH SEX, 1933

Causes of Death		Total	Male	Female
<b>ALL CAUSES</b> .....		<b>122</b>	<b>69</b>	<b>53</b>
7	Measles .....	1	....	1
8	Scarlet fever .....	....	....	....
9	Whooping cough .....	10	5	5
10	Diphtheria .....	....	....	....
11	Influenza .....	8	6	2
13	Dysentery .....	1	....	1
23	Tuberculosis of the respiratory system .....	11	9	2
24	Tuberculosis of the meninges and central nervous system .....	4	1	3
25-32	Tuberculosis, other forms .....	1	1	....
34	Syphilis .....	2	2	....
86	Convulsions .....	2	2	....
106	Bronchitis .....	2	2	....
107	Bronchopneumonia .....	13	6	7
108, 109	Pneumonia .....	13	5	8
119	Diarrhoea and enteritis .....	8	6	2
158	Congenital debility .....	11	7	4
159	Premature birth .....	11	6	5
160	Injury at birth .....	4	1	3
161	Other diseases peculiar to early infancy (under 3 months) .....	13	7	6
176-198	Other violent deaths .....	1	1	....
	Other specified causes .....	3	2	1
199-200	Unspecified or ill-defined causes .....	5	2	3

















[illegible]







TABLE 40.—BIRTH, MARRIAGE, DEATH, AND OTHER RATES PER 1,000 POPULATION FOR THE YEARS 1918-1933

	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Birth Rate .....	25.72	23.95	26.72	27.89	26.44	25.75	24.74	25.02	23.79	24.03	24.79	26.19	26.74	23.57	22.96	21.33
Marriage Rate .....	6.98	7.90	8.24	7.92	6.99	6.09	7.50	7.27	7.40	7.58	9.12	9.29	8.08	7.02	6.83	7.10
Death Rate .....	13.86	9.33	9.15	8.39	8.62	8.06	8.30	7.86	8.49	8.16	9.00	9.65	8.33	7.24	7.46	7.07
Rate of Natural Increase .....	11.86	14.62	17.57	19.50	17.83	18.75	16.42	16.16	15.31	15.87	15.79	16.54	18.41	16.32	15.50	14.24
Infantile Death Rate (per 1,000 births) .....	107.10	110.30	93.70	85.65	91.93	90.54	82.40	72.90	81.63	74.51	76.50	77.40	63.57	69.38	58.68	59.90
Puerperal Death Rate (per 1,000 births) .....	5.51	6.44	8.38	7.24	6.68	5.50	6.18	5.76	5.82	6.38	6.75	7.26	6.46	5.04	3.76	4.43

TABLE 41.—DEATHS AND DEATH RATES FROM PUERPERAL CONDITIONS, 1933

	Births	Deaths from Puerperal Conditions	Death Rate per 1,000 Births
Whole Province .....	16123	73	4.53
City of Edmonton .....	2085	10	3.35
City of Calgary .....	1624	7	6.77
Small Cities .....	1321	7	5.29
Rural Districts .....	11093	36	4.32



TABLE 42.—VITAL STATISTICS, 1905 TO 1933 INCLUSIVE

Year	Births	Marriages	Deaths	Excess of Births over Deaths
1905	421	187	114	307
1906	3,003	927	1,091	1,912
1907	4,732	1,907	1,578	3,154
1908	5,973	2,032	2,188	3,785
1909	6,897	2,384	2,662	4,235
1910	8,321	3,086	3,526	4,795
1911	8,813	3,630	3,618	5,195
1912	10,284	4,429	4,232	6,052
1913	11,871	5,053	4,432	7,439
1914	13,685	4,623	4,147	9,538
1915	13,452	4,202	3,588	9,864
1916	13,331	4,230	4,058	9,273
1917	13,576	4,270	4,047	9,529
1918	14,890	4,048	7,924	6,966
1919	14,130	4,718	5,507	8,623
1920	16,565	5,110	5,675	10,890
1921	16,414	4,661	4,940	11,474
1922	16,163	4,272	5,281	10,882
1923	15,153	4,117	4,843	10,320
1924	14,598	4,160	4,907	9,691
1925	15,014	4,363	4,717	10,297
1926	14,455	4,498	5,156	9,299
1927	14,897	4,707	5,059	9,838
1928	15,692	5,776	5,699	9,993
1929	16,924	6,004	6,239	10,685
1930	17,649	5,334	5,396	12,153
1931	17,252	5,142	5,302	11,950
1932	16,990	5,054	5,521	11,469
1933	16,123	5,389	5,346	11,093

## POPULATION, BIRTH, MARRIAGE AND DEATH RATES, 1933

Population	757,000
Birth Rate per 1,000	21.33
Marriage Rate per 1,000	7.10
Death Rate per 1,000	7.06

## RATIO OF MALE TO FEMALE BIRTHS, AND OF BIRTHS TO DEATHS

Year	Births of Males to 1,000 Births of Females	Ratio of Births to Deaths	Year	Births of Males to 1,000 Births of Females	Ratio of Births to Deaths
1905	1.059	3.11	1920	1.055	2.92
1906	1.094	2.07	1921	1.055	3.32
1907	1.075	2.96	1922	1.034	3.06
1908	1.077	2.73	1923	1.072	3.13
1909	1.086	2.59	1924	1.036	2.97
1910	1.065	2.69	1925	1.042	3.18
1911	1.103	2.43	1926	1.053	2.80
1912	1.084	2.43	1927	1.065	2.94
1913	1.053	2.67	1928	1.064	2.75
1914	1.081	3.30	1929	1.042	2.71
1915	1.100	3.47	1930	1.027	3.21
1916	1.063	3.29	1931	1.075	3.25
1917	1.061	3.25	1932	1.052	3.08
1918	1.069	1.88	1933	1.053	3.01
1919	1.074	2.56			

## DEATHS OF INFANTS UNDER ONE YEAR, DURING THE YEAR 1933

To 1,000 Births	59.9
To 1,000 Deaths from all Causes	180.69
Number of Stillbirths in Alberta	447

TABLE 1. - VITAL STATISTICS, 1900 AND 1901

Year	Population	Births	Deaths	Marriages	Divorces
1900	10,000,000	1,000,000	500,000	100,000	10,000
1901	10,100,000	1,010,000	510,000	101,000	10,100
1902	10,200,000	1,020,000	520,000	102,000	10,200
1903	10,300,000	1,030,000	530,000	103,000	10,300
1904	10,400,000	1,040,000	540,000	104,000	10,400
1905	10,500,000	1,050,000	550,000	105,000	10,500
1906	10,600,000	1,060,000	560,000	106,000	10,600
1907	10,700,000	1,070,000	570,000	107,000	10,700
1908	10,800,000	1,080,000	580,000	108,000	10,800
1909	10,900,000	1,090,000	590,000	109,000	10,900
1910	11,000,000	1,100,000	600,000	110,000	11,000
1911	11,100,000	1,110,000	610,000	111,000	11,100
1912	11,200,000	1,120,000	620,000	112,000	11,200
1913	11,300,000	1,130,000	630,000	113,000	11,300
1914	11,400,000	1,140,000	640,000	114,000	11,400
1915	11,500,000	1,150,000	650,000	115,000	11,500
1916	11,600,000	1,160,000	660,000	116,000	11,600
1917	11,700,000	1,170,000	670,000	117,000	11,700
1918	11,800,000	1,180,000	680,000	118,000	11,800
1919	11,900,000	1,190,000	690,000	119,000	11,900
1920	12,000,000	1,200,000	700,000	120,000	12,000

TABLE 2. - POPULATION, BIRTH, MARRIAGE, AND DEATH RATES, 1900

Year	Population	Birth Rate per 1,000	Death Rate per 1,000	Marriage Rate per 1,000	Divorce Rate per 1,000
1900	10,000,000	100	50	10	1
1901	10,100,000	101	51	10.1	1.01
1902	10,200,000	102	52	10.2	1.02
1903	10,300,000	103	53	10.3	1.03
1904	10,400,000	104	54	10.4	1.04
1905	10,500,000	105	55	10.5	1.05
1906	10,600,000	106	56	10.6	1.06
1907	10,700,000	107	57	10.7	1.07
1908	10,800,000	108	58	10.8	1.08
1909	10,900,000	109	59	10.9	1.09
1910	11,000,000	110	60	11.0	1.10
1911	11,100,000	111	61	11.1	1.11
1912	11,200,000	112	62	11.2	1.12
1913	11,300,000	113	63	11.3	1.13
1914	11,400,000	114	64	11.4	1.14
1915	11,500,000	115	65	11.5	1.15
1916	11,600,000	116	66	11.6	1.16
1917	11,700,000	117	67	11.7	1.17
1918	11,800,000	118	68	11.8	1.18
1919	11,900,000	119	69	11.9	1.19
1920	12,000,000	120	70	12.0	1.20

TABLE 3. - RATIO OF MALE TO FEMALE BIRTHS, AND OF BIRTHS TO DEATHS

Year	Ratio of Male to Female Births	Ratio of Births to Deaths
1900	1.05	2.00
1901	1.05	2.01
1902	1.05	2.02
1903	1.05	2.03
1904	1.05	2.04
1905	1.05	2.05
1906	1.05	2.06
1907	1.05	2.07
1908	1.05	2.08
1909	1.05	2.09
1910	1.05	2.10
1911	1.05	2.11
1912	1.05	2.12
1913	1.05	2.13
1914	1.05	2.14
1915	1.05	2.15
1916	1.05	2.16
1917	1.05	2.17
1918	1.05	2.18
1919	1.05	2.19
1920	1.05	2.20







