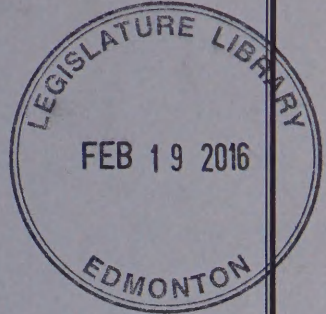


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ANNUAL REPORT

OF THE

Department of Public Health

PROVINCE OF ALBERTA

1959

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

EDMONTON:

PRINTED BY L. S. WALL, QUEEN'S PRINTER

1961



ANNUAL REPORT

OF THE

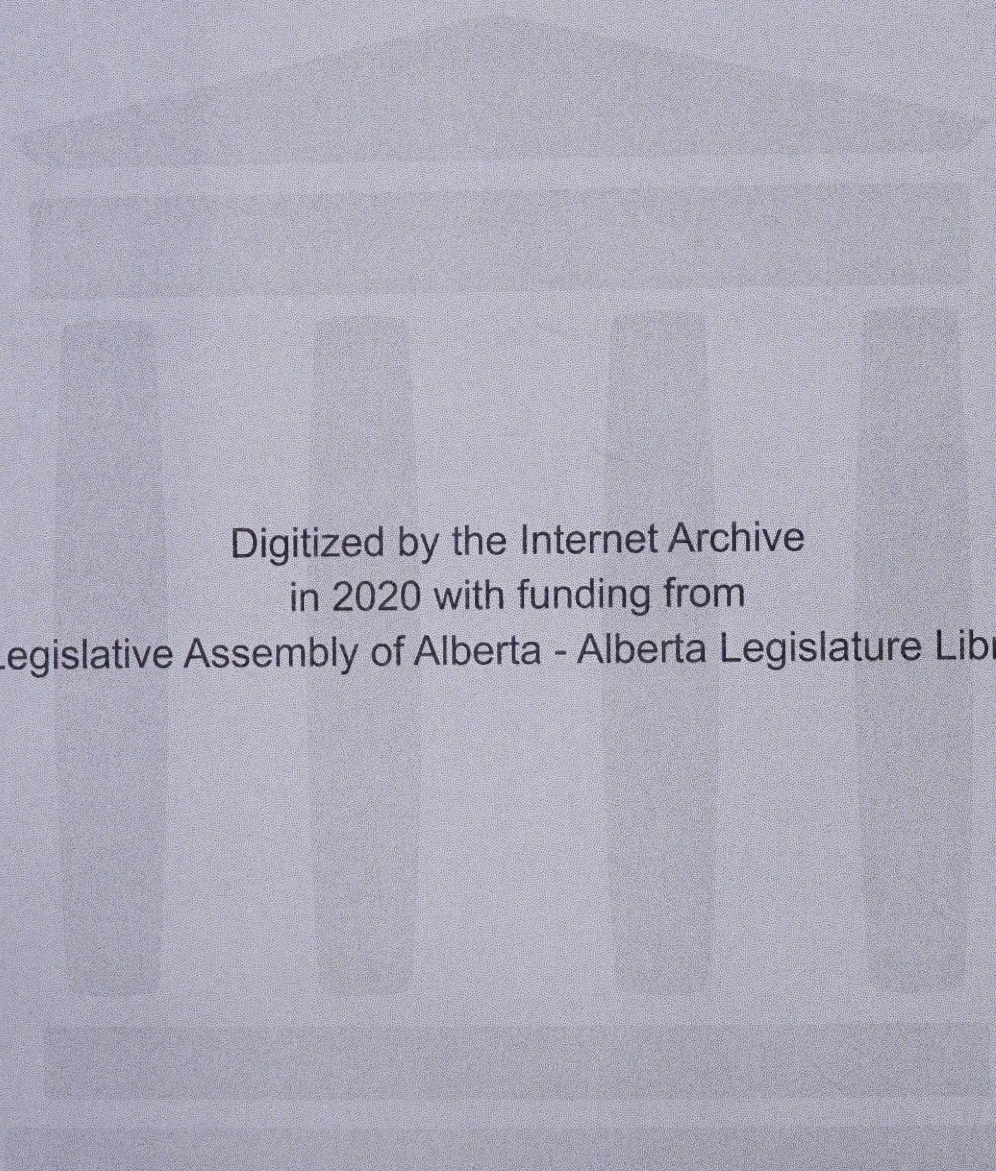
Department of Public Health

PROVINCE OF ALBERTA

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December 31, 1960.

TO HIS HONOUR,
J. PERCY PAGE,
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 1959.

I have the honour to be, Sir,

Your obedient Servant,

J. DONOVAN ROSS, M.D.,
Minister of Health.

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December 31, 1960.

TO THE HONOURABLE DR. J. DONOVAN ROSS,

MINISTER OF HEALTH,

Administration Building, Edmonton, Alberta.

SIR:

I have the honour to submit herewith, the Forty-First Annual Report of the Department of Public Health.

I have the honour to be, Sir,

Your obedient Servant,

A. SOMERVILLE, B.A., M.D., D.P.H.,

Deputy Minister of Health.

Government, 1900

TO THE HONOURABLE DR. J. PATRICK BAKER,
MINISTER OF HEALTH,
Administration Building, Edmonton, Alberta.

Sir:

I have the honor to acknowledge the receipt of your
Report of the Department of Public Health.

I have the pleasure to acknowledge,

Your obedient servant,

A. BOWEN, M.A., M.D., F.R.C.P.,
Legislative Council, Edmonton.

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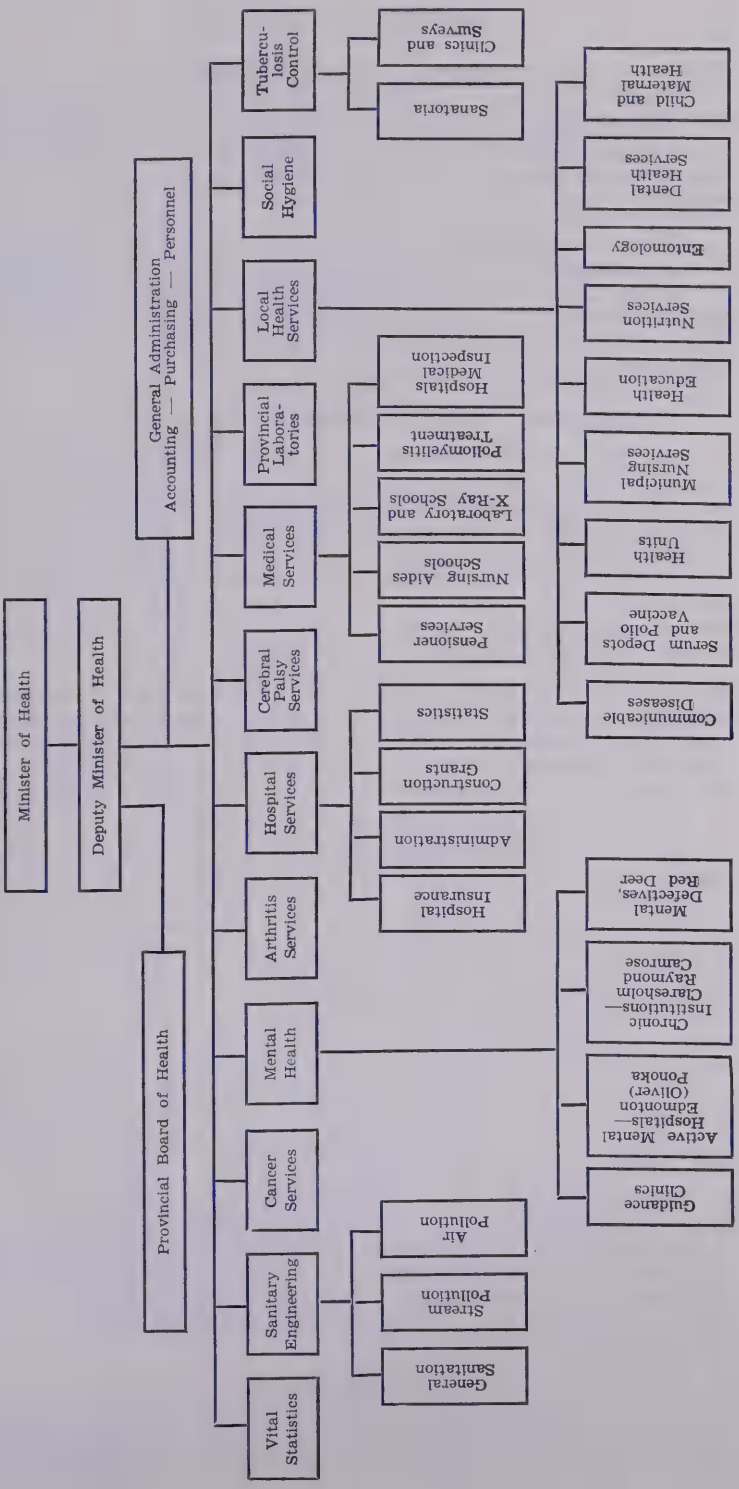
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Department of Public Health—Alberta

DIVISIONAL ORGANIZATION CHART

January - 1959



PROVINCIAL BOARD OF HEALTH

The Provincial Board of Health met on such occasions as were necessary during the year 1959. A review of some of the major items considered at these meetings is contained in this report.

There was no change in Board membership during the year. Dr. A. Somerville, Provincial Medical Officer of Health, continued as Chairman and Dr. R. D. Stuart, Provincial Bacteriologist, and Mr. H. L. Hogge, Provincial Sanitary Engineer, were members. Mr. L. E. Stewart, Chief Sanitary Inspector, acted as Secretary.

Regulations Passed or Amended During The Year

Alberta Regulation 72/59 - O.C. 296-59 approved new regulations governing beverage rooms. These regulations clarified the responsibility of local boards of health in respect to the control of public health conditions in hotel beverage rooms and other premises where alcoholic beverages are served. The regulations established standards for cleansing, bactericidal treatment and storage of glasses and for lighting, ventilation, insect control, water supplies, toilet facilities and other equipment and conditions of public health significance in beverage rooms.

Alberta Regulation 313/59 - O.C. 1368-59 approved amendments to the regulations respecting nuisances and general sanitation. The amendments extracted the sections relating to waste disposal grounds to form the nucleus of separate regulations on waste disposal grounds referred to in the next paragraph.

Alberta Regulation 314/59 - O.C. 1369-59 approved new regulations respecting waste disposal grounds. These regulations embody the requirements respecting waste disposal grounds formerly in the nuisance regulations. The principle new provisions include requirements that any cities and towns having populations in excess of 10,000 shall operate sanitary landfills, while communities of less than 10,000 are permitted to use trench and cover methods of disposal.

Alberta Regulation 385/59 - O.C. 1700-59 approved an amendment to the regulations relating to the conduct of funerals and interment of dead bodies. This amendment deleted a section which had provided that a permit must be obtained from the Provincial Medical Officer of Health before a corpse could be disinterred.

Eleven persons were appointed Executive Officers of the Provincial Board of Health during the year. There were four cancellations. At the year's end there were 42 such authorizations in effect, an increase from 35 during 1959. Persons holding appointments as Executive Officers of the Provincial Board of Health are employees of the Provincial Department of Public Health or are Municipal Nurses.

Sixty-two nurses in public health work were issued authorizations by the Provincial Board of Health in 1959 certifying them to be capable of performing inoculations and vaccinations in accordance with section 44 of The Public Health Act. Fifty-

three authorizations were returned. At the year's end 163 authorizations were in effect compared with 154 at the end of the preceding year. The increase appears to be due to an increase in the number of nurses employed in public health work.

During the year a few cases of persons who were suffering from tuberculosis in an infectious form and who were refusing treatment were reported to the Board. After proper investigation of each case the Board issued six orders covering removal of these persons to hospitals and sanatoria for treatment. Authority for this is contained in the Communicable Disease Regulations. Four such orders were issued in 1958, two in 1957, eleven in 1956 and seventeen in 1955. It can be seen that 1959 was the third successive year when the number of such orders was less than 10. It would appear that circumstances which make such orders necessary continue to be rare.

The control of pollution in the rivers of the province continued to receive the attention of the Board. During the year the Board issued instructions and followed up its previous instructions to communities and industries using the rivers for disposal of wastes.

The Board gave attention to the possibility that significant amounts of air pollution might be present in various parts of the province which have been affected by industrial growth. The provision of special equipment to the Division of Sanitary Engineering has made it possible to start collecting data in this field. The records being made from the data collected will help to determine what significance can be attached to air pollution in various areas and what steps, if any, may be necessary for the protection of public health. Studies have been started on the effect of oil field batteries, sulphur plants and industrial areas in and adjacent to cities.

Questions in connection with swimming pools and bathing beaches were considered by the Board. Such matters as employment of lifeguards at bathing beaches, installation of package type pools and special requirements for hotel and motel pools were considered. At the year's end a review of existing regulations was under way so that consideration can be given to recommendations for such amendments as may be necessary.

Many other matters received attention during the year. Some of these were the location, supervision, facilities and operation of trailer coach parks and summer camps, veterinary inspection of poultry and health checks for restaurant employees. In these and other matters the Board gave guidance and assistance to the various Divisions of the Department and to Local Boards of Health so that activities could be co-related into a broad program designed to improve the health of the people of the province.

LEGISLATION PASSED DURING THE YEAR**Chiroprody Professions Act Amendment Act (Chapter 7)**

This Act amended The Chiroprody Professions Act, being chapter 40 of the Revised Statutes.

The name of the practice governed by this Act has been changed from "Chiroprody" to "Podiatry" and all references in the Act are changed accordingly. The Act hereafter will be known as The Podiatry Professions Act. The Act also makes a change in the functions of the Alberta Chiroprody Association and the Board of Examiners in Chiroprody. Previously, the Board, appointed by the Lieutenant Governor in Council, only evaluated educational qualifications; registration and discipline was in the hands of the Association. These powers of registration and discipline are given to the Board and hereafter the right to practise depends upon the holding of a subsisting certificate of competency issued by the Board. Membership in the Association will be voluntary. Persons holding a certificate of registration from the Association on the date this Act came into force are entitled to receive without charge a certificate of competency from the Board and until such certificate is issued the certificate from the Association is deemed to be a certificate of competency.

A new section enables podiatrists to supply or prescribe such drugs, chemicals or compounds as may be authorized by order in council.

This Act came into force on the 7th day of April, 1959.

The Chiropractic Act Amendment Act (Chapter 65)

This Act amended The Chiropractic Act, being chapter 41 of the Revised Statutes.

Section 28, subsection (1) was amended by removing the reference to the Provincial Secretary and substituting the reference to the Minister charged with the administration of the Act.

This Act came into force on the 7th day of April, 1959.

The Dental Association Act Amendment Act (Chapter 65)

This Act amended The Dental Association Act, being chapter 82 of the Revised Statutes.

Section 27 was amended by removing the reference to the Provincial Secretary and substituting the reference to the Minister charged with the administration of the Act.

This Act came into force on the 7th day of April, 1959.

Alberta Registered Dietitians Association Act (Chapter 14)

This Act which is cited as "The Alberta Registered Dietitians Association Act" incorporates the Alberta Registered Dietitians Association in a manner similar to other associations such as physiotherapists, registered nurses, etc. Provision is made for a governing council who have power to make by-laws subject to the approval of the Lieutenant Governor in Council. The

academic standing in the examination of candidates for admission to membership is under the control of the University of Alberta. Members are to be issued certificates of registration and power to suspend or expel members is given. Only members of the association have the right to use the designation "registered dietitian" or any abbreviations, etc., that imply that the person is registered under this Act as a member of the association.

This Act came into force on the 7th day of April, 1959.

Health Unit Act Amendment Act (Chapter 27)

This Act amended The Health Unit Act, being chapter 139 of the Revised Statutes.

A new subsection (1a) was added to section 16 providing for an additional grant based on the density of population in the health unit area. The grants vary from twenty-five cents per person where the density is less than one person per square mile to five cents per person where the density is between four and five persons per square mile.

A new section 18a was added providing for the payment of health services in national parks not exceeding \$1.25 per capita.

This Act came into force on the 31st day of March, 1959.

Hospitalization Benefits Act, 1959 (Chapter 31)

This Act cited as "The Hospitalization Benefits Act, 1959", repeals and replaces "The Hospitalization Benefits Act", being chapter 30 of the Statutes of 1957. The new Act consolidates the former Act and amendments with certain new provisions required to give better effect to the Hospitalization Agreement with the Government of Canada. In accordance with the Agreement it is provided that a person injured as a result of the wrongful act or omission of another is entitled to recover the cost of the hospital services against that person even though the hospital services may have been paid for pursuant to this Act, and the Minister is entitled to be reimbursed from any moneys so recovered. For the purposes of more effectively carrying out the provisions of this Act it also amends The Municipal Hospitals Act, being chapter 216 of the Revised Statutes. The functions exercised by the Board of Public Utility Commissioners under that Act are transferred to the Lieutenant Governor in Council or to the Minister.

This Act came into force on the 1st day of April, 1959, and the provision dealing with the recovery of the cost of hospital services as damages is made retroactive to the 1st day of April, 1958.

Hospitals Act Amendment Act (Chapter 32)

This Act amended The Hospitals Act, being chapter 147 of the Revised Statutes.

Section 2 was amended by revising the definition of "approved hospital" to mean a hospital designated as such by the

Lieutenant Governor in Council. The definition "per diem" allowance was struck out.

Sections 3, 4 and 5 were repealed and replaced. The new section 3 authorizes the Lieutenant Governor in Council to make regulations designating hospitals as approved hospitals, and regulations governing appointment, dismissal or suspension of the medical staff of the hospital, the organization and duties of the staff within the hospital. Regulations may also be made prescribing the standards of service to be made available in the hospitals. The new section 4 authorizes the Minister or any official of the Department of Public Health authorized by the Minister to obtain access to any hospital charts and records for the purpose of assessing the standard of service available in any hospital, and improving surgical techniques. The information is to be treated as confidential but the Minister may use the information for compiling statistical data. A new section 5 authorizes the Lieutenant Governor in Council to establish model by-laws, rules and regulations for adoption by approved hospitals.

This Act came into force on the 7th day of April, 1959.

Medical Profession Act Amendment Act (Chapter 65)

This Act amended The Medical Profession Act, being chapter 198 of the Revised Statutes.

Sections 2, 31 and 77 were amended by removing the references to the Provincial Secretary and substituting the references to the Minister charged with the administration of the Act.

This Act came into force on the 7th day of April, 1959.

Mental Defectives Act Amendment Act (Chapter 50)

This Act amended The Mental Defectives Act, being chapter 199 of the Revised Statutes.

Section 15, subsection (1) was amended by replacing clause (e) to provide that where the mentally defective person is under twenty-one years of age the charge payable by the municipality is fifty cents a day for each day the person is in the institution.

A new section 15a was added providing that where a charge for maintenance is not payable by the municipality under section 15, a charge may be made against the estate of the mentally defective person, in an amount to be set by the Lieutenant Governor in Council. The Minister is given authority to waive the recovery of such charges where he deems the circumstances proper.

This Act came into force on the 31st day of March, 1959.

Mental Diseases Act Amendment Act (Chapter 51)

This Act amended The Mental Diseases Act, being chapter 200 of the Revised Statutes.

A Part III was added to the Act to provide for the establishment of emotionally disturbed children's wards, to which emotionally disturbed children may be admitted upon the request

of a medical practitioner with the consent of the parent or guardian of the child. Provision is made for the retention and discharge of the children from the ward.

This Act came into force on the 1st day of April, 1959.

Naturopathy Act Amendment Act (Chapter 65)

This Act amended The Naturopathy Act, being chapter 221 of the Revised Statutes.

Section 25 was amended by removing the reference to the Provincial Secretary and substituting the reference to the Minister charged with the administration of the Act.

This Act came into force on the 7th day of April, 1959.

Optometry Act Amendment Act (Chapter 65)

This Act amended The Optometry Act, being chapter 229 of the Revised Statutes.

Section 3 was amended by removing the reference to the Provincial Secretary and substituting the reference to the Minister charged with the administration of the Act.

This Act came into force on the 7th day of April, 1959.

Provincial General Hospitals Act (Chapter 64)

This Act cited as "The Provincial General Hospitals Act" will authorize the establishment of a Provincial General Hospital in Calgary. The composition, administration and operation thereof will be very similar to that of the University of Alberta Hospital. The purpose and objects of the hospital is to provide general hospital facilities for active and chronic treatment in the area for which the hospital is established.

This Act came into force on the 7th day of April, 1959.

Public Health Act Amendment Act (Chapter 66)

This Act amended The Public Health Act, being chapter 255 of the Revised Statutes.

Section 7 was amended to give the Provincial Board of Health authority to make regulations governing the location, facilities, sanitation, maintenance, etc., of summer camps. Section 35 was amended by replacing subsection (4). The new subsection will allow the annual census taken under The Municipalities Assistance Act to be used in the calculation of grants. A new section 43a was added prohibiting the use of shoe-fitting machines that present a radiation hazard.

The new section 43a comes into force on the first of January, 1960, the remainder of the Act came into force on the 7th day of April, 1959.

■ **Solemnization of Marriage Act Amendment Act (Chapter 79)**

This Act amended The Solemnization of Marriage Act, being chapter 319 of the Revised Statutes.

Section 2 was amended to remove the definition of "Registrar-General" and to substitute a reference to the "Director" as the Director of the Division of Vital Statistics under the new The Vital Statistics Act, 1959.

All references to the "Registrar-General" throughout the Act are changed accordingly.

Section 23 was amended by adding a new subsection (2a) which provides that notwithstanding subsection (2) the required consent may be given by the parent or person having legal custody when the parents are divorced or separated or where one of the parents is confined in a mental institution or by the Superintendent of Child Welfare where the minor is a ward of the government.

This Act came into force on the 7th day of April, 1959.

Vital Statistics Act, 1959 (Chapter 94)

This Act cited as "The Vital Statistics Act, 1959", will repeal and replace The Vital Statistics Act, being chapter 360 of the Revised Statutes.

This Act with some slight modification is a uniform Act recommended for enactment by the Conference of Commissioners on Uniformity of Legislation in Canada. The Act provides for a Director of Vital Statistics with whom must be registered all births, stillbirths, adoptions, marriages, divorces and deaths.

This Act comes into force on the 1st day of January, 1960.

DEPARTMENT OF PUBLIC HEALTH
REVENUE AND EXPENDITURE FOR FISCAL YEAR ENDING MARCH 31, 1960

	Salaries	Expenses	Revenue
601 Administration - General	\$ 13,990.00	\$ 2,809.58	\$
602 Administration - General	92,921.11	7,450.79	184.50
618 Administration - Postage .....	.....	8,819.71	.....
605-1 Communicable Diseases	8,700.23	128,032.75	.....
605-2 Sanitary Engineering	80,814.07	59,358.71	81,901.29
606 Public Health Nursing	12,785.60	129,067.38	48,760.30
607 Vital Statistics	74,078.59	21,246.52	132,946.41
609 Insulin and Other Special Drugs .....	.....	27,963.49	11,860.33
610 Social Hygiene	74,439.11	16,061.70	57,347.88
616 Hospitals Division	98,169.13	38,406,942.18	15,153,736.22
646 Hospital Construction Grant .....	.....	929,187.48	673,083.34
617 Medical Services	32,811.37	1,419,339.01	.....
626 Public Health Laboratories .....	.....	459,817.80	.....
631 Poliomyelitis .....	.....	134,168.43	.....
633 Cancer Services	277,921.87	825,672.86	293,834.33
638 Civil Service Nurse	6,928.74	1,031.04	.....
639 Public Health Education	23,691.17	10,753.50	5,072.33
640 Entomology and Vector Control	13,883.75	7,346.29	.....
641 Health Units	12,073.10	791,284.79	606,423.22
642 Dental Health Services	4,046.03	711.61	.....
643 Nursing Aides	79,862.06	234,343.09	268,021.10
644 Laboratory and X-Ray School	16,471.94	19,171.23	34,670.77
645 Health Services—Extension Program	5,440.00	1,633,551.32	2,102,229.91
648 Grants for Public Health Services .....	.....	176,727.00	.....
649 Alcoholism Foundation of Alberta .....	.....	125,000.00	.....
651 Cerebral Palsy Clinics	68,743.42	27,079.74	40,357.96
652 Arthritis Services	12,402.60	2,691.00	.....
653 Poison Control Services .....	.....	4,056.02	.....
654 Emergency Air Ambulance Services .....	.....	15,594.94	.....
656 Medical Rehabilitation Services .....	.....	6.50	.....
657 Industrial Health Services .....	.....	445.50	.....
S.W. 58 Professional Acts .....	.....	110.00	.....
DIVISION OF MENTAL HEALTH			
622 Director's Office and Guidance Clinics	149,129.39	21,837.62	100,000.00
612-1 } Provincial Mental Institute, Edmonton	1,871,048.67	490,522.11	527,376.93
613-2 } .....	.....	.....	.....
612-3 } Provincial Mental Hospital, Ponoka	1,606,465.76	501,787.79	623,972.15
613-1 } .....	.....	.....	.....
612-4 } Provincial Auxiliary Mental Hospital, Claresholm	78,002.91	40,192.45	33,303.80
612-5 } Provincial Auxiliary Mental Hospital, Raymond	93,521.62	26,586.25	41,689.08
612-6 } Rosehaven, Camrose	557,452.83	114,289.57	543,327.95
614-1 } Provincial Training School, Red Deer	1,108,063.85	274,906.02	286,106.82
614-2 } Deerhome, Red Deer	725,803.28	256,483.46	263,239.49
615 } Emotionally Disturbed Children's Program	5,976.20	6,676.94	1,376.00
DIVISION OF TUBERCULOSIS CONTROL			
604-1 Director's Office and Clinics	85,014.43	79,166.05	30,674.62
604-2 Baker Memorial Sanatorium, Calgary	760,980.22	179,470.42	299,396.64
604-3 Aberhart Memorial Sanatorium, Edmonton	795,094.33	194,159.69	196,321.70
	<u>\$ 8,826,727.38</u>	<u>\$47,811,300.33</u>	<u>\$22,457,214.47</u>
Total Expenditure—Public Health Department			\$56,638,027.71
Less Public Health Revenue			22,457,214.47
Net Expenditure—Department of Public Health			<u>\$34,180,813.24</u>

The Vital registrations during the year were as follows:

Births	38,080
Marriages	10,402
Deaths	8,481

The population for 1959 was officially estimated as 1,243,000 and, therefore, the following rates have been recorded:

Year	No. of Births	Birth Rate	No. of Marriages	Marriage Rate	No. of Deaths	Death Rate
1954	33,593	32.3	9,960	9.6	7,520	7.2
1955	34,357	32.2	9,844	9.2	7,956	7.5
1956	34,951	31.1	9,965	8.9	7,786	6.9
1957	35,719	30.8	10,117	8.7	8,255	7.1
1958	36,842	30.7	10,186	8.5	8,237	6.9
1959	38,080	30.6	10,402	8.4	8,481	6.8

On the whole these figures are good. The total number of births is up although the birth rate is down slightly. The natural increase (excess of births over deaths) was 29,599.

Alcoholism

The Alcoholism Foundation of Alberta is a voluntary society supported during the fiscal year 1959-60 by the Province of Alberta by a grant of \$125,000.00. This was approximately 75% of their income.

The Foundation recognizes alcoholism as a treatable illness and a public health responsibility and is, therefore, concerned with problem drinking. Its aim is to prevent problem drinking through education, treatment and research. In carrying out this program 521 persons were treated in 1958, bringing the total treated to 4,142 since the inception of the service, of which 56% are reported as having achieved more or less recovery.

Hospital Services

The Alberta hospital insurance program continued to expand. The Province has accepted the responsibility to pay the principal and interest on all debentures and loans which fall due after January 1st, 1959. The Federal Government does not recognize capital cost of hospital buildings as part of the cost of hospitalization and, therefore, does not contribute towards this debenture debt. The cost of major equipment for hospitals is shared between the federal and provincial governments on a fifty-fifty basis, while the cost of minor equipment is paid for by the Province.

On April 1st, 1959, Alberta introduced its insurance program covering auxiliary hospitals. These institutions take care of the type of case which requires some nursing care but does not require the expensive services of a full-fledged hospital. In the beginning the Department accepted a group of 10 institutions that were already in operation, paying them about \$4.50 per patient day, leaving the patient responsible for \$1.50 per day. The Province has arranged to pay the debenture costs of new institutions of this nature. The Federal Government supports the capital cost at \$1,500.00 per bed out of an estimated cost of \$6,500.00. These new institutions will be built in units of fifty beds scattered at strategic points throughout the rural parts of the Province and in 100-bed units in the cities. An active building program is under way aimed at making 3,000 beds available.

In support of the operating cost of these auxiliary hospitals an additional mill has been added to the municipalities' hospital tax which was previously at three mills for acute hospitalization. The operating cost is, therefore, divided approximately 25% from the patient, about 20% from the municipality and the balance or about 55% from the Province.

In addition, the Department of Public Welfare is building a number of Homes for the Aged which will supply the need for space for elderly persons and others who need a degree of supervision but do not need nursing care.

Division of Sanitary Engineering

This Division has been expanding steadily in the last few years. A major responsibility is the supervision of the large number of water supplies and sewage disposal systems. Almost every community in the Province down to a population of three

hundred persons has these services. 170 water systems serve 782,133 people and 177 sewer systems serve 785,993 people. Most of these are small units and, therefore, require considerable supervision

The lagoon method of sewage disposal has developed widely and 114 communities are now using this method. A research program over the past couple of years indicates that these lagoons, especially if operated in series, give a highly efficient result in summer and a satisfactory result even when operating under ice cover. No serious complaints have come forward except occasional complaints of odors from the lagoons during the spring "turnover".

A ground water survey being conducted by the Alberta Research Council is discovering better sources of underground water and this is proving useful in finding adequate water supplies for the smaller communities and for smaller industries. The larger cities all get their water from surface streams.

The stream pollution studies have continued and the proper treatment of effluents prior to disposal has called for the issuing of a number of orders to municipalities and to industries. No serious complaints arose in 1959 such as occurred a few years ago. However, it is recognized that the winter flow of the North Saskatchewan River is so low as to barely meet the demands.

Air pollution still continues as a major responsibility for the sanitary engineers. 41 exposure cylinders have been set up on a more or less permanent basis at points in our major cities and adjacent to gas plants and refineries. Also, during 1959 a portable laboratory was put into operation. This laboratory can be moved to spots where problems arise and is particularly geared to the assessment of sulphur compounds. The sale of Alberta's gas calls for the removal of thousands of tons of sulphur daily from the gas, and these plants and the handling of the sour gas is creating a continual problem. A few locations have been given special attention. The sulphur levels found in Alberta are below the levels reported elsewhere but, nevertheless, many complaints keep coming in. It is the intention of the Department to further expand this detection program because additional sulphur plants are planned in Alberta related to the sale of natural gas.

Mental Health Service

During 1959 the capacity of our mental services increased by opening a new dormitory at Deerhome. However, this space was used immediately to house patients removed from Wards 4, 5 and 6 at Ponoka. These wards, among the oldest at Ponoka, are in poor shape and are to be completely remodelled.

Much thought has been given to the problem of the Emotionally Disturbed Child. It is difficult to get information of a factual nature since no program elsewhere appears to have been developed for a long enough period of time. It was, therefore, decided to remodel a building on the grounds of the Provincial Training School at Red Deer to provide a pilot plant for the study. A more permanent program is to be developed later. This pilot plant was ready to commence operations at the end of the year.

Cancer Services

A big step was taken in the cancer services with the opening of a Cancer Clinic Building at Calgary. Up to the present time the clinic has been housed in the Holy Cross Hospital with x-ray service purchased from that hospital. No heavy radiological service has been available in Calgary. The new building houses a diagnostic service including a medical laboratory and diagnostic x-ray, while in the treatment field heavy duty x-ray, a "cobalt bomb" and a caesium unit have been provided. A caesium unit was also added this year to the Edmonton Cancer Clinic.

Child and Maternal Health

During 1959 recognition was given to the importance of child and maternal health as a public health problem by the official establishment of a service under Mrs. Janet Bailey, R.N., P.H.N. Previously, the requirements in this field had been met by medical officers and nurses in the Division of Local Health Services.

Dental Health

Dental health was recognized in 1959 by the appointment of Dr. C. W. B. McPhail, B.Sc., D.D.S., M.S.D., as the Director of Dental Health Services for Alberta. Dr. McPhail also works part-time on the teaching staff of the University of Alberta.

Special Drugs

For many years Alberta has been supplying insulin to diabetics under a means' test. During 1959 this service was extended by the distribution of oral antidiabetic drugs. This special drugs program also includes the supplying of penicillin for continued use of persons under 18 years of age who have had an attack of rheumatic fever.

Under consideration at the moment is the possibility of supplying corticoids for the treatment of lupus erythematosus and of nephrosis.

Professional Acts

In view of amendments ratified at the 1959 Session of the Legislature, certain Professional Acts relating to the health field were transferred from the Provincial Secretary's Department to the Department of Public Health and by authority of Order-in-Council 1617/59, the Minister of Health was charged with the administration of the following Acts:

- The Podiatry Professions Act
- The Chiropractic Act
- The Dental Association Act
- The Medical Profession Act
- The Naturopathy Act
- The Optometry Act
- The Chartered Physiotherapists Act
- The Veterinary Surgeons Act

In regard to The Podiatry Professions Act and The Optometry Act, Boards of Examiners have been continued by the Depart-

ment in order to license all members who desire to practice in Alberta. Pursuant to The Chiropractic Act and The Naturopathy Act, Appraisal Boards have been continued by the Department in order that members wishing to practice in Alberta may be "listed" through the Provincial Government. In the case of the other Professional Acts, membership is obtained through the various Associations established under each respective Act.

During the calendar year 1959, the Chiropractic Appraisal Board approved twelve applications and rejected one. The Board of Examiners, pertaining to The Optometry Act, issued four licenses and rejected none. No applications were received under The Podiatry Act or The Naturopathy Act.

Respectfully submitted,

A. SOMERVILLE, B.A., M.D., D.P.H., L.R.C.P.S. (C),
Deputy Minister of Health.

DIVISION OF LOCAL HEALTH SERVICES

E. S. Orford Smith, M.A., M.B., B.Chir., D.P.H., D.I.H., Director

The Division of Local Health Services was enlarged during 1959 by the establishment of two new professional positions, for a Director of Dental Health and a Nursing Consultant in Maternal and Child Health. The new Director of Dental Health is Dr. C. W. B. McPhail, who also serves as Associate Professor of Public Health and Preventive Dentistry with the Dental Faculty at the University of Alberta, dividing his time between these appointments. The position of Nursing Consultant in Maternal and Child Health was filled by Mrs. J. C. Bailey.

The Division therefore now consists of the following branches, each under the supervision of a director or consultant:

- (1) Communicable Diseases
- (2) Health Units
- (3) Public Health Nursing
- (4) Maternal and Child Health
- (5) Dental Health
- (6) Health Education
- (7) Nutrition Services
- (8) Entomology and Vector Control

The Director of Public Nursing, Mrs. D. McPhail, was on educational leave at the University of Michigan during the first half of the year, and returned after obtaining her M.P.H. degree.

The Division of Local Health Services is the Department's principal link with local Boards of Health, serving these bodies in an advisory capacity in relation to their administrative problems, and in a consultant capacity in relation to their professional and technical responsibilities.

The heads of the various branches collaborate closely, not only with other divisions of the Department, but also with other departments of the Government which are associated with particular phases of public health activity. In addition, they maintain frequent contact with the chiefs and consultants of corresponding divisions of the Department of National Health and Welfare.

The Director of Local Health Services and the Nursing Consultant in Maternal and Child Health represented the Province at the second annual meeting of the Maternal and Child Health Advisory Committee in Ottawa.

A voluntary project which was begun in 1958 for the immunization of civil servants in Edmonton against poliomyelitis was continued during 1959 by a team from the Division with the assistance of the Civil Service Nurse. By the end of 1959 there were 2,048 civil servants completely immunized and 1,707 others partially protected.

The reports which follow contain a more detailed account of the functions and responsibilities of the branches of the Division, and indicate their achievements during the year.

COMMUNICABLE DISEASES

E. S. Orford Smith, M.A., M.B., B.Chir., D.P.H., D.I.H., Director

The Communicable Diseases branch of the Division of Local Health Services undertakes:

- (1) The collection, preparation and transmission of information, and the compilation of statistics, concerning the morbidity and mortality of communicable diseases;
- (2) The provision of consultant services to local health authorities on matters relating to the control of communicable diseases;
- (3) The direction or application of control measures against communicable diseases in areas administered by the Provincial Government which are outside the jurisdiction of Health Units;
- (4) The interpretation and distribution of Communicable Disease Regulations;
- (5) The distribution of immunizing antigens and sera, and supervision of the utilization of those in limited supply;
- (6) The appraisal of immunization programs, and the publication of specific recommendations in relation to them.

COMMUNICABLE DISEASE REGULATIONS

The Director was authorized by the Provincial Board of Health to form a committee for the purpose of reviewing the Communicable Disease Regulations, last published in 1953, and of recommending any necessary changes.

The need for such a review, although due, was in part precipitated by a request from the Dominion Bureau of Statistics for the adoption of a basic standard list of notifiable diseases which had been approved and recommended by the Dominion Council of Health, but which included several diseases that were not legally reportable in Alberta.

A committee was duly formed, consisting of Dr. G. H. Ball of the City of Edmonton Health Department, Dr. C. G. Moore of the Red Deer Health Unit, and Dr. D. Stewart of the Sturgeon Health Unit. The committee met on several occasions and embarked on a very thorough review, giving particular consideration to suggestions which were solicited from Medical Officers of Health throughout the Province. Work was still proceeding at the end of the year.

NOMENCLATURE OF DISEASES

The introduction of a standard list of notifiable diseases by the Dominion Bureau of Statistics has involved certain changes in nomenclature. The most important of these changes are in relation to viral or aseptic meningitis. Cases which were formerly reported as non-paralytic poliomyelitis are now classified as viral or aseptic meningitis, and sub-classified as (a) due to poliovirus, (b) due to Coxsackie virus, (c) due to ECHO virus or (d) other and unspecified. Until the causative virus is identified, a case of viral or aseptic meningitis is assigned to the category of unspecified aetiology.

PARALYTIC POLIOMYELITIS

1959 was marked by an unexpected reversal in the morbidity trend of poliomyelitis, not only in Alberta, but all across Canada. There were 82 reported cases of paralytic poliomyelitis during the year, and 13 deaths. The corresponding figures for the two preceding years were 34 cases with 6 deaths in 1957, and 22 cases with 1 death in 1958. Type 1 poliovirus was identified in 39 cases, and type 3 in one case; type 2 poliovirus was also present in one of the type 1 cases. Eighteen of the cases and five of the deaths occurred in the area of Fort Vermilion and La Crete. Table 1 shows the age distribution and vaccination status of cases and deaths.

TABLE 1
AGE DISTRIBUTION AND VACCINATION STATUS OF PARALYTIC POLIOMYELITIS
CASES AND DEATHS REPORTED FOR 1959

Age Group	Number of Cases	No. of Doses Salk Vaccine				Number of Deaths	No. of Doses Salk Vaccine			
		0	1	2	3		0	1	2	3
0 - 4	34	17	3	3	11	4	3	.....	1	.....
5 - 9	22	10	3	.....	9	4	3	1	.....	.....
10 - 14	1	.....	.....	.....	1	.....	.....	.....	.....	.....
15 - 19	2	1	.....	.....	1	.....	.....	.....	.....	.....
20 and Over	23	17	3	1	2	5	4	.....	1	.....
Total	82	45	9	4	24	13	10	1	2	.....

By way of comment, it should be recalled that Dr. Jonas E. Salk never claimed that his vaccine was more than 90 per cent effective. Immunity is essentially a relative matter, and the degree of immunity which can be acquired by artificial means must inevitably depend not only upon the biological ability of each individual to produce antibodies in response to a particular antigenic stimulus, but also upon the virulence and concentration of the infecting organism to which he is subsequently exposed. It is known, moreover, that the average immunological response to Salk vaccine is lower in respect of type 1 poliovirus than in respect of types 2 and 3. The fact that type 1 was the most frequently identified poliovirus in the Province during 1959 may help to account for the increased incidence.

VIRAL OR ASEPTIC MENINGITIS

There were 32 reported cases of viral or aseptic meningitis during the year. This figure may be compared with the figures reported in previous years for non-paralytic poliomyelitis, of which there were 31 cases in 1957 and 15 in 1958. Type 1 poliovirus was identified in six cases, and ECHO virus in two (type 6 and type 9); the remaining 24 cases were of unspecified aetiology. Ten of the cases occurred in the La Crete area, including two from whom poliovirus was isolated. Table 2 shows the age distribution and vaccination status of cases known to be due to poliovirus and of those whose aetiology was unspecified.

TABLE 2
AGE DISTRIBUTION AND VACCINATION STATUS OF VIRAL OR ASEPTIC
MENINGITIS CASES DUE TO POLIOVIRUS AND OF UNSPECIFIED
AETIOLOGY REPORTED FOR 1959

Age Group	No. of Cases due to Poliovirus	No. of Doses Salk Vaccine				No. of Cases of Unspecified Aetiology	No. of Doses Salk Vaccine			
		0	1	2	3		0	1	2	3
0 - 4	2	2	...	...	...	11	5	3	...	3
5 - 9	3	...	...	...	3	3	1	...	...	2
10 - 14	1	1	...	...	...	3	...	...	...	3
15 - 19 .....	...	...	...	...	...	...	...	...	...	...
20 and Over .....	...	...	...	...	...	7	5	1	1	...
Total	6	3	...	...	3	24	11	4	1	8

TYPHOID FEVER

There were 13 cases of typhoid fever reported during the year, with no fatality. The corresponding figures for the two preceding years were 16 cases with two deaths in 1957, and six cases with no fatality in 1958. Three cases which occurred in the Drayton Valley area at the beginning of March were suspected to have contracted their infection by drinking untreated water which had been drawn through the ice from the North Saskatchewan River. A 62-year-old woman who was diagnosed at Hanna had evidently been developing the disease on her way home from a visit to an area of the United States where serious flooding had taken place.

DIPHTHERIA

There were ten cases of diphtheria notified in 1959, all of whom recovered. This number was the second lowest annual incidence ever recorded in Alberta, having been undercut in 1951 and equalled in 1955, and represented a gratifying improvement over the two preceding years' records of 39 cases with six deaths in 1957 and 17 cases with two deaths in 1958. Only once before, in 1956, did a year go by without a single diphtheria death.

MEASLES

The number of measles cases reported during the year was 3,956, slightly higher than the 1958 incidence of 3,383, but still well below the 1957 peak of 12,337. The number of deaths from measles was three, which was the lowest figure since 1956 and the second lowest in the history of the Province, comparing favourably with 16 fatalities in 1957 and four in 1958.

STREPTOCOCCAL INFECTIONS

In 1959 the number of notified cases of scarlet fever and streptococcal sore throat reached an all-time high of 5,132, representing a nearly seven-fold increase over the 1957 incidence of 774, and a nearly five-fold increase over the 1958 incidence of 1,062. The fact that there were also five deaths in 1959, compared with one in 1957 and none in 1958, would suggest very strongly that the rise in the reported incidence reflected a real increase in the prevalence of streptococcal infections rather than a desir-

able improvement in the standard of notification. The upward trend in morbidity was viewed with some concern by the committee responsible for reviewing the Communicable Disease Regulations, and the wisdom of a 1958 decision to relax the rule on quarantine for scarlet fever and streptococcal sore throat was very seriously questioned.

The control of streptococcal infections is more than merely an end in itself, for any acute streptococcal infection may be the precursor of much graver disease such as nephritis or rheumatic fever, either of which can cause permanent damage and can shorten life. It is therefore relevant to mention here some facts concerning the incidence of rheumatic fever and rheumatic heart disease in Alberta which have been extracted from data compiled by the Division of Medical Services in connection with its program of rheumatic fever prophylaxis. By the end of 1959 a total of 925 children under the age of 18 years had, over an eighteen-month period since the program's inception, been accepted as eligible for free penicillin by virtue of a rheumatic history. The incomplete figure for the number of first attacks of rheumatic fever in 1959 was 183, while by the end of 1959, the cumulative incidence for 1958 had reached 209. The average age of these children at the onset of disease was very close to $8\frac{1}{2}$ years. It was observed that a single attack of rheumatic fever had been sufficient to cause the damage in no less than 52 per cent of the 357 children who had definite cardiac involvement.

PSITTACOSIS

A serologically confirmed case of psittacosis occurred in a 26-year-old female technician who had handled a dead budgerigar at the Provincial Veterinary Laboratory. The young woman made an uneventful recovery, but the subsequent discovery of psittacosis in a long series of budgerigars which died within a few days of their arrival at retail stores in Alberta from a source in Ontario gave rise to much concern. Physicians were advised to consider the possibility of psittacosis in cases of atypical pneumonia, and to enquire in such cases for a history of contact with psittacine birds. Representatives from the Veterinary Branch of the Provincial Department of Agriculture were invited to participate in discussions on the control of psittacosis.

TETANUS

One case of tetanus was reported during the year in a 9-year-old boy, the third case in a ten-year period. The child stepped on a nail in a barnyard, was admitted to hospital two days later with a cellulitis of the foot, and developed tetanic spasms two days after admission. He died on his fourth day in hospital. The importance of this case lies in the fact that the boy had received a series of three inoculations of tetanus toxoid three years previously, and a reinforcing dose about four months previously. Certain features in the clinical picture suggested very strongly that a septicaemia had been present, and the physician eventually agreed that the immediate cause of death might well have been septicaemia rather than tetanus, but he still considered that the child had had tetanus. The child was therefore recorded as a tetanus case, but not as a tetanus death.

IMMUNIZATION

Immunizing antigens and sera to the value of approximately \$264,000.00 were distributed during 1959 with the help of the Provincial Laboratory of Public Health.

Local health authorities continued to encourage persons up to the age of 40 years, and expectant mothers of any age, to seek vaccination against poliomyelitis, and the supply of vaccine was usually sufficient to enable them to extend their programs to include any persons over the age of 40 years who desired this protection. In table 3 is estimated Alberta's vaccination status against poliomyelitis at the end of 1959.

TABLE 3
ESTIMATED VACCINATION STATUS AGAINST POLIOMYELITIS AT END OF 1959

Age Group and Category	Estimated Number of Persons Who Received Two Doses Only of Salk Vaccine by 31st December, 1959	Estimated Number of Persons Who Received Three or More Doses of Salk Vaccine by 31st December, 1959	Total
0 - 4	55,720	135,015	190,735
5 - 19	55,045	227,705	282,750
20 - 39: Expectant Mothers	13,855	21,820	35,675
20 - 39: Others	74,775	112,550	187,325
40 and Over	5,855	41,770	47,625
Total	205,250	538,860	744,110

TABLE 4
NUMBER OF CASES OF COMMUNICABLE DISEASES REPORTED
IN THE YEARS 1958 AND 1959

	1958	1959
Brucellosis	1	...
Diarrhoea of the newborn .....	...	...
Diphtheria	17	10
Dysentery:		
(a) Amoebic .....		...
(b) Bacillary	83*	61
(c) Unspecified .....		...
Encephalitis, infectious (arthropod-borne)	**	...
Food poisoning:		
(a) Staphylococcus intoxication		6
(b) Salmonella infections	83*	36
(c) Unspecified		9
Hepatitis, infectious	**	527
Leprosy	2	...
Measles	3,383	3,956
Meningitis, viral or aseptic:		
(a) Due to poliovirus		6
(b) Due to Coxsackie	15*	...
(c) Due to ECHO virus		2
(d) Other and unspecified		24
Meningococcal infections	5	6
Paratyphoid fever	5	2
Pemphigus neonatorum .....	...	...
Pertussis	684	657
Poliomyelitis, paralytic	22	82
Psittacosis .....	...	1
Rocky Mountain spotted fever .....	...	2
Rubella	2,268	950
Scarlet fever and streptococcal sore throat	1,062	5,132
Smallpox .....	...	...
Tetanus .....	...	1
Tuberculosis:		
(a) Pulmonary	449	451
(b) Other and unspecified	76	101
Tularaemia	**	1
Typhoid fever	6	13

*Not differentiated in previous reports.

**Figures not available.

DEPARTMENT OF PUBLIC HEALTH

TABLE 5
DEATHS ASCRIBED TO COMMUNICABLE DISEASES FOR THE YEARS 1958 AND 1959

	1958		1959	
	Total Deaths	Rate per 100,000 of population	Total Deaths	Rate per 100,000 of population
Diarrhoea of the newborn	1	0.1	14	1.1
Diphtheria	2	0.2	0	0.0
Measles	4	0.3	3	0.2
Meningococcal infections	1	0.1	2	0.2
Paratyphoid fever	0	0.0	1	0.1
Pertussis	2	0.2	5	0.4
Poliomyelitis, paralytic	1	0.1	13	1.0
Smallpox	0	0.0	0	0.0
Tuberculosis:				
(a) Pulmonary	35	2.9	37	3.0
(b) Other and unspecified....	9	0.7	7	0.6
Typhoid fever	0	0.0	0	0.0
Population of Alberta in 1958	1,201,000		Population of Alberta in 1959	1,243,000

TUBERCULOSIS, PULMONARY

Edmonton	39	29	5	3	5	6	3	9	6	2	6	5	4	5	9	2	2	2	2	4	31	19	10	68
Calgary	33	20	3	1	7	5	9	3	5	1	5	1	2	2	8	2	2	2	2	16	13	12	58	
Lethbridge	4	1	.....	.....	1	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	1	9
Medicine Hat	1	6	.....	.....	1	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	7
Red Deer	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Rural	156	160	25	21	27	80	22	29	30	19	24	23	28	19	19	39	22	34	79	46	38	5	316	
Total	234	217	34	25	41	43	34	43	43	22	36	30	36	32	32	44	28	38	129	80	62	9	451	

TUBERCULOSIS, OTHER AND UNSPECIFIED

Edmonton	10	12	.....	1	1	3	2	2	.....	.....	3	1	3	2	4	.....	.....	.....	.....	2	12	6	1	22
Calgary	5	2	1	.....	.....	1	1	1	.....	.....	1	.....	.....	2	1	.....	.....	.....	.....	2	3	3	1	7
Lethbridge	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Medicine Hat	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Red Deer	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Rural	36	33	3	9	4	3	3	14	6	1	3	7	5	5	6	.....	.....	.....	.....	7	10	13	5	69
Total	52	49	4	10	5	6	6	17	6	1	7	8	8	11	12	3	.....	.....	.....	7	6	12	8	101

TULARAEMIA

Edmonton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calgary	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lethbridge	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medicine Hat	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Deer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rural	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Total	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1

TYPHOID FEVER

Edmonton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calgary	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Lethbridge	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medicine Hat	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Deer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rural	7	4	1	4	1	4	1	4	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	6	1	2	11
Total	8	5	1	4	1	4	4	4	.....	.....	1	1	.....	1	.....	.....	.....	.....	.....	2	7	1	3	13

TABLE 6: COMMUNICABLE DISEASE CASES REPORTED IN 1959 BY SEX, AGE AND PERIOD OF REPORTING (Continued)

	SEX		FOUR WEEKLY PERIODS												AGES							TOTAL			
	Male	Female	1 - 4	5 - 8	9 - 12	13 - 16	17 - 20	21 - 24	25 - 28	29 - 32	33 - 36	37 - 40	41 - 44	45 - 48	49 - 52	Under 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 39		40 - 59	60 and Over	Age Not Stated
Edmonton																									
Calgary																									
Lethbridge																									
Medicine Hat																									
Red Deer																									
Rural																									
Total	1	1						1													1				1

TYPHOID CARRIER

TABLE 7

INCIDENCE OF SOME OF THE MORE SERIOUS COMMUNICABLE DISEASES
FOR THE TEN-YEAR PERIOD, 1950 to 1959

Date	Population	Total Cases	Total Deaths	Mortality Rate per 100,000 of population
DIPHTHERIA				
1950	895,000	13	1	0.1
1951	939,501	2	1	0.1
1952	970,000	11	1	0.1
1953	1,002,000	28	3	0.3
1954	1,039,000	35	2	0.2
1955	1,066,000	10	1	0.1
1956	1,123,116	19	0	0.0
1957	1,160,000	39	6	0.5
1958	1,201,000	17	2	0.2
1959	1,243,000	10	0	0.0
MEASLES				
1950	895,000	1,538	8	0.9
1951	939,501	8,204	12	1.3
1952	970,000	3,515	7	0.7
1953	1,002,000	7,260	8	0.8
1954	1,039,000	3,769	6	0.6
1955	1,066,000	7,136	24	2.3
1956	1,123,116	2,047	2	0.2
1957	1,160,000	12,337	16	1.4
1958	1,201,000	3,383	4	0.3
1959	1,243,000	3,956	3	0.2
PERTUSSIS				
1950	895,000	120	3	0.3
1951	939,501	827	7	0.7
1952	970,000	1,105	8	0.8
1953	1,002,000	1,085	12	1.2
1954	1,039,000	842	7	0.7
1955	1,066,000	791	1	0.1
1956	1,123,116	547	3	0.3
1957	1,160,000	859	4	0.3
1958	1,201,000	684	2	0.2
1959	1,243,000	657	5	0.4
POLIOMYELITIS, PARALYTIC				
1950	895,000	143*	7	0.7
1951	939,501	84*	2	0.2
1952	970,000	774*	81	8.3
1953	1,002,000	1,399*	109	10.9
1954	1,039,000	550*	31	3.0
1955	1,066,000	244*	8	0.7
1956	1,123,116	81*	3	0.3
1957	1,160,000	34	6	0.5
1958	1,201,000	22	1	0.1
1959	1,243,000	82	13	1.0
*These figures include cases of Non-Paralytic Poliomyelitis (Viral or Aseptic Meningitis).				
SCARLET FEVER AND STREPTOCOCCAL SORE THROAT				
1950	895,000	2,309*	0	0.0
1951	939,501	2,304*	6	0.6
1952	970,000	3,829	2	0.2
1953	1,002,000	2,173	3	0.3
1954	1,039,000	1,363	0	0.0
1955	1,066,000	741	1	0.1
1956	1,123,116	642	0	0.0
1957	1,160,000	774	1	0.1
1958	1,201,000	1,062	0	0.0
1959	1,243,000	5,132	5	0.4
*These figures were for Scarlet Fever only.				
TYPHOID FEVER				
1950	895,000	13	1	0.1
1951	939,501	37	0	0.0
1952	970,000	16	2	0.2
1953	1,002,000	9	1	0.1
1954	1,039,000	5	1	0.1
1955	1,066,000	8	2	0.2
1956	1,123,116	22	1	0.1
1957	1,160,000	16	2	0.2
1958	1,201,000	6	0	0.0
1959	1,243,000	13	0	0.0

HEALTH UNITS

E. S. Orford Smith, M.A., M.B., B.Chir., D.P.H., D.I.H., Director

The Health Unit Act of 1951 provided the opportunity for all interested municipalities, including improvement districts but excluding cities with more than 50,000 people, to form themselves into suitably-sized groups and to share, in an economical manner, the professional and technical services of a Health Unit team.

The general public health services which are normally offered by a Health Unit include the prevention and control of communicable diseases, the local control of tuberculosis, maternal and child health programs, school health services, health education and mental hygiene programs and a sanitary inspection service. A Health Unit may also provide a dental health service, which is essentially of a preventive character and intended primarily for the benefit of younger children.

Until 1958 the Department paid 60 per cent of the approved operating expenses of each Health Unit, but in that year an amendment to the Health Unit Act provided for the replacement of this method of support by a system of grants. Under the new system each Health Unit was entitled to receive from the Department a grant for general public health services at the per capita rate of \$1.45 less one cent for each thousand of population served, and a grant for dental services at one-fifth of this rate, provided that its participating municipalities agreed to contribute at not less than two-thirds of these respective rates.

Although the new system was preferred by the majority, experience showed that a few Health Units were placed at a disadvantage. A study revealed that the Health Units most adversely affected were those in which unduly high costs of operation resulted from an unusually wide scattering of population. Based upon these findings, a further amendment to the Health Unit Act was passed in 1959, providing for the payment of an additional grant for general health services at the rate of five cents per capita for each person or part of a person by which the population density falls short of 5 per square mile. Six Health Units benefited from this additional grant, at rates varying from five cents to twenty cents per capita.

The 1959 amendment to the Health Unit Act also included provision for the payment of a grant to National Parks, at a rate not exceeding \$1.25 per capita, to enable them to complement their existing public health services supplied at federal expense, and to acquire the scope of general services normally associated with a Health Unit. The result of this legislation was the establishment of two new Health Units, in Banff and Jasper National Parks, in each of which the services of a part-time Medical Officer of Health and a full-time Sanitary Inspector were augmented by those of a part-time Public Health Nurse and a part-time Stenographer-Technician. This raised the number of Health Units from 21 to 23, and the total population served by Health Units to 666,528, or just over 92 per cent of Alberta's population outside of the cities of Edmonton and Calgary.

The following is a list of the Health Units, with the locations of their headquarters, their populations for 1959, their approximate areas and their population densities:

Name of Health Unit	Headquarters	Population	Area in Square Miles	Population Density
Alberta East Central	Stettler	49,039	7,300	6.72
Athabasca	Athabasca	20,838	8,500	2.45
Banff National Park	Banff	3,069	2,600	1.18
Barons - Eureka	Coaldale	27,097	3,000	9.03
Chinook	Fort Macleod	23,730	4,000	5.93
City of Lethbridge	Lethbridge	31,568	12	2,631
Drumheller	Drumheller	29,202	4,300	6.79
Edson	Edson	21,406	9,600	2.23
Foothills	High River	22,395	3,800	5.88
Grande Prairie	Grande Prairie	30,839	19,000	1.62
Jasper National Park	Jasper	2,322	4,200	0.55
Jasper Place	Jasper Place	19,299	6.5	2,968
Leduc - Strathcona	Edmonton	25,235	1,600	15.77
Medicine Hat	Medicine Hat	43,759	10,000	4.38
Minburn - Vermilion	Vermilion	29,084	5,000	5.82
Mount View	Calgary	42,351	5,200	8.14
North Eastern Alberta	St. Paul	31,264	6,000	5.11
Peace River	Peace River	30,785	27,400	1.12
Red Deer	Red Deer	54,829	4,000	13.70
Stony Plain-Lac Ste Anne	Stony Plain	20,256	4,300	4.72
Sturgeon	Edmonton	49,107	3,700	13.29
Vegreville	Vegreville	31,228	3,700	8.44
Wetoka	Wetaskiwin	27,826	3,100	8.98

Each Health Unit is administered by a Board on which the major contributing municipalities are directly represented. The daily operation of a Health Unit and the supervision of its staff, however, are the responsibility of the Medical Officer of Health. The Director of Local Health Services is available to advise Health Unit Boards, to assist Secretary-Treasurers, and to be consulted by Medical Officers of Health, and in this connection during 1959 he made more than forty visits to twenty different Health Units.

Staff appointments are made on the authority of the Health Unit Boards concerned. The following table shows the categories of staff, and the number of established positions in each category at the end of 1959, with corresponding figures for the four preceding years:

Category of Staff	1959	1958	1957	1956	1955
Medical Officers	23	21	20	18	17
Dentists	3	3	3	1	1
Public Health Nurses	170	108	98	82	70
Sanitary Inspectors	31	28	26	24	19
Dental Assistants	3	3	3	1	1
Stenographer-Technicians	42	32	29	25	22
Secretary-Treasurers	23	21	20	18	17

Five new Medical Officers of Health were appointed to Health Units during the year under review; a course of orientation was arranged for each one, and wherever possible this included a period of attachment to a well established Health Unit under a Medical Officer of Health of considerable experience.

One Health Unit Dentist obtained his D.D.P.H. from the School of Hygiene at the University of Toronto, and one Medical

Officer of Health was granted leave of absence by his Health Unit to take the D.P.H. course there. Both these staff members received bursaries from federal Professional Training Grants, on the Deputy Minister's recommendation.

The annual Health Unit Conference was held during the first week of November, and provided an opportunity for Board Chairmen (or their representatives), Medical Officers of Health, Dental Officers and Secretary-Treasurers to discuss problems of common interest. The conference covered a large variety of topics, some of importance to administration, others strictly professional. Numerous resolutions involving policy were submitted for the Minister's consideration, and some of these were noted for possible legislative action.

PUBLIC HEALTH NURSING

Dorothy McPhail, B.Sc., M.P.H., R.N., Director,

Janet Bailey, P.H.N., R.N., Acting Director

Again it is my pleasure to report the activities of the Public Health Nursing Section, Local Health Services Division, for 1959. For the greater part of the year, the Acting Director was responsible for the work of the Public Health Nursing Section, since the Director was absent for educational purposes. The major responsibility of this section is the direction and supervision of twenty-seven municipal nurses. Counselling, placement and guidance are also offered to all public health nurses in the Province and particularly to those in Health Units.

Throughout the year most Health Units have had their full complement of staff but we continue to have difficulty locating nurses for the northern communities.

During the year eight nurses were appointed to the Municipal Nursing Service, six nurses resigned from the service and Miss A. D. Engelcke retired following twenty-five years of devoted service with the Department of Public Health.

Several Municipal Nursing Districts were without nurses during the year due to the difficulty in obtaining suitable well qualified candidates for these positions.

The Foremost Municipal Nursing Service was officially closed at the end of March, 1959, since a resident physician established himself in the community. We wish to express our sincere appreciation to the County of Forty Mile No. 8 for helping to support a community nursing service during the years it was so urgently needed.

FIELD TRIPS

The Acting Director made field trips to twelve Municipal Nursing Districts and five Health Units. Supervision and counselling of the nurses were offered in all of these centres.

Interviews were held by the Nursing Director with twelve staff nurses in the Central Office in Edmonton.

CONTINUING EDUCATION

A refresher course in paediatrics and obstetrics for physicians and public health nurses was held in February under the joint sponsorship of the Alberta Division of the Canadian Medical Association and the University of Alberta Paediatric and Obstetric Departments. This conference was well attended by representatives of the Health Units as well as by all Municipal Nurses since it took the place of their annual Spring Conference.

Staff conferences for the discussion of policies and for continuing education were held by most of the Health Units and where possible the Municipal Nurses were included in these study groups.

NEW APPOINTMENT

On the return of the Director of Public Health Nursing, the Acting Director was appointed as Nursing Consultant, Maternal and Child Health, under the guidance of the Director of Local Health Services. The Nursing Consultant will work closely with the public health nurses to assist them in improving their nursing services in the area of maternal and child health.

ANNUAL MEETINGS

The annual meetings of the Alberta Division of the Canadian Public Health Association and the Alberta Association of Registered Nurses were well attended by nurses from both the Health Units and the Municipal Nursing Service. The Acting Director was able to be present at one of these meetings.

PUBLIC HEALTH NURSES' UNIFORM

An interesting event took place in 1959 when nurses in Health Units adopted a standard uniform for the first time. The Uniform Committee, elected by the Nurses' Section of the Alberta Division of the Canadian Public Health Association, prepared the regulations regarding the uniform. It consists of a medium blue hat, suit and top coat with the added feature of a distinctive blue and silver lapel and hat pin. This uniform now replaces the older style designed for the Municipal Nurses about ten years ago. Complimentary reports concerning the new uniforms have been received from many districts.

The record of nursing service carried out by the Health Unit nurses will appear in the annual reports of the Health Units. The statistical records attached to this report refer only to the nursing service accomplished by the Municipal Nurses.

In conclusion I should like to acknowledge the co-operation of the nursing staff, local nursing service committees, Health Unit Boards and staff, and other Government Departments, which has added to the progress of the Public Health Nursing Section.

This report is respectfully submitted.

NUMBER AND TYPES OF CALLS—27 MUNICIPAL NURSING DISTRICTS

(19 I.D.'s)
(8 M.D.'s)

Number Treatment Consultations	20,425
Number Treatment Consultations Public Welfare Cases	914
Number Treatment Consultations Treaty Indians	278
Number Miscellaneous P. H. Consultations	9,941
Number Antepartum Consultations	1,182
Number Infant and Pre-school Consultations	6,240
Number Treatment Home Visits	2,736
Number Treatment Home Visits to Public Welfare Cases	670
Number Treatment Home Visits Treaty Indians	72
Number Miscellaneous P. H. Home Visits	2,765
Number Communicable Disease Home Visits	1,166
Number T. B. Home Visits	254
Number V. D. Cases Found, Treatment and Home Visits	81
Number Maternal Welfare Home Visits	522
Number Infant and Pre-school P. H. Home Visits	1,270
Number Deliveries	30
Number Abortions	18
Number Cases sent to Doctor or Hospital	2,686
Number Deaths	14
Number Cases of Communicable Disease	1,312
Number Letters and Telephone Calls	9,463
Number Newspapers or Radio Publicity	252
Total Fees Collected	\$18,940.61
Cost of Drugs and Surgical Supplies	\$15,215.92

SUMMARY OF SCHOOL REPORTS—27 MUNICIPAL NURSING DISTRICTS

(19 I.D.'s)
(8 M.D.'s)

Number of Visits to Schools	459
Number of Pupils Inspected	7,997
Classroom Talks	151
Number of Consultations with Teachers	678
Number of Consultations with Parents	516
Number of Pre-school Children Examined	196
Number of Doses of Diphtheria Toxoid	1,513
Number of Doses of Tetanus Toxoid	1,496
Number of Doses of Smallpox Vaccine	1,862
Number of Doses of Whooping Cough Vaccine	338
Number of Mantoux and Patch Tests	1,421
Number of Doses of Polio Vaccine	761
Number of Films Shown	24

LECTURES, CLINICS, CLASSES—27 MUNICIPAL NURSING DISTRICTS

(19 I.D.'s)
(8 M.D.'s)

Number Lectures to Organizations	40
Number Films Shown	75
Number Generalized Clinics	668
Number Child Welfare Clinics	388
Number Home Nursing Classes	33
Number First Aid Classes	10

IMMUNIZATION WORK DONE AT OFFICE OR CLINICS
27 MUNICIPAL NURSING DISTRICTS(19 I.D.'s)
(8 M.D.'s)

	Number of Doses
Number Immune Serum Globulin	408
Number Polio Vaccine	10,650
Number Diphtheria Toxoid	5,898
Number Pertussis Vaccine	5,677
Number Tetanus Toxoid	5,829
Number Smallpox Vaccine	1,806
Number Typhoid Fever Vaccine	176
Number Patch or Old Tuberculin Tests	1,077
Number Asian Flu Vaccine	20
Other Vaccines	264

MATERNAL AND CHILD HEALTH

Janet C. Bailey, R.N., P.H.N., Nursing Consultant

This subdivision of the Division of Local Health Services came into existence early in the fall of 1959. Immediately after the appointment was made it was arranged through a Federal Health Grant project for the consultant to spend three weeks observing Maternal and Child Health Programs in a few selected places. These places included the Department of National Health and Welfare (Child and Maternal Health Division), the Ottawa Health Department, the Ontario Department of Health, the Toronto Health Department and the Saskatchewan Department of Public Health. This opportunity proved most helpful.

Attendance at the Maternal and Child Health Advisory Committee Meeting held at the Department of National Health and Welfare, Ottawa, on September 21 and 22, 1959, was also arranged.

The University of Alberta, through an Extension Course, presented a course on the Care of the Premature Infant in October and November 1959. The Nursing Consultant attended approximately one-third of the lectures given.

Plans have been made to spend two or three days in each Health Unit during 1960 to observe the Maternal and Child Health Program presently being carried out. By doing this it is expected to gain knowledge that will be useful in drafting a definite program in this field of public health nursing.

DENTAL HEALTH SERVICES

C.W.B. McPhail, B.Sc., D.D.S., M.S.D., Director

A Director of Dental Health Services was added, for the first time, to the Division of Local Health Services staff with the appointment of Dr. C. W. B. McPhail on August 1st, 1959. His appointment is shared with the Dental Faculty, University of Alberta as Associate Professor of Public Health and Preventive Dentistry. The function of this service is:

- (a) To encourage, financially aid and assist with the planning and carrying out of a comprehensive dental public health program in all local Health Units and City Departments of Health throughout the Province.
- (b) To advise and deal with matters pertaining to dental public health.
- (c) To serve as a liaison for the Department with the dental and other health professions, and other groups or individuals interested and concerned in dental health.

The initial report of this service will deal largely with the background and recent planning of dental health in Alberta; subsequent reports will deal largely with actual programs, results and future planning.

An amendment to The Health Unit Act in 1952 provided for the employment of part or full-time dentists and dental assistants by local Boards of Health. At this time dental service costs were budgeted for in the same way as other Health Unit operating expenses, the Department paying 60% of an approved budget which covered equipment, supplies, rent, travel and subsistence, and salaries up to the level recommended by the Government's salary survey committee. A 1958 amendment to The Health Unit Act provided for a separate dental health grant (equivalent to one-fifth of the general health services block grant) available on request to local Health Units. This grant (as with the general services block grant) must be matched locally by at least two-thirds of its amount. Any amount spent over this basic budget must be contributed locally. As can be seen from this the decision to provide a dental program in a Health Unit, and the basic type of program to be provided, is the decision of the local Health Unit Board. Dental programs under these arrangements have been operating in various Health Units from time to time, but never more than two or three in any one year.

The first dental health program to be operated by a rural Health Unit on a full-time basis was established at Lamont in the summer of 1943 and continued in operation until mid-summer of 1946. The Barons-Eureka Health Unit started a part-time program in 1954 and has continued with a full-time program since 1955. Jasper Place began with a part-time program in 1957 and continued with a full-time program shortly thereafter. Sturgeon Health Unit has had a dental health program operating on a full-time basis continually since 1957. With these exceptions no full-time local Health Unit program has operated continuously for more than two years.

The Barons-Eureka program concentrates largely on education - treatment services to the grade two children. Recently some interesting figures were provided indicating a lower decay rate in the naturally occurring water fluoride areas as compared to the non-fluoride areas.

Jasper Place Health Unit operates a very comprehensive preventive dental program, providing education, examination, consultation and referral services to the younger age groups, as well as a topical fluoride program to grade one and pre-school children. Treatment services including examination, X-rays, extractions, fillings, space maintainers and also limited preventive orthodontic appliances are given to selected cases on the basis of need. Statistical data were provided to the Canadian Dental Association.

Sturgeon Health Unit was forced to limit its education - treatment services to pre-school children in order to keep up with the demand. Four other Health Units budgeted for a full-time dental program but were unable to fill the appointments.

Both Calgary and Edmonton provided an educational, examination and referral program with limited treatment services provided on a basis of greatest need. These cities have not hitherto been eligible for a specific grant for dental services.

Dental diseases cannot be classed with the "killing" diseases such as heart disease and cancer, nor with the seriously crippling diseases such as polio and arthritis; nevertheless, death results occasionally, and all too frequently a physical, emotional or social handicap is the result of untreated dental disease. Dental disease in most instances, unless prevented or controlled, continues throughout life, so that an important economic aspect is involved. And then there is the fact that in the civilized world it has become man's most common affliction. This may be due partly to:

- (a) heredity.
- (b) our food and eating habits which favour a continuing high attack rate of dental disease.
- (c) the fact that, for one reason or another, only one person in three, approximately, receives adequate dental care in Canada.
- (d) the shortage of dentists in some areas.
- (e) the fact that recommended proven and effective measures of prevention and control, either for individual or community use, are as yet not being generally employed.

For whatever reason, dental health has certainly become a major public health problem. And for this reason it can be no longer considered the sole responsibility of the dental profession; they must provide guidance and leadership, but it is a responsibility that must be shared by the health professions and official bodies at all levels, just as other health problems are a shared responsibility.

Positive action has been brought about in Alberta by a continually increasing interest and demand over a period of years, but it was undoubtedly precipitated by the activities of a group of missionary dentists operating in the province. Discussions were held with various members of responsible and interested

groups. It was generally agreed that the overall plan in its initial stages should consist of three phases:

- (a) A program to make available basic dental services in the rural areas of the province where such services are difficult to obtain, in order to meet the apparently urgent demand for such services.
- (b) A program to increase the supply of services by increasing training facilities, recruitment activities and considering facilities for the training of additional dental auxiliary personnel.
- (c) A need to reduce the continuing high attack rate of dental disease on a long term basis by (i) encouraging the general use of the proven and effective preventive measures that are available on an individual or community basis today, and (ii) continuing support of research.

Some of these steps were already in progress, others were started before the end of 1959. For example:

- (a) A program is being arranged whereby transportable dental equipment will be made available by the Department of Public Health to a roster of volunteer dentists from the Alberta Dental Association who have volunteered to visit communities where there was an urgent demand for services and to make their services available in that community on a private practice basis.
- (b) Realizing the shortage of full-time dentists in Health Unit services the Alberta Dental Association has volunteered to provide a roster of dentists to work in Health Unit preventive dental programs on a part-time, short term basis until full-time services are available. It is hoped that both of these programs will be operating in 1960. The Dental Faculty, University of Alberta arranged for third-year dental students to work in Health Units only, and providing only preventive services during the summer recess period between the third and fourth years of dentistry.
- (c) Five additional Health Unit Boards budgeted for the services of a full-time public health dentist.
- (d) Plans were completed and approved in 1958 for a new dental school and renovation of some existing space at the Dental Faculty, University of Alberta. These new facilities will provide for the training of fifty students in each year of dentistry. The present facilities provide only for a maximum of thirty students per year.
- (e) The Alberta Dental Association has been carrying out a recruitment campaign, attempting to interest suitably qualified high school students to make a career in dentistry.
- (f) Several meetings have been held between the Department, the University of Alberta and the Alberta Dental Association concerning the possibility of training additional dental auxiliary personnel. It is expected that Legislation dealing with the training of a new type of dental auxiliary personnel will be presented in the 1960 session.

HEALTH EDUCATION

C.C. Evoy, B.Sc., Director

TOURS AND MEETINGS

Each year in planning a program for health education some consideration is given to an improvement in the quality of meetings. Aside from the topic and presentation this is largely determined by good organization and an effective pattern. In this connection the cooperative assistance of public health field staff, education officials, executive members of local organizations and school teachers can prepare an environment which is conducive to a successful meeting. This year with the active participation of these auxiliary groups the quality of the meetings has improved. The general design and structure of the meetings has changed form. Through different approach techniques there has been more audience involvement with resultant general satisfaction of accomplishment. This observation is based on personal judgement and of course is open to question.

Health education of the people may be classified into general public, school, home and school, public health staff and students. To consolidate the educational program for most efficient use of time it was essential to plan tours which would distribute services as equitably as possible over the province. The form this program took was designed for workshop, convention, conference, in-service training, and professional instruction.

The year opened with an orientation lecture to the public health nurses in training at the University of Alberta. The purpose of the talk was to acquaint these students with the services of the Division of Health Education.

The program of the Department of Public Health was of interest to many organizations. Six meetings were attended, by staff from Health Education, where a questionnaire, film, pamphlets and discussion were used to emphasize the value of provincial health services and to make interesting an otherwise dull subject. The documentary film shown was screened at twenty-four other meetings sponsored by local health authorities.

In June at Kinuso co-ordinators of the health education program in schools along the shores of Lesser Slave Lake met to evaluate the year's work in health education, to discuss the advisability of a continuing program and the need for a second teachers' institute. The reports from committee members were favorable towards the project and approved a tentative program for the fall institute.

The expanded program in health education introduced into the schools contiguous to Lesser Slave Lake in 1958 was re-opened by the local school Superintendent O. Fadum with an institute of thirty-five teachers on October 2nd at Kinuso School. The purpose of the gathering was to orientate new elementary teachers to the program, to stimulate the continuing staff and to appraise the work of the preceding year through sectional discussion and display of completed work. Discussion revealed some

weaknesses in the plan which could be corrected only by changed attitudes of the community and by additional physical equipment for some schools. However, tangible results of the program for the previous two terms were encouraging enough to stimulate the staff to a renewed effort for another year.

The Director of Health Education served as a consultant at both the co-ordinators meetings and the institute.

Visits were made to a number of health units to discuss educational matters with the medical officer of the unit and his staff. Topics given consideration were as follows:

1. Newsletters to teachers.
2. Health education in schools.
3. Safety education in the schools.
4. First aid instruction in schools by nurses.
5. Opportunity rooms for the children with I.Q. 50 to 70.
6. Teacher-psychologist in the school system.
7. The relationship between the home and the school concerning health practices.
8. In-service training in health education.
9. Health education literature displays.
10. Utilization of films by the health unit staff.

Most units were working closely with the schools in the areas listed with the exception of first aid teaching. However instruction in this subject for teachers, by the medical officer, would be available when required.

Schools

Each year opportunities are provided for visits to Alberta schools. To each school visited this year we offered a special service; to the pupils of elementary grades a lesson on safety and for the teacher a demonstration of techniques in teaching. For all teachers of health from grade I to X inclusive there was demonstrated a series of three-panel displays of health education aids classified according to grade and unit. These materials include samples of free literature, films and current health references. Consultation and discussion concerning the curriculum and use of the health education media are considered essential to a better understanding of our service.

Thirty school visits were made in 1959. More than 150 teachers and approximately 2,000 pupils were in attendance.

University

Commencing this year the Director of Health Education delivered thirty-six lectures to the students of the Faculty of Education at the University of Alberta, Edmonton. These lectures depicted the health education services available to teachers and pupils in Alberta schools and the local public health program provided through the health units. A total of over five hundred student teachers were in attendance.

Workshops

Teaching implies the transmission of ideas from person to person by instruction and training. In-service-training of public health staff in the use of audio-visual equipment is a continuing essential service which makes full use of teaching methods. Demonstration in the art of teaching can help prepare public health staff for the health education of the public. Instruction on film utilization is combined with training in the use of audio-visual equipment. New health unit members seek help in this area of their work. Through this training provided by Health Education and the cooperation of other members of the health unit staff it is possible to keep all field staff abreast of education methods.

Three workshops on film utilization were conducted during 1959.

In the fall of the year a helping service was given to one local school system. A testing program for retarded children was conducted by school authorities. Health Education was called upon to administer a number of the tests. The assistance was given in the interests of child health.

Conferences

Early in the year a conference on the Curriculum Guide in Health and Personal Development was held by the Department of Education to consider recommendations to be submitted to the Cameron Commission on Education. The Department of Public Health was represented at the meeting by the Deputy Minister of Health and the Director of Health Education.

The sanitary inspectors of the province held a refresher course at the University of Alberta during the third week in April. The director of health education conducted a half-day workshop on methods in public health education for this group. Assisting in this program was Mrs. E. Colborne teacher-educator on the staff of Health Education.

In May a representative from this branch attended a Junior Red Cross Committee meeting in Calgary. Then, in June, at the annual conference of this association the Director of Health Education was present as a guest committee member. He participated in the program as an observer and commentator.

Finally in late fall at the Health Unit Conference in Edmonton a representative from health education was in attendance at a number of the sessions. Tape-recording equipment from the division was supplied for a verbatim report of the discussions.

Displays and Exhibits

A complete set of new displays was designed and prepared for use in teacher education. These three-panel units, of which there are nine, have been used to demonstrate for the teachers, health literature and films available to the schools of the province. Once again, hundreds from the teaching profession had an opportunity to become acquainted with this educational service. The sequence to a demonstration of this nature was a large number of requests for health literature and films.

The theme for the health display at the Edmonton Exhibition was "Safety In The Home". A fitting exhibit from National Health and Welfare, Ottawa, was the central display. Around this and in keeping with the general theme were arranged provincial facts and statistics on home safety.

Other divisions showing were Mental Health and Nursing Aides. In connection with the latter the projectograph from Health Education was used to show slides on the training program in this branch of nursing.

At the Alberta Federation of Home and School Convention the division placed a health display which was manned daily by Health Education staff members. Items of interest were health literature samples and service information.

Conventions

Representatives from Health Education prepared a display of health literature for a number of teachers' conventions. Three different programs were attended in Edmonton. Other centres visited were Bonnyville, Red Deer and Calgary. Teachers of health present at these conventions had an opportunity to examine and discuss health materials related to the teaching of this subject. It is estimated that three thousand teachers were in attendance at these conventions.

EXTENSION ACTIVITIES

To reach the people of this province with ideas which may modify their thinking and improve their way of life requires different types of media. In health education the methods employed are effected through literature, films, talks or lectures and publicity.

Health literature has most appeal when it is displayed and associated with some group discussion. Organizations of parents meeting in convention halls so that they may become acquainted with the literature available concerning their problems is of value. Delegates at conventions may be impressed with services and information in the health program of the province. These contacts are valuable to the communities represented. Through them health extension service can become a part of the education of the people.

At professional gatherings of teachers, nurses, sanitary inspectors and medical officers of health, a speaker, display, film or health literature may be required. The services available from Health Education provide for assistance of this nature.

Local associations of the Home and School Federation draw upon this division for program assistance on health topics. Again the call can be for one or more of the extension services. Other organizations which use this help are women's groups, churches and clubs.

HEALTH LITERATURE DISTRIBUTION

Each year we note changes in patterns of interest in the requests for health literature. During the past twelve months there has been an upsurge in the demand for posters of all types. The greatest interest has been shown by the elementary schools.

To name the most popular by topic, the order of preference for health literature is colds, safety, dental health, tuberculosis and sanitation.

The mimeographed materials prepared by Health Education for university students and teachers of the elementary and junior high school were designed to give help in health teaching generally and specifically safety and dental health.

Child care literature has been in strong demand from health units in the rural areas and by city health departments. Requests from other organizations for this material have been fewer in comparison to previous years.

The schools of the province have received from Health Education for teaching purposes the following publications: Alberta's Health Services Program, Communicable Disease pamphlets including the Regulations, and pamphlets on Sanitation, Dental Health and Safety.

A healthy but moderate interest has been displayed in Industrial Health publications.

FILM LIBRARY

Some years ago a dramatic film on mental health services in Alberta was produced by the Department of Economic Affairs. The film has served a good purpose in providing a visual concept of the mental health program to the people of the province and in serving as a training film for new staff entering mental health work. However the film has fulfilled its primary purpose and will be replaced in 1960 by a documentary film depicting mental health services including changes since 1949 in treatment and accommodation. The work on the new film will commence in January of the new year and should be completed by late summer.

The film library has a complement of 568 separate titles, 440 of which are 16mm films with the balance in 35mm filmstrips. The total is a fluctuating number resulting from periodic withdrawal of worn prints and replacement. New films added to the library in 1959 numbered 32. Of these, 25 were new titles - 16 films and 9 filmstrips. Replacements of prints numbered 7. Preview committees screened forty-two new films from which approximately forty percent of the titles were recommended for purchase.

Health films shown in the past year numbered 10,500. The hospital nursing schools rank first on the list of users, followed closely by the schools, municipal nurses and health units. The number of requests from groups like the Home and School locals has fallen but this is compensated through an increase in the number of films shown to parent-teacher groups by local health authorities. An estimated total of 546,450 persons viewed health films from the division in 1959.

NUTRITION SERVICES

Elva M. Perdue B.Sc. (H.Ec.), B.Ed., Nutritionist

The main purpose of Nutrition Services of the Division of Local Health Services of the Department of Public Health is to help build and maintain the health of the people of Alberta through the promotion of good nutrition practices. This is done by providing consultant and educational services to public health personnel, other government departments, hospital personnel, schools and to lay groups. The staff consists of one nutritionist and one part-time stenographer.

PUBLIC HEALTH PERSONNEL

Consultant service is provided to public health nurses at the local level by direct visits, office visits and through direct assistance with specific programs. For example, the Nutritionist attends Child Health Conferences and prenatal classes but only on request and for a particular purpose - showing a film, presenting a demonstration or preparing a special display.

The public health nurse is especially concerned with nutrition education in family counselling, school health services, child health conferences, and prenatal classes as evidenced by the request for many and varied types of information, program assistance, publications, posters, exhibits and films.

As in previous years, the nutritionist was responsible for part of the orientation of medical officers of health, municipal nurses and some health unit nurses coming on staff. This includes teaching, reviewing aids that are available and illustrating ways in which the services of the nutritionist can be utilized in the general public health program.

Industrial nurses and Victorian Order nurses again requested assistance in planning nutrition programs and in obtaining publications and teaching aids.

Nine issues of the mimeographed release Nutritionally Speaking were prepared throughout the year for distribution to public health personnel, industrial nurses, Victorian Order of Nurses, home economics and health teachers. This material is intended to provide information on recent advances in the field of nutrition.

For the second year, a course in Normal Nutrition was given to the student nurses at the Provincial Mental Hospital, Ponoka. This course was comprised of 20 hours of lectures and 14 hours of laboratory given over a three week period.

The nutritionist was again available to assist professional personnel in all Divisions of the Department with problems relating to nutrition, some of which have entailed considerable research.

OTHER GOVERNMENT DEPARTMENTS

The nutritionist continued to cooperate actively with provincial and federal government departments in an exchange of information, ideas, materials, etc. At the provincial level, there was a continuing liaison with the Supervisor of Home Economics and the Dietitian at the School for the Deaf in the Department of Education and with the Supervisor of Women's Extension Service and District Home Economists in the Department of Agriculture.

At the federal level, a close working relationship was maintained with the Nutrition Division of the Department of National Health and Welfare, the Dietitian in the Foothills Region of Indian and Northern Health Service, the Consumer Section of the Department of Agriculture and the Home Economics Section of the Department of Fisheries.

HOSPITAL PERSONNEL

During the late fall of 1959, the nutrition consultant service to small hospitals was changed. This will in future be provided by the Alberta Hospital Association. However, during most of the year, assistance with food service problems was given as usual to small institutions, including municipal hospitals, homes for the aged, nursing homes and children's homes.

Implementing this service before it was discontinued, the nutritionist visited three municipal hospitals at the request of the hospital administrators. These visits required a combined total of fifteen days of observation. After each dietary department was surveyed, a detailed written report was prepared and a copy sent to the hospital administrator. The reports are designed to show findings and make specific recommendations.

In addition to numerous telephone calls, the nutritionist also received requests from 22 hospitals for assistance and information which was forwarded by letter as quickly as staff and time permitted. Further, to assist the problem of menu planning, seven issues of the mimeographed release, "Institutional Supper Menus" were prepared and distributed before it was discontinued in November.

SCHOOLS

Work in the schools was directed under three main channels - animal feeding demonstrations, food surveys and school lunches.

Animal feeding demonstrations continued to be carried out in the schools as a graphic illustration of the value of good eating habits. A total of 20 such demonstrations were conducted in schools throughout the province during the year. The animals are provided free by the Department. In carrying out the demonstrations, efforts are made to stimulate interest in the community and often the results are discussed at a meeting of the Home and School Association.

Nutrition Services makes food survey records available to the teachers and assists with the evaluation of the records. The teachers use the result as a guide in their teaching. Teachers

have also been advised on nutrition materials that are available on request in quantity and those that are available on loan.

Work on school lunch programs was continued as usual. Efforts were made to stimulate interest with the result that programs that had previously been setup were not only continued but new programs were initiated. The emphasis has again been on the packed lunches brought from home and the problem of a nourishing beverage at noon is gradually being overcome as milk dispensing machines in the larger schools become more common.

LAY GROUPS

Since the nutritionist is a consultant, part of her time is spent answering questions, giving information and solving problems for individuals. Inquiries regarding all phases of nutrition are received from the lay public and Nutrition Services continues to promote good eating habits through work with community groups and the general distribution of teaching aids such as leaflets, booklets, pamphlets, posters, films, filmstrips and reference materials.

There was an increase this year in the number of requests for assistance with budgets and special diets. Talks on various aspects of nutrition were given to eight lay groups and five home nursing classes received assistance with courses on nutrition in health and disease.

MISCELLANEOUS

Pre-planning for food service at summer camps and assistance to food service personnel throughout the camping period was again given, but as the number of requests was tripled in 1959, it has become impossible to give detailed assistance.

Library service was available to public health personnel, to hospital staffs and to the general public through the small library maintained by Nutrition Services.

The nutritionist frequently assisted with nutrition problems encountered by the Visiting Homemakers.

The objectives and activities of Nutrition Services were outlined to key groups of students, including teachers and public health nurses at the University.

The nutritionist attended the annual meeting of the Dominion - Provincial Nutrition Committee and the Canadian Council on Nutrition in Ottawa.

ENTOMOLOGY AND VECTOR CONTROL

J. H. BROWN, B.Sc., M.Sc., F.A.P.H., M.R.S.H., *Director*

The Division of Entomology and Vector Control deals with insect-borne diseases and reservoirs of human infection in native small mammals, with particular attention being paid to Rocky Mountain Spotted Fever, Colorado Tick Fever, Bubonic Plague, Tularaemia, Encephalomyelitis and other less known conditions.

Other insect problems, such as fly and mosquito control, insecticides, insect infestation in food-stuffs and insect pests of institutions, also fall within the work of the Division. Furthermore, a considerable amount of time is devoted to determining the distribution of insects, ticks and mites that are involved in the transmission of human diseases.

TICK SURVEY

The Rocky Mountain Spotted Fever tick, *Dermacentor andersoni* is well-established in Alberta. Its known and supposed range embraces all of that part of Alberta south of a line from Empress west to Calgary, and thence north and west in the foothills and mountains north to Fort St. John, B.C.

Collections—On account of delays in field work only 12 collections were made in 1959, with 164 ticks being collected. Of these 88 were removed from hosts and 76 were by drag.

Rocky Mountain Spotted Fever—During 1959 one case of Rocky Mountain Spotted Fever involving a 23 year old white male occurred in the Medicine Hat area. This case was diagnosed on a clinical basis when the young man took ill at Lacombe. As he had been treated with antibiotics serological proof could not be obtained. However, a field study proved that he had been in a known Spotter Fever area and that he had been bitten by ticks. He had never been vaccinated against Rocky Mountain Spotted Fever. He made a good recovery but still complained of some weakness two months after the illness.

Vaccinations—During 1959 a total of 1,668 doses of Rocky Mountain Spotted Fever vaccine were given in the Medicine Hat, Manyberries and Ralston areas.

Tick Paralysis—One case of Tick Paralysis involving a young white female occurred in Calgary. This child had been admitted to hospital as a possible Poliomyelitis case because of a sudden onset of paralysis of the lower limbs. On admission to the hospital a thorough examination was carried out and, due to the fact that this Division has repeatedly stressed the necessity of always considering the possibility of Tick Paralysis, particularly during the early spring and summer, the doctor and nurse in attendance explored the body surface and found a female *Dermacentor andersoni* attached at the hair line on the left side of the neck. The tick was removed and five days later the child had completely recovered.

The field study of this case proved that two days previous to the onset of the paralysis the child had returned from visiting in the interior of British Columbia where "tick paralysis" ticks are present. An examination of the specimen showed that the female tick involved was a *Dermacentor andersoni* and had been feeding for a period of five to seven days.

PLAGUE SURVEY

Two very large areas of Plague infection, one centering on Hanna and the other on Brooks exist in Alberta; in both of these areas plague-infected Ground Squirrels (gophers) and plague-infected Ground Squirrel fleas are present in large numbers.

There are 14 species of fleas in Alberta that are capable of transmitting plague from infected animals to man, fortunately most of these species are not very numerous, and in many cases their distribution is limited. In 1959 a total of 151 fleas and 48 tissue specimens were collected in various areas from 162 small mammals, but no positives were found, however, it should be obvious that the lack of positives does not necessarily mean any decrease in the amount of infection in fleas and gophers. And the fact that human deaths occur every year in the plague areas in the United States, indicates that bubonic plague is still a serious problem.

FLY CONTROL

Fly control still presents a considerable problem both in cities and small towns. However a program of Fly Control within Health Units was developed during 1959, based mainly on basic sanitation and proper garbage disposal. This program was developed in this division and worked out on a pilot-basis before being recommended. The program appears to have been well accepted.

MOSQUITO CONTROL

Mosquitoes did not present a very serious problem except in the irrigation areas of southern Alberta. However they were present in sufficient numbers to constitute a nuisance at most of the summer resort areas. There is very great interest in all parts of the province for local mosquito control programs, but, unfortunately, mosquito control is usually expensive and ineffective unless a definite long range program is undertaken. When this is done with the cost being spread out over a period of years an exceptionally cheap and effective control can be had.

SCHISTOSOMIASIS

Schistosome dermatitis is becoming quite a serious problem in many of the new lake areas that are being opened up. This condition is caused by the penetration of the skin by a small fork-tailed parasite (*cercariae*.) In man it always follows bathing or swimming in infested lakes or ponds and is characterized by a localized area of very itchy weals.

Snails, which are the hosts for the *cercariae*, are sensitive to copper, and small quantities of it in the water will poison them.

However, this same chemical is also toxic to fish and unless properly applied can have a very adverse effect on the fish population.

An investigation into the biological, epidemiological and immunological aspects of *Schistosoma dermatitis* was undertaken with the investigation to be in the form of a two-year pilot experiment. The work is being done under the auspices of the Department of Public Health, with the assistance of an Immunologist and Dermatologist.

The whole investigation will involve field study, laboratory experiments and large-scale testing of human subjects. It is under the direction of a board composed of—

T. H. Aaron, M.D., Immunologist

J. H. Brown, M.Sc., Entomology and Vector Control, D.P.H.

*R. B. Miller, Ph.D., Department of Zoology, Univ. of Alberta

P. L. Rentiers, M.D., Dermatologist

*Since deceased.

The laboratory work is being done at the Department of Zoology and the financing is being done by the Department of Public Health, through a Federal Health Grants Project. Other assistance is provided by the Department of Zoology and by this Division.

LEECHES

Reports of leech infestations came in from many Alberta lakes during 1959 and appropriate advice was given. It is evident that leeches will become a problem at many of the resort areas being now developed, particularly in regard to wading areas.

HARVEST ITCH

Harvest itch is a skin condition somewhat similar to scabies and is caused by mites. The mites involved are normally on such vegetation as grain and grasses and are accidentally transferred to the person of harvesters and others handling such materials. Necessary advice was given to Health Units and local practitioners during 1959.

INSECTICIDES

Vapourizers are mechanical devices for releasing the fumes of lindane and other insecticides by means of electrical heating elements. Installation regulations under the Canadian Standards Association are used to control their use in food-handling establishments.

In view of the fact that Insecticides, and Pesticides generally, are toxic materials the Division is being very cautious in making recommendations unless there is sufficient evidence that the materials will be used by competent persons in a proper manner. It should be a matter of great concern when it is realized that there is a vast array of "poisons" now present in every household.

There is ample evidence now available to indicate that some regulatory measures regarding the use of pesticides should be introduced.

POISON CONTROL

During 1959 the recommendations made by the Poison Control Advisory Committee were put into effect to the extent that the cardwheel system was established and the order for the printing of the necessary cards and supplies of the cardwheel was let. It is hoped to have this program in operation early in 1960.

Q FEVER

In 1959 the Q Fever Survey demonstrated the presence of the organism in dairy herds in various parts of the province. Further work is being carried on to evaluate the importance of these findings and also to see if any human infection exists.

LABORATORY

Insect Identification—During 1959 numerous specimens of insects from different products and places were received for identification. Many of them were insects from tropical and semi-tropical areas and had been rarely found in Alberta. From their numbers, and as they are plant-eating insects, it would appear that they may be brought in in van-loads of fruit and vegetables. After they were identified suitable information for control measures was supplied to the person from whom they were received.

Insect Collection—Good progress was made in arranging the collection of insects and ticks injurious to human health.

STAFF

On account of the increased amount of field investigational work, and the increased demands from the public, the Health Units, other divisions of this department and other departments in the Government for competent and reliable professional advice and assistance in the various fields of activities falling within the scope of the Division, a full-time Biologist in the person of Mr. A. A. Kirdeikis, B.Sc., was added to the staff on September 15.

The summer field investigations had been carried on by M. S. Brett, B.Sc., and K. E. Glover, B.Sc., both of whom returned to the University of Alberta in September to resume their studies in the fields of Medicine and Dentistry respectively.

The usual educational work in regard to the control of insect-borne diseases was carried out by means of radio, motion pictures, newspapers and lectures. The usual lectures to the 3rd year Medical Students, Public Health Nurses, Nurses-in-Training were given, and in some cases, expanded. A series of lectures were given to the students taking the "Health" course in the Faculty of Education.

DIVISION OF MEDICAL SERVICES

M. G. McCallum, B.Sc., M.D., D.P.H., Director

EMERGENCY AIR AMBULANCE SERVICE

The Government of the Province of Alberta, through the Department of Public Health, implemented a fully organized 'Emergency Air Ambulance Service' in January 1959 for the residents of Alberta. The service provides transportation to hospitals in the larger cities from outlying areas for medical, obstetrical and surgical cases, who, because of the emergent nature of the condition or inaccessibility of hospitals to the patient, of necessity must be transported by air services. Where the need for transportation to hospital is not urgent; where it is possible to care for the patient in a local hospital; where specialist care can be carried to the patient; or where the patient can be transported satisfactorily by car, ambulance or rail, the air service is not available. The patient or responsible party is required to pay a part of the air ambulance cost, amounting to \$25.00, for each flight.

During the year there were 55 ambulance flights, 53 patients were transported and blood was carried once to a hospital. Of the 53 patients 29 recovered, 10 were improved, 4 were unimproved, 9 died. There were two flights in which the patients died prior to arrival of the flight. There were 16 children and 6 infants among the total patients flown.

DIABETIC DRUG PROGRAM

The Department of Public Health has provided to residents of Alberta, without charge, a hypoglycaemic medication in the form of insulin. The program has been operative for about thirty years and the insulin was provided under a "means' test".

As of 1st April, 1959, the administration of supplying insulin was transferred to the Division of Medical Services and expanded to include an oral hypoglycaemic medication tolbutamide.

As of 31st December, 1959, 314 patients were receiving insulin and 81 patients were receiving tolbutamide, without charge, under the program. There were also another 89 applications for tolbutamide in the course of being processed.

TREATMENT SERVICES FOR SOCIAL SERVICE RECIPIENTS

In 1959 there was an increase in numbers of the total social service recipients, as well as an increase in each of the categories eligible to receive treatment service benefits under the Treatment Services Program of the Provincial Government. The over-all increase was 7.7% while the total population increase was only 3.5%. The comparative numbers in each of the Social Service Recipient categories for 1958 and 1959 appear in Table 1.

TABLE 1

Categories	Recipients		Spouses		Dependent Children		Total	
	1958	1959	1958	1959	1958	1959	1958	1959
Old Age Security*	20,366	21,511	2,178	2,235	372	423	22,916	24,183
Old Age Assistance†	5,664	6,150	1,137	1,270	340	366	7,141	7,786
Blind Pension	410	425	130	129	156	178	696	732
Mother's Allowance	2,009	2,164	.....	.....	4,810	5,194	6,819	7,358
Widow's Allowance	811	817	.....	.....	2	3	813	820
Disability Pension	2,841	3,269	551	647	606	884	3,998	4,800
Total	32,101	34,336	3,996	4,281	6,286	7,048	42,383	45,679

*Recipients of Old Age Security plus Alberta Supplementary Allowance.

†Individuals 65-70 years of age in receipt of Old Age Assistance.

The average number of Social Service Recipients in the province during the calendar year 1959 was 44,051, an increase of 3,669 over 1958. This was accounted for by some increase in all categories.

The treatment services provided under the program include medical, dental, optical, and other special services such as physiotherapy, podiatry, chiropractic, etc. The latter are provided subject to the prior approval of the Medical Services Division. Complete hospitalization services are also provided through the Provincial Hospitals Division.

Provincial treatment services expenditures on behalf of this group amounted to \$1,031,303.66 in 1958 and \$1,318,031.31 in 1959, which was an increase of \$286,727.65. The per capita expenditure for the group was \$29.92 in 1959 as compared to \$26.16 in 1958, a per capita increase of \$3.76. This per capita increase in expenditure is largely due to the increase of the per capita payment to the Dental Association from \$4.00 to \$4.80 per year, and to the College of Physicians & Surgeons from \$19.00 to \$24.00 per year beginning April 1st, 1959. The expenditures by type of service rendered appear in Table 2.

TABLE 2
PROVINCIAL EXPENDITURES FOR SOCIAL SERVICE RECIPIENTS—1958-1959

	1958	1959	
Medical Care	767,265.90	1,003,840.66	30.8% increase
Dental Care	161,529.66	202,903.85	25.6% increase
Optical and Optometric Services	100,384.10	107,517.80	7.1% increase
Other treatment services	2,124.00	3,769.00	77.4% increase
	\$1,031,303.66	\$1,318,031.31	

1. Medical Care For Social Service Recipients

This service functions by agreement between the College of Physicians & Surgeons and the Provincial Department of Public Health. The College, through its practising members, provides complete medical care for the social service recipient group, and in return in 1959 received \$24.00 per capita per year for eligible individuals based on a monthly payment of \$2.00 per capita. Previous to April 1st, 1959, this payment had been \$19.00 per year. These monies are placed in a Pensioner's Medical Fund and the medical practitioner submits his accounts for the care of this group to this fund. The fund pays the doctors on the

basis of fee for service after first appraising the account according to the minimum schedule of fees. The first payment to each doctor is 50% of the value of the assessed account. Subsequently, after the administrative costs are deducted for operating this fund, the remainder at the end of the year is prorated among the practitioners according to the assessed value of services provided. During the fiscal year April 1st, 1959 to March 31st, 1960 administrative costs were 2.62% of the assessed value of the accounts and the practitioners received 63.04% of the value of their assessed accounts as final payment. As a result, the medical profession of the Province of Alberta is making a very considerable contribution to care of the social service recipients in the province

In 1959 the province expended \$1,003,840.66 for medical services as compared to \$767,265.90 in 1958. This was an increase of \$236,574.70 or 30.8%. The explanation of this higher expenditure appears twofold; first, the per capita increase in payments to the College of Physicians & Surgeons from \$19.00 in 1958 to \$24.00 in 1959; second, the Disability Pension Group, a high utilization group, increased 20% from 1958 to 1959.

TABLE 3 (A)
 SOCIAL SERVICE RECIPIENTS MEDICAL SERVICES UTILIZATION AND ACCOUNTING FROM APRIL 1st, 1959, TO MARCH 31st, 1960,
 BY TYPES ACCORDING TO:

A. NUMBERS TREATED, OFFICE, HOME AND HOSPITAL VISITS AND MILEAGE TRAVELLED BY DOCTORS

PENSION GROUP	OFFICE VISITS			HOUSE VISITS			HOSPITAL VISITS				Doctors' Mileage	
	Cases Treated	Male	Female	Number	Value of Assessed Accounts	Number	ACUTE		CHRONIC			
							Value of Assessed Accounts	Number	Value of Assessed Accounts	Number		
70 and Over												
Recipients	48,403	23,054	25,349	34,629	119,371.00	19,110	124,712.00	124,767	225,507.00	8,402	16,308.00	16,330
Spouses	3,854	176	3,678	3,132	11,393.00	553	2,536.00	5,283	10,466.50	97	213.00	1,354
Children	25	17	8	17	47.00	4	11.50					
Total	52,282	23,247	29,035	37,798	130,811.00	19,667	127,279.50	130,050	235,973.50	8,499	16,521.00	17,684
65 - 69												
Recipients	38,486	14,551	23,945	34,964	121,900.00	8,959	40,461.00	73,893	88,932.00	2,146	4,268.00	4,526
Spouses	5,060	284	4,776	4,095	13,845.00	400	2,068.00	6,441	14,461.00	50	101.00	689
Children	887	211	646	810	3,025.00	50	259.00	1,026	983.00			81
Total	44,413	15,046	29,367	39,869	138,770.00	9,409	42,788.00	81,360	104,386.00	2,196	4,369.00	5,306
Widow's Allowance												
Recipients	3,251	11	3,251	2,603	9,723.00	389	1,774.00	3,503	7,530.00	98	197.00	584
Children	52		41	42	179.00	11	65.00	123	381.00	5	9.00	
Total	3,303	11	3,292	2,645	9,902.00	410	1,839.00	3,626	7,861.00	103	206.00	584
Mother's Allowance												
Recipients	7,023		7,023	6,165	23,062.00	601	3,082.00	3,516	6,712.00	58	59.00	6,952
Children	6,974	3,269	3,705	5,383	20,579.00	311	4,790.00	3,524	8,838.00	12	10.00	2,003
Total	13,997	3,269	10,728	11,548	43,641.00	912	7,872.00	7,040	15,550.00	70	69.00	8,955
Blind Pension												
Recipients	2,055	934	1,121	1,411	4,858.00	471	1,705.00	4,902	8,474.00	488	865.00	27
Spouses	226	69	177	174	677.00	23	118.50	142	422.00			
Children	143	72	71	116	443.00	18	103.00	181	475.00	8	23.00	
Total	2,424	1,055	1,369	1,701	5,978.00	512	1,926.50	4,525	9,371.00	496	888.00	27
Disability Pension												
Recipients	14,410	8,394	6,016	9,339	32,839.00	1,711	7,960.00	20,894	44,575.00	1,027	2,118.00	10,100
Spouses	1,517	82	1,435	1,365	5,022.00	94	492.00	1,630	3,796.00	10	18.00	241
Children	804	487	317	639	2,526.00	65	353.00	1,009	7,978.00			10
Total	16,731	8,963	7,768	11,343	40,387.00	1,870	8,805.00	23,533	56,349.00	1,037	2,136.00	10,351
TOTAL	133,150	51,591	81,559	104,904	369,489.00	32,780	190,510.00	250,134	429,490.50	12,401	24,189.00	42,887

TABLE 3 (B)
 SOCIAL SERVICE RECIPIENTS MEDICAL SERVICES UTILIZATION AND ACCOUNTING FROM APRIL 1st, 1959, TO MARCH 31st, 1960,
 BY TYPES ACCORDING TO:

PENSION GROUP	SURGICAL			ANAESTHETICS			CONSULTATIONS			X-RAYS			LABORATORY			
	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Average Number of Pensioners covered per Month	
																B. SURGICAL TREATMENTS, ANAESTHETICS, MEDICAL CONSULTATIONS, X-RAY EXAMINATIONS AND LABORATORY PROCEDURES
70 and Over																
Recipients	2,576	34,787.00	1,393	22,840.00	1,767	20,128.00	2,242	27,431.00	2,101	7,259.00	21,641	7,259.00	2,101	7,259.00	21,641	
Spouses	172	10,337.00	117	1,691.00	99	1,085.00	253	2,579.00	211	733.00	2,239	733.00	211	733.00	2,239	
Children	2	115.00	.....	.....	2	11.00	3	19.00	3	9.00	436	9.00	3	9.00	436	
Total	2,750	45,249.00	1,510	24,531.00	1,868	21,224.00	2,478	30,029.00	2,318	8,001.00	24,316	8,001.00	2,318	8,001.00	24,316	
65 - 69																
Recipients	2,274	69,460.00	1,284	22,337.00	2,194	16,648.00	2,845	29,859.00	1,704	7,638.00	6,173	7,638.00	1,704	7,638.00	6,173	
Spouses	236	12,370.50	134	2,063.00	129	1,542.00	333	4,078.00	239	933.00	1,253	933.00	239	933.00	1,253	
Children	27	879.00	20	341.00	11	101.00	24	401.00	13	62.00	323	62.00	13	62.00	323	
Total	2,537	82,709.50	1,438	24,741.00	2,334	18,291.00	3,202	34,338.00	1,956	8,633.00	7,749	8,633.00	1,956	8,633.00	7,749	
Widow's Allowance																
Recipients	139	6,285.00	92	1,038.00	87	978.00	234	2,854.00	278	1,044.00	815	1,044.00	278	1,044.00	815	
Children	4	63.00	2	17.00	.....	.....	3	21.00	7	25.00	3	25.00	7	25.00	3	
Total	143	6,358.00	94	1,055.00	87	978.00	237	2,875.00	285	1,069.00	818	1,069.00	285	1,069.00	818	
Mother's Allowance																
Recipients	471	24,031.00	287	4,439.00	207	2,263.00	580	6,428.00	546	1,752.00	2,206	1,752.00	546	1,752.00	2,206	
Children	586	19,820.00	354	5,141.00	149	1,824.00	461	5,551.00	301	1,288.00	5,190	1,288.00	301	1,288.00	5,190	
Total	1,057	43,851.00	641	9,580.00	356	4,087.00	1,041	11,979.00	847	3,040.00	7,396	3,040.00	847	3,040.00	7,396	
Blind Pension																
Recipients	103	7,429.00	47	686.00	77	785.00	63	537.00	87	343.00	426	343.00	87	343.00	426	
Spouses	15	1,025.00	10	178.00	8	80.00	19	211.00	11	24.00	128	24.00	11	24.00	128	
Children	29	1,005.00	10	172.00	11	132.00	8	48.00	8	8.00	175	8.00	8	8.00	175	
Total	147	9,459.00	67	1,036.00	96	997.00	90	796.00	106	375.00	729	375.00	106	375.00	729	
Disability Pension																
Recipients	629	35,877.00	398	6,466.00	443	4,971.00	621	7,200.00	511	1,469.00	3,285	1,469.00	511	1,469.00	3,285	
Spouses	108	4,942.00	39	540.00	41	1,343.00	116	1,343.00	68	277.00	639	277.00	68	277.00	639	
Children	77	2,903.00	32	675.00	20	235.00	20	228.00	35	131.00	879	131.00	35	131.00	879	
Total	814	43,722.00	469	7,681.00	504	5,648.00	757	8,771.00	614	1,877.00	4,803	1,877.00	614	1,877.00	4,803	
TOTAL	7,448	231,347.50	4,219	68,622.00	5,245	51,225.00	7,805	88,788.00	6,126	22,995.00	45,811	22,995.00	6,126	22,995.00	45,811	

TABLE 3 (C)
 SOCIAL SERVICE RECIPIENTS MEDICAL SERVICES UTILIZATION AND ACCOUNTING FROM APRIL 1st, 1959, TO MARCH 31st, 1960,
 BY TYPES ACCORDING TO:

C. REFRACTIONS, ELECTROCARDIOGRAMS, OTHER PROCEDURES, AND AVERAGE ACCOUNTS FOR PENSIONERS

PENSION GROUP	REFRACTIONS		E.C.G.		OTHER PROCEDURES		LATE BILLING PENALTIES		TOTAL		Average Annual Cost per Pensioner Less Costs of Operation
	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Number	Value of Assessed Accounts	Procedure	Value of Assessed Accounts		Average Cost per Procedure
70 and Over											
Recipients	1,281	12,810.00	2,297	12,280.00	745	4,585.00	1,024	6,261.50	202,334	644,368.00	3.18
Spouses	95	950.00	116	678.00	54	418.00	60	335.50	10,245	44,453.50	4.36
Children	1	10.00	1	5.00	.....	.....	1	11.00	34	227.50	6.68
Total	1,377	13,770.00	2,414	12,973.00	799	5,003.00	1,085	6,608.00	212,613	689,049.00	3.21
65 - 69											
Recipients	1,004	10,040.00	1,851	10,344.00	683	4,249.00	557	5,252.50	134,358	430,662.00	3.21
Spouses	138	1,380.00	141	773.00	61	353.00	54	307.00	12,451	54,614.50	4.41
Children	16	160.00	10	43.00	6	48.00	10	37.00	2,023	6,393.00	3.16
Total	1,158	11,580.00	2,002	11,166.00	750	4,652.00	621	6,086.50	148,832	491,729.50	3.30
Widow's Allowance											
Recipients	80	800.00	106	347.00	59	1,944.00	28	324.50	7,706	35,106.00	4.55
Children	.....	.....	6	40.00	1	11.50	1	2.50	205	761.50	3.85
Total	80	800.00	112	387.00	60	1,955.50	29	327.00	7,911	35,867.50	4.54
Mother's Allowance											
Recipients	248	2,480.00	119	743.00	146	1,131.00	87	682.50	13,031	83,114.00	63.90
Children	405	4,050.00	55	377.00	74	584.00	101	474.50	11,716	74,853.00	64.00
Total	653	6,530.00	174	1,120.00	220	1,715.00	188	1,157.00	24,747	157,969.00	63.20
Blind Pension											
Recipients	63	630.00	71	385.00	60	316.00	27	309.50	7,170	27,040.00	3.77
Spouses	4	40.00	11	69.00	10	83.00	2	2.50	2,926	2,926.50	1.85
Children	8	80.00	1	8.00	3	51.00	.....	.....	401	2,548.00	6.38
Total	75	750.00	83	462.00	73	450.00	29	312.00	8,000	32,514.50	4.06
Disability Pension											
Recipients	209	2,090.00	318	1,702.00	178	1,528.00	220	1,891.50	38,488	158,695.00	4.70
Spouses	32	320.00	39	225.00	17	97.00	12	253.50	8,568	17,733.00	4.94
Children	11	110.00	40	241.00	14	141.00	54	484.00	2,019	15,591.00	7.76
Total	252	2,520.00	397	2,168.00	209	1,566.00	286	2,639.00	42,085	191,981.00	4.57
TOTAL	3,595	35,950.00	5,182	28,276.00	2,111	15,941.50	2,238	17,139.50	444,188	1,599,110.50	3.68

2. Dental Services For Social Service Recipients

This program has changed little through the years since its beginning in 1947. The service functions by an agreement between the Alberta Dental Association and the Provincial Department of Public Health. The Dental Association, through its practising dentists, provides routine dental care for the Social Service Recipients. New dentures and partial plates are provided at half cost to eligible individuals. Posterior bridge work is not provided. In return the province makes a payment to the Dental Association of 40c per month (\$4.80 per year) for each eligible recipient under the plan. This payment prior to April 1st, 1959 was 33 1/3c per month (\$4.00 per year) which partially explains the per capita increase in expenditures by the Department of Public Health in providing dental services for Social Service Recipients. Each dentist receives payment in full from the Dental Association on submission of his accounts.

In 1959 for dental services, the province expended \$202,903.85 as compared to \$161,530.36 in 1958, an increase of \$41,373.55 or 25.6%.

Table 4 shows the utilization of dental services by Social Service Recipients during the Calendar years 1957 - 1959 inclusive.

TABLE 4
SOCIAL SERVICE RECIPIENTS UTILIZATION OF DENTAL SERVICES BY GROUPS
AND YEARS—1957 to 1959

GROUP	Cases Treated			Percentage of Total Recipients				Disbursements	
	1957	1958	1959	1957	1958	1959	1959 % of Recipients and Dependents	Total per Group, 1959	Average per Case, 1959
Old Age Group Recipients	3,442	3,721	3,156	11.9%	12.5%	12.1%	11.9%	\$58,056.61	\$18.39
Dependents .....	....	....	580	....	....	....	13.9%	10,691.00	18.43
Mother's Allowance Recipients	2,700	2,852	986	43.7%	44.1%	50.1%	47.1%	19,941.50	20.22
Dependents .....	....	....	2,594	....	....	....	51.4%	48,643.50	18.75
Blind Pension Recipients	149	172	134	23.1%	24.6%	22.6%	25.0%	2,388.50	17.82
Dependents .....	....	....	59	....	....	....	18.4%	1,343.00	22.76
Widow's Allowance Recipients	129	136	146	16.7%	16.9%	17.9%	17.7%	3,151.00	21.58
Dependents .....	....	....	2	....	....	....	66.7%	14.00	7.00
Disability Pension Recipients .....	....	728	837	....	26.4%	26.6%	27.2%	16,247.65	19.41
Dependents .....	....	....	350	....	....	....	25.2%	6,368.00	18.19
TOTAL	6,420	7,609	8,844	17.5%	18.8%	20.1%	20.1%	\$166,844.76	\$18.87

There were 1,233 more individuals who utilized dental services in 1959 than in 1958, this difference being almost entirely accounted for by an increase in utilization by the Mother's

Allowance Group with 50% of these recipients and dependents receiving dental care. The payments made by the Dental Association to the practising dentists during the year were \$170,729.76 or \$19.30 per individual treatment. Administrative costs were \$14,804.21 or 8.67% of treatment costs.

3. Optical Services For Social Service Recipients

A total of 7,890 claims for glasses at a cost of \$77,225.30 was approved in 1959. This showed an increase of 124 or 1.6% in claims and \$2,029.40 or 2.7% increase in payment.

Comparative data for eligible recipients is shown in Table 5.

TABLE 5
SOCIAL SERVICE RECIPIENTS UTILIZATION AND COSTS OF OPTICAL SERVICES
1957 - 1959

	Average Number of Recipients	Number of Accounts	% of Recipients Obtaining Glasses	Total Cost of Glasses	Cost per Account
1957	36,620	6,901	18.8%	\$63,949.96	\$9.27
1958	40,382	7,766	19.2%	75,195.90	9.69
1959	44,051	7,890	17.9%	77,225.30	9.79

The above indicates a decrease in the relative number of Social Service Recipients receiving glasses, 17.9% as compared to 19.2% in 1958, and 18.8% in 1957. There was a slight increase in cost per account.

Total payments to optometrists were \$30,292.50 for 5,377 claims which is an increase of \$5,104.30 or 20.3% in payment and an increase of 356 or 7.1% in claims.

Payment to the medical eye specialist is a part of the overall agreement for pensioners medical care made with the College of Physicians & Surgeons of Alberta.

4. Other Treatment Services

These services include physiotherapy, nursing, podiatry and chiropractic, and are provided only on the recommendation of the patient's physician and approval by the Director of Medical Services. Expenditures for these services amounted to \$3,769.00 showing an increase of \$1,645.00 or 77.4% over 1958.

Provincial expenditures for these services were as follows:

Physiotherapy	\$2,121.00
Chiropractic	1,009.00
Nursing	587.00
Podiatry	52.00
Total	\$3,769.00

Outpatient physiotherapy, which is received at hospitals, is not included in the above totals but is part of the hospitalization services.

POLIOMYELITIS TREATMENT PROGRAM

The Poliomyelitis Sufferer's Act and Regulations provide treatment services for residents of Alberta who suffer from poliomyelitis. These treatment services include in-hospital medical and surgical care, subsequent to the fourteen day isolation period. Orthopaedic appliances, splints and other equipment are

also provided as well as outpatient physiotherapy, muscle tests, radiological and other assessment procedures. Medical care during the isolation period (14 days) in hospital is not provided, nor is medical care outside of hospital. Outpatient speech therapy and occupational therapy may be provided.

During the year there were 278 admissions to hospital with a total stay of 22,337 days, of which 536 were for the isolation period.

Of the 278 admissions 143 were re-admissions and 175 first admissions. The first admissions included 80 acute paralytic, 14 acute non-paralytic, and 41 chronic cases.

TABLE 6
PROVINCIAL EXPENDITURES FOR POLIOMYELITIS TREATMENT SERVICES

	1958	1959
Medical Care	57,888.25	47,146.75
Medical Supervisors	3,064.00	3,600.00
Appliances and Outpatient Services	30,256.54	32,120.37
Home Care Program	9,090.11	9,884.15
Total	\$100,298.90	\$92,751.27

It will be noted that there was a decrease in the medical care expenditures in 1959 as compared to 1958. This was due to a decrease in total cases under care.

Of the total payments for medical care in hospital for poliomyelitis patients, \$8,516.00 was paid to the College of Physicians & Surgeons for providing 4,258 days at \$2.00 per day, \$10,528.80 was paid for providing 17,543 non-respirator days at 60c per day, and \$28,104.95 was paid directly to the doctors for 145 operative procedures. This latter amount included surgeons, surgical assistants and anaesthetists' fees, paid on the basis of the College of Physicians & Surgeons' schedule of fees, less 10%. The medical supervision was a payment to an orthopaedic specialist for supervision of the poliomyelitis services in the Alberta Crippled Children's Hospital.

Appliances and outpatient services include the following services and payments:

Service	Expenditure
INPATIENT	
431 appliances	\$25,497.42
OUTPATIENT	
36 appliances	2,774.55
715 physiotherapy treatments	1,454.00
143 muscle tests	207.50
radiological	2,093.50
other services	93.40
Total	\$32,120.37

Under the Home Care Program implemented in 1957 for long term poliomyelitis cases, there was an expenditure of \$9,884.15 for equipment in 1959. To the end of 1959 there had been equipment purchased for 13 persons of whom 10 had been placed in their homes by December 31st, 1959.

RHEUMATIC FEVER PROPHYLAXIS PROGRAM

This program was implemented in June 1958, by the Department of Public Health and by the end of 1959 had been in operation for 18 months. Children under 18 years of age, whose physician can demonstrate a history of rheumatic fever, are eligible for prophylactic therapy benefits.

There are a considerable number of children in the province suffering from the effects of rheumatic fever attacks. The program is intended to prevent recurring attacks and thereby prevent incapacitating disabilities in these children. The child eligible under the program receives 400,000 units of penicillin daily for as long as his doctor considers it in the best interest of the child's health.

Applications approved in 1958 (6 months)	494
Applications approved in 1959	433
Total	<u>927</u>

The individual receives a three months supply at a time. To December 31st, 1959, there were 927 initial supplies provided and 1,795 subsequent supplies provided to a total of 927 cases.

There were 7 cases sensitive to penicillin of which only one developed sensitivity subsequent to initiation of treatment. These individuals received triple sulpha instead of penicillin.

THE SCHOOLS FOR NURSING AIDES

The Nursing Aide Education Program has been in operation for fourteen years and the need for more and more Nursing Aides increases with the demand for more nursing personnel. With the increase in size and number of hospitals under the Hospitalization Benefits Act and the expanding of procedures, treatments, medications, diagnostic tests and preventive measures requiring more of the time of the professional nurse, greater numbers of Nursing Aides are required to fill the gap at the patient's bedside, with the nurse performing the highly trained technical professional duties.

As a result of the foregoing, a second Nursing Aide School was opened in Edmonton in 1958 to complement the School in Calgary. The first students were admitted in February, 1958, and the first class certified at the end of the year. In April, 1959 the Department of Public Health decided these schools should operate as near capacity as possible and during the year enrolled 308 in the Calgary School and 270 in the Edmonton School.

The average number of the class for the year 1959 was 28 in the Calgary School and 27 in the Edmonton School with the enrollment of eleven classes in each school during the year. Following is the table of aides certified during each calendar year from 1946 to 1959:

1946	10	1953	208
1947	41	1954	256
1948	160	1955	270
1949	117	1956	254
1950	159	1957	239
1951	247	1958	281
1952	216	1959	451

Of the 451 aides certified during the year, 26 were certified under Section 16 of the regulations governing nursing aides in the province.

This Nursing Aide Program serves; to train those women in nursing who do not possess the academic qualifications to enter professional nursing, and to give these women a vocation which they can practice with personal satisfaction, and to contribute extensively to the nursing field in the care of the sick.

NURSING RECRUITMENT PROGRAM

This program has been functioning actively since 1956. It recruits applicants for education as Nurses and Nursing Aides. The need for this is as great or greater now than previously. With the implementation of the Hospitalization Benefits Plan there is a tremendous increase in general acute and chronic patient beds, and thus a need for more nursing personnel. In 1957 there were just over 7,000 active patient beds, presently there are 7,500 with a further planned increase of 2,000. There are presently 775 chronic hospital beds with an increase of 2,500 more planned. Added to the foregoing there are a large number of nursing home beds used for the care of the chronically ill which employs many nursing aides. It is thus essential that every effort be made to recruit candidates for the Nursing and Nursing Aide Education Programs.

The Nursing Recruitment Officer carries forward the recruitment program by means of pamphlets, posters, newspaper advertisements, radio and television. Films and filmstrips are in use. Material is prepared and distributed for use by counsellors in the secondary schools; speakers are arranged for Career Day talks in schools. The Recruitment Officer visits schools throughout the province advising students on the career possibilities in the field of nursing.

It is rather difficult to assess the value of this program, but in spite of the increase of patient beds the nursing situation appears better. The active hospitals have enlarged their nurse educational schools and the two Nursing Aide Schools have increased their enrollment to approximately 600 per year.

THE LABORATORY AND X-RAY SCHOOL

The Laboratory and X-ray School is operated by the Department of Public Health for the purpose of training individuals as combined technicians in both radiology and diagnostic laboratory procedures. Small hospitals have part-time work for a radiological technician and also a clinical laboratory technician but not a full-time position. One combined technician is capable of filling both positions satisfactorily. The course is of six months duration, provides three months training in technical radiology and clinical laboratory. Seventeen technicians were certified as of March 31st, 1959.

The School has now certified seventy-seven technicians in the five years of operation.

There has been considerable demand by hospitals for more of these technicians. As a result, a class of twenty-two was en-

rolled in October 1959. It was found necessary to provide a second laboratory technician for several months to augment the teaching of the supervisor technician. This enlargement of the size of the class should adequately supply all small hospitals with combined technicians.

Following is the disposition of the 77 technicians certified, since the inception of the course in 1954, to December 31st, 1959:

Active in rural hospitals, including Department Institutions (2)	39
Full time 35, part time 4	4
Active in other establishments (clinics)	6
Taking or having completed further training at R.T. level	9
Active at out-of-Province locations	9
Active Total	58

The net increase of technicians in small hospitals and institutions since December 31st, 1958 is only five, although the net increase of these in active treatment work is sixteen.

DIVISION OF CANCER SERVICES

V. W. Wright, M.D., Director

The three Cancer Clinics in the Province of Alberta have experienced a very busy year (1959) as the tables below will reveal.

1. Number of examinations made (Malignant and Benign) January 1 - December 31, 1959, is 22,075.

	New		Review		Total	
	1959	1958	1959	1958	1959	1958
Edmonton	2,859	2,869	9,114	8,816	11,973	11,685
Calgary	1,833	1,859	6,409	3,982	8,242	5,841
Lethbridge	522	569	1,338	1,350	1,860	1,919

It will be noted that the total number of examinations made in the Edmonton, Calgary and Lethbridge Clinics is 22,075 as compared with 19,445 in 1958; 18,243 in 1957; 17,060 in 1956; 14,306 in 1955 and 13,026 in 1954.

2. Number of examinations made where malignancy was proven 17,644 as compared with 12,811 in 1958 as shown in the following table:

	Edmonton	Calgary	Lethbridge	Total
1959	9,574	6,659	1,411	17,644
1958	9,135	2,208	1,468	12,811

EDMONTON CLINIC

New Malignant cases reporting to Clinic in 1959	1,145
Previously Benign cases reporting to Clinic in 1959	135
Prior to 1953 reporting to Clinic for the first time in 1959	42
<hr/>	
Total New Malignant cases reporting to Clinic in 1959	1,322
Non-reporting Malignant cases: Path. and Autopsy Reports	249
Cases treated elsewhere reporting to Clinic in 1959	135
<hr/>	
Total	1,706

CALGARY CLINIC

New Malignant cases reporting to Clinic in 1959	783
Non-reporting Malignant cases: Path. and Autopsy Reports	174
<hr/>	
Total	957

LETHBRIDGE CLINIC

New Malignant cases reporting to Clinic in 1959	204
Non-reporting Malignant cases: Path. and Autopsy Reports	19
<hr/>	
Total	223

The Total Number of New Malignant Cases discovered in Alberta in 1959 was 2,751.

4. Number of examinations made on patients which proved Benign -

	Edmonton	Calgary	Lethbridge	Total
1959	2,399	1,583	449	4,431
1958	2,550	3,633	451	6,634

5. The X-ray Department of the Edmonton Clinic has had a particularly busy year as shown in the following tables:

	No. of Films	No. of Pts.	No. of Exams.	Average No. of Exams. per Day
1959	27,338	5,036	7,840	33.8
1958	19,186	4,266	5,999	25.8
1957	17,338	4,236	5,665	24.4

Approximately 5-6000 outside films were reviewed on 508 patients. Non standard fluoroscopies were done on 360 patients.

	G.I. Series	Large Bowel and Air Contrast	Urinary Tract	Tomographies
1959	853	501 - 123	201	345
1958	756	435 - 102	223	174
1957	548	431 - 55	66	90
Therapeutic Radiology				
			1959	1958
New Patients—X-ray, Cobalt, etc.			722	759
Patients re-treated—X-ray, Cobalt, etc.			500	508
Patients treated with radium			54	107
Patients treated with radioisotopes			8	....
			1,284	1,374
Treatment Given By				
Cobalt 60			8,363	10,581
X-ray			4,084	3,745
Cobalt 60 and X-ray			835	836
Cesium 137			126	....
			13,408	15,162
Radium Insertions, implants and moulds			236	212
Biopsies done at Clinic			71	47
Blood Counts done in Clinic Laboratory			7,720	7,044

6. NUMBER OF CASES SUPPLIED WITH THE FOLLOWING SERVICES

	Hospital Services		Radiation Therapy		Diagnostic X-Ray	
	1959	1958	1959	1958	1959	1958
Edmonton	275	484	1,284	1,374	5,036	4,266
Calgary	125	311	568	499	1,280	1,340
Lethbridge	8	59	70	137	503	417
	408	854	1,922	2,010	6,819	6,023

*Radiation Services include treatment by Cobalt 60, Cesium 137, Deep and Superficial X-Ray, Radium and Radioisotopes.

	Major Surgery		Exploratory Laparotomy		Breast Biopsies	
	1959	1958	1959	1958	1959	1958
Edmonton	738	709	113	103	322	284
Calgary	508	519	68	57	286	270
Lethbridge	106	149	29	23	92	83
	1,352	1,377	210	183	700	637

	Other Biopsies		Diagnostic Curettages		Encephalograms, etc.	
	1959	1958	1959	1958	1959	1958
Edmonton	589	486	262	271	11	21
Calgary	478	602	130	138	....	....
Lethbridge	170	196	36	38	....	....
	1,237	1,284	428	447	11	21

	Bronchoscopy and Oesophagoscopy		Sigmoidoscopy		Cystoscopy	
	1959	1958	1959	1958	1959	1958
Edmonton	94	109	211	183	270	286
Calgary	41	38	12	16	86	81
Lethbridge	6	8	10	13	36	37
	141	155	233	212	392	404

	Investigations and Consultations		Laboratory Tests	
	1959	1958	1959	1958
Edmonton	190	151	7,803	7,127
Calgary	42	75	1,090	479
Lethbridge	7	5	68	29
	239	231	8,961	7,635

7. Since the opening of the Clinics in 1941 the total number of examinations made is 176,092.

DIVISION OF SOCIAL HYGIENE

P. L. Rentiers, M.D., Director

The year 1959 has been one of heightened activity for the Division of Social Hygiene, with the Head Office and all the Clinics showing an increased work load. Alberta's venereal disease rates continue to be amongst the highest in Canada. There are many factors contributing to this:

- (1) A rapidly expanding population. In 1959 Alberta's population reached the 1,243,000 mark as compared to 1,201,000 in 1958 and 1,160,000 in 1957.
- (2) The opening of new centres of population in relatively inaccessible cases.
- (3) The great influx of transient labour not only to our urban points but also to the isolated communities.
- (4) The relatively high incidence of disease amongst our native population. Approximately 3.1% of our total populace is of Indian or Half-breed extraction. This 3.1% of our population accounted for almost one-third of all our venereal disease cases. This explains the frequency of semi-epidemic conditions which exist from time to time in the isolated communities, bush camps, and construction camps, etc.
- (5) The good rapport maintained between the private practitioners and this Division, resulting in an excellent reporting of cases.
- (6) The continued policy of the Division to search out new cases by the increased use of the mobile clinic.

Comparative rates for syphilis and gonorrhoea per 100,000 population for Alberta in 1957, 1958 and 1959 were as follows:

SYPHILIS	1957	1958	1959
All Types	9.7	13.9	17.9
Primary and Secondary	1.9	4.1	9.6
GONORRHOEA	215.4	209.0	193.6

It will be noted that the total figure for gonorrhoea is down. We attach no importance to this drop since it has been amply shown that many cases of gonorrhoea are diagnosed, treated and followed up by the private physicians without recourse to the Provincial Laboratory facilities. This being the case, our Division has no control as it has in the diagnosis and treatment of syphilitic infection.

While the increase in the number of cases of early syphilis is worrisome, the situation should not create undue alarm. It demonstrates that there can be no complacency or relaxation of effort by this Division. Proven methods of control should be maintained and perhaps even tightened. Foremost among the control procedures for syphilis is the routine taking of blood tests at every opportunity. This last year 45.5% of our new syphilitic infections first came to our attention because such tests were taken. 1725 positive or doubtful blood specimens (exclusive of those taken in our clinics) were investigated during 1959. Of this number 495 related to known cases, 1230 to persons

on whom we had no diagnosis. Of the previously undiagnosed cases some have been confirmed syphilitic, others have proven to be instances of false positive reactions, and many are still under investigation pending a decision. 1471 negative blood specimens were found to be of value as follow-up tests in known cases of syphilitic infection, gonorrhoeal infections, and persons who had been named as sources of, or contacts to syphilitic infection.

In reaching a decision concerning cases of reactive serology the Treponema Pallidum Immobilization Test has continued to be of infinite value. 210 blood specimens were submitted for this test during the year, 71 of which were reported as positive, 105 as negative, and 34 as unsatisfactory. Of the 71 positive tests 56 confirmed the diagnosis of syphilis and 13 related to previously known cases.

This Division has continued to co-operate with the Indian and Northern Health Services by acting as a central registry and providing consultative service for the Northwest Territories directly beyond our northern boundary. There has been a decided increase in the number of syphilitic infections reported from this area which has greatly added to the work of our Division; nevertheless, we feel that our knowledge of these cases has aided in the tracing of provincial sources and contacts. The developments in the Northwest Territories have resulted in a constant and rapid shifting of persons to and from that area. New infectious cases of syphilis in Alberta have been traced directly back to sources in the Northwest Territories and vice versa.

We would like to acknowledge once again the faithful co-operation received from the private physicians and Public Health Agencies, from Dr. R. D. Stuart of the Provincial Laboratory and his staff, the Provincial and City Welfare Departments, the Indian and Northern Health Services, the Royal Canadian Mounted Police and the local Police. Without the assistance and interest of all these groups the work of our Division would be sadly hampered.

The statistical report of our Division is as follows:

DIVISION OF SOCIAL HYGIENE
ALLEGED SOURCES OF OR CONTACTS TO VENEREAL INFECTION
JANUARY 1, 1959 - DECEMBER 31, 1959

Residential Status	Number Reported with Sufficient Information for Investigation	Number Located	Percentage Located
Alberta	2,614	2,372	91%
Non-Alberta	130	62	48%
Northwest Territories	147	141	96%
TOTALS	2,891	2,575	89%

Agent Forwarding Information	Number Reported with Sufficient Information for Investigation	Number Reported with Insufficient Information for Investigation
Private Physicians	938	354
Provincial Clinics	1,719	710
Armed Forces	92	27
Other Provinces	142	....

EPIDEMIOLOGICAL INVESTIGATIONS CARRIED OUT BY DIVISION OF
SOCIAL HYGIENE

I Sources and Contacts to Venereal Disease:

Unit	Total Cases Processed	Cases Investigated	Cases Not Investigated Insufficient Information
Edmonton Clinic	1,420	1,180	240
Calgary Clinic	1,212	1,092	120
Lethbridge Clinic	152	127	25
Mobile Clinic	188	179	9
Head Office	2,891	2,575	316

Unit	II Delinquents		III Miscellaneous	
	Total Cases		Total Cases	
Edmonton Clinic	594		139	
Calgary Clinic	72		469	
Lethbridge Clinic	6		110	
Mobile Clinic	2		59	

PROVINCIAL CLINIC, Alberta Jasper Building, 9815 Jasper Avenue, Edmonton, Alberta

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
	Gonorrhoea (All Forms) ..						1	42	98	697	369				1207
Syphilis (Congenital) ..									1				1
Acquired—Primary							1		21				22
Acquired—Secondary							1	1	3	3			8
Acquired—Latent									10	5			15
Type Undetermined										1			1
TOTALS						1	44	99	732	378			1254

Number of Cases of Syphilis—Male 37, Female 10	47
Number of Cases of Gonorrhoea—Male 739; Female 468	1,207
Number and results of Serological Tests for Syphilis: 13,208 of which 439 were positive.	
Number and results of Darkfield Examinations: 42 of which 17 were positive.	
Number and results of Cerebrospinal Fluid Tests: 11 of which 3 were positive.	
Number and results of Bacteriological Tests for Gonococci: 1,894 of which 808 were positive.	
Number and results of Cultures taken for Gonococci: 4,871 of which 632 were positive.	
Total Number of Patient Visits	21,938
Total Number of New Admissions	1,280
Total Number of Old Infections for Follow-up first time in Current Year—	
Syphilis	73
Gonorrhoea	40

PROVINCIAL CLINIC, Alberta Office Building, 134 8th Avenue, S.E., Calgary, Alberta.

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
	Gonorrhoea (All Forms) ..					1	1	27	31	379	151				590
Syphilis—(Congenital) ..									1				1
Acquired—Primary									21	3			24
Acquired—Secondary									1	3			9
Acquired—Latent									1	4	3		8
Acquired—Tertiary (Neurosyphilis)													1
Acquired—Tertiary (Other)										1			1
TOTALS					1	1	27	34	409	162			634

Number of Cases of Syphilis—Male 30, Female 14	44
Number of Cases of Gonorrhoea—Male 407, Female 183	590
Number and results of Serological Tests for Syphilis: 6,409 of which 318 were positive.	
Number and results of Darkfield Examinations: 23 of which 4 were positive.	
Number and results of Cerebrospinal Fluid Tests: 6 of which 0 were positive.	
Number and results of Bacteriological Tests for Gonococci: 2,930 of which 628 were positive.	
Number and results of Cultures taken for Gonococci: 10 of which 2 were positive.	
Total Number of Patient Visits	9,925
Total Number of New Admissions	875
Total Number of Old Infections for follow-up first time in Current Year—	
Syphilis	37
Gonorrhoea .....	....

PROVINCIAL CLINIC, Division of Social Hygiene, Lethbridge Municipal Hospital, Lethbridge, Alberta

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
	Gonorrhoea (All Forms) ..							9	3	41	3				56
Syphilis—Congenital ..									1				1
Acquired—Primary ..							1		4	2			7
Acquired—Secondary ..									1	2			3
Acquired—Latent ..								1	5	2			8
TOTALS ..							10	4	52	9			75

Number of Cases of Syphilis—Male 12, Female 7 ..	19
Number of Cases of Gonorrhoea—Male 50, Female 6 ..	56
Number and results of Serological Tests for Syphilis: 429 of which 44 were positive.	
Number and results of Darkfield Examinations: 13 of which 3 were positive.	
Number and results of Cerebrospinal Fluid Tests: 1 of which 0 were positive.	
Number and results of Bacteriological Tests for Gonococci: 133 of which 57 were positive.	
Number and results of Cultures taken for Gonococci: 11 of which 1 was positive.	
Total Number of Patient Visits ..	488
Total Number of New Admissions ..	93
Total Number of Old Infections for Follow-Up first time in Current Year—	
Syphilis ..	6
Gonorrhoea ..	2

PROVINCIAL GAOL, Lethbridge, Alberta.

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
	Gonorrhoea (All Forms) ..							2		6			
Syphilis													
Acquired—Latent ..									1		1		2
TOTALS ..							2		7		1		10

Number of Cases of Syphilis—Male 2 ..	2
Number of Cases of Gonorrhoea—Male 8 ..	8
Number of Prisoners Admitted ..	2,614
Number and results of Serological Tests for Syphilis: 927 of which 28 were positive.	

MOBILE CLINIC—Lac La Biche, Surrounding Area, McMurray, Good Fish Lake, Slave Lake, Grande Prairie, Peace River Area, Lubicon Lake, Manning, Meander River and Indian Cabins.

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
	Gonorrhoea (All Forms) ..							2		1	1				4
Syphilis (Congenital) ..							2						2
Acquired—Secondary ..									1	3	1		5
Acquired—Latent ..									1	11	8		20
TOTALS ..							2	2	2	15	10		31

Number of Cases of Syphilis—Male 14, Female 13 ..	27
Number of Cases of Gonorrhoea—Male 3, Female 1 ..	4
Number and results of Serological Tests for Syphilis: 748 of which 65 were positive.	
Number and results of Bacteriological Tests for Gonococci: 5 of which 3 were positive.	
Number and results of Cultures taken for Gonococci: 5 of which 1 was positive.	
Total Number of Patient Visits ..	56
Total Number of Treatments Given ..	159

DEPARTMENT OF PUBLIC HEALTH

PRIVATE PHYSICIANS REPORTING CASES

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
Lymphogranuloma Venereum													1
Gonorrhoea (All Forms) ..			1	3		9	34	27	283	55	29	10	451
Syphilis (Congenital)									1				1
Acquired—Primary							4	1	15	9	2		31
Acquired—Secondary								3	3	5	1		12
Acquired—Latent						1		1	20	9	2		33
Acquired—Tertiary (Cardiovascular)									1	1			2
Acquired—Tertiary (Neurosyphilis)									6	2		1	9
Type Undetermined									1				1
TOTALS			1	3		10	38	33	330	81	34	11	541

Number of Cases of Syphilis—Male 55, Female 34	89
Lymphogranuloma Venereum—Male 1, Female 0	1
Number of Cases of Gonorrhoea—Male 347, Female 104	451
Number of Doctors in the Province Receiving Consultative Service	109

NEW CASES OF LYMPHOGANULOMA VENEREUM, SYPHILIS AND GONORRHOEA REPORTED IN ALBERTA—1959

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
Lymphogranuloma Venereum													1
Gonorrhoea (All Forms) ..			1	3	1	11	140	159	1473	580	30	10	2408
Syphilis (Congenital)						2		2	2				6
Acquired—Primary							6	1	61	14	2		84
Acquired—Secondary							1	6	13	16	1		37
Acquired—Latent						1		4	52	27	3		87
Acquired—Tertiary (Cardiovascular)									1	1			2
Acquired Tertiary (Neurosyphilis)									7	2		1	10
Acquired—Tertiary (Other)									1				1
Type Undetermined									1	1			2
TOTALS			1	3	1	14	147	172	1612	641	36	11	2638

Total Number of Cases of Lymphogranuloma Venereum—Male 1, Female 0	1
Total Number of Cases of Syphilis—Male 151, Female 78	229
Total Number of Cases of Gonorrhoea—Male 1,645, Female 763	2,408

TOTAL NUMBER OF CASES REPORTED BY VARIOUS CLINICS OF THE DIVISION OF SOCIAL HYGIENE

Sex	Syphilis	Gonorrhoea	Totals
Male	95	1,207	1,302
Female	44	658	702
Totals	139	1,865	2,004

CASES REPORTED BY DOCTORS AND MILITARY AUTHORITIES

	Private Physicians	Armed Forces	Totals
Lymphogranuloma Venereum....	1	0	1
Syphilis	89	1	90
Gonorrhoea	451	92	543
Totals	541	93	634

NEW CASES OF SYPHILIS AND GONORRHOEA REPORTED IN NORTHWEST TERRITORIES—1959

Total Number of New Cases of Venereal Disease Classified as to Sex and Age of Patient:

	Under 1 Yr.		1-4 Yrs.		5-14 Yrs.		15-19 Yrs.		20 Yrs. & Over		Age Not Stated		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
Gonorrhoea (All Forms)	2	3	30	8	1	1	45
Syphilis													
Acquired—Primary	2	.....	17	4	1	1	25
Acquired—Secondary	1	4	8	1	.....	14
Acquired—Latent	3	1	.....	4
Type Undetermined	2	.....	.....	1	3
TOTALS	4	4	53	23	4	3	91

Number of Cases of Syphilis—Male 28, Female 18 46
 Number of Cases of Gonorrhoea—Male 33, Female 12 45

REPORT OF THE PROVINCIAL LABORATORIES

R. D. STUART, M.D., *Director*

During 1959 the Provincial Laboratories carried out 553,482 examinations, an increase of 26,972 over 1958. This increase is recorded wholly in the Calgary laboratory whose examinations showed a striking increase of 26% over last year's total. The failure of the Edmonton laboratory, for the first time in ten years, to show any increase was largely due to policy in that a certain devolution in examinations and an alteration in technical approach eliminated a considerable number of simpler examinations and allowed the laboratory to concentrate on more complicated procedures. Milk examinations were transferred entirely to the Dairy Branch Laboratory thus centralizing these examinations in a laboratory specifically devoted to this work while the elimination of approximately 6,000 smears for gonococci was due to technical developments indicated last year which allowed greater concentration on the more significant cultural investigations. In both laboratories, however, high percentage increases were recorded in Diagnostic Cytology. Other notable increases were evident in enteric and fungus investigations in the Calgary laboratory and in virus investigations in the Edmonton laboratory.

SPECIAL TRENDS

In Edmonton a certain subdivision of sections has occurred in both Pathology and Bacteriology. This has been necessitated by certain sections becoming unduly large and cumbrous but more importantly it has allowed a separation of much of the hospital diagnostic work from miscellaneous public health investigations. This trend has permitted better control of hospital diagnostic examinations, has accelerated reporting and has become almost inevitable due to an increasing demand for statistical returns by the Federal Government. This last requirement has produced another trend, to the recording of work performance under unit values instead of under examinations. This use of unit values although still experimental will eventually be a better indicator of the actual work necessitated by various types of examinations than any system currently in use but requires considerable time for an effective changeover in any large laboratory. Probably by 1961 the system may be fully operational in both Calgary and Edmonton laboratories. Increasing involvement in hospital work is also apparent in the southern laboratory in spite of its unfortunate location. According to Dr. Shute this has been particularly evident in diagnostic histology and may be partly explained by the policy of making the Red Cross Crippled Childrens' Hospital an active treatment center for paediatric cases.

NEW OR SUPPLEMENTARY SERVICES

In this category comes the new virus service established in the Edmonton laboratory with the facilities provided by the recent laboratory extension. Since an adequately trained virologist could not be obtained to take charge of this service it had necessarily to be developed by slow and rather tentative steps. Dr. Williams, previously Assistant Bacteriologist, has made significant contributions to this development which now utilizes the services of two full-time technicians, one part time technician and one full-time assistant in charge of glassware. The virus serology section began experimental procedures in March, 1959, established a routine service for the University Hospital in September and a similar service for Health Units, military establishments, etc. in November. The culture of certain viruses in chick embryos was begun in June and technical methods have been developed to the stage of providing a partial service for the University Hospital and for the Student Infirmary. This procedure is mainly applicable to influenza for which throat washing kits are now available and a Provincial epidemiological service has been mooted. In the still more difficult field of tissue culture, in which viruses are grown in living human or animal tissues in the test tube, experimental procedures were begun in December but considerably more work and probably extra staff training will be required before any routine service can be established.

In Pathology both Dr. Macgregor and Dr. Shute report a greatly increased clinical demand for the cytological examination of cervical secretions, although as Dr. Shute indicates, cervical cancer is detected in an extremely low percentage of symptom-free women by this means. Nonetheless the increased emphasis on cytological examination has led to the realization by doctors that early cancer has no characteristic visual appearance. The consequent increased demand for microscopic examination of tissue biopsies from cervical lesions has been particularly evident. Dr. Macgregor points out that his Division discovered last year 12 cases of early non-invasive cancer of the cervix. The chances of cure in this type of cancer should be very good.

The technique of cervical smear cytology is so thoroughly established in gynecological circles across North America that special provision may have to be made for it in our laboratories. As a tentative step in this direction a technician has been sent to a Cytology Centre for special training in the approved methods.

In Syphilis Serology the Edmonton laboratory has now replaced the Kahn test by the VDRL test. Once experience has been attained this test can be performed rather more quickly than the Kahn test. More importantly it allows the work of this laboratory to correspond directly with that of other Provincial Laboratories across Canada. During 1960 it is hoped to extend this procedure to the southern laboratory. Incidentally, it should be mentioned that the changeover required no fewer than 4,028 separate examinations carried out in parallel with the earlier techniques to allow it to be brought into operation. These examinations are not recorded in Table 1.

GENERAL SERVICES

Pathology

During the year 28,444 blocks of tissues removed during surgery were examined and reported on in our two laboratories. Cancer was present in from 7 to 14% of the cases examined. Tissue reporting, of course, discloses many abnormalities other than cancer and the reports are of value to the physicians and surgeons in checking on clinical diagnosis and often in deciding upon a proper course of treatment. Medico-legal autopsies, carried out by the Edmonton laboratory, continue to increase from year to year and members of the Pathology Division are frequently called by the Courts to give expert medical evidence in such cases. 72 such autopsies were performed in 1959.

Bacteriology

The continuing rise in the numbers of *Salmonellas* isolated was referred to in last year's report. The implication is abundantly confirmed by this year's figures which indicate more than twice as many isolations as last year. The large numbers appearing in the Calgary report are due principally to a food poisoning outbreak following a private reception in Fort Macleod. In all, some 200 people were involved and the causative organism, *Salmonella typhi-murium*, was isolated from chicken and potato salad. In an excellent piece of epidemiological investigation carried out by the southern laboratory two of the caterers' food handlers were shown to be excreting the organism which was also isolated from pooled chicken faeces collected on the farm which provided the caterer with the fowl. The probable importance of chickens in the dissemination of human food poisoning *Salmonellae* may also be indicated in the marked rise in *Salmonella heidelberg* infections recorded in Edmonton. For the first time since such records have been kept this organism has superseded *Salmonella typhi-murium* as the second most important cause of human food poisoning. Coincidentally the same organism has for the first time become the most important human pathogen involved in chicken Salmonellosis in Alberta. These human figures are especially significant because they are derived from a large number of more or less discrete cases. One small outbreak, ascribable to contact infection only, occurred in an Edmonton hospital. Calgary, however, produced a distinct food poisoning episode due to *Salmonella newport* which was traced to home cured smoked ham. The proprietor of the store and all four members of his staff proved to be symptom-free carriers.

Of considerable importance is the evidence that enteropathogenic *E. coli* have begun, apparently for the first time, to be an important cause of infantile gastroenteritis in this Province. 66 strains were isolated in the northern part of the Province from 42 patients, mainly in the Edmonton area. 55 strains were of the serotype 0119:B14 and the sources indicate the wide spread and high incidence of this organism.

Diphtheria incidence, though small, is regularly recorded in this yearly report. During 1959, 18 strains were isolated in the Edmonton laboratory and 5 in Calgary. The latter were isolated

from Indians of the Blood tribe at Cardston, 4 being from aural infections while one involved the throat.

Brucella abortus was isolated from one case in Calgary. This organism was of the usual undulant fever variety presumably of bovine origin. *Brucella melitensis* was isolated in Edmonton from an Eskimo living in Cambridge Bay, N.W.T. This organism was of the same type as those previously isolated from Eskimos in the same area in 1954 and 1956.

Unusual incidents have been encountered in the Tuberculosis sections of both laboratories. In Edmonton *Nocardia asteroides* (an organism which may be confused with the tubercle bacillus) was isolated from two patients, on one of whom it was responsible for serious chronic pulmonary disease. From Calgary Dr. Shute reports an interesting autopsy on a 58 year old man which revealed multiple abscesses containing enormous numbers of *M. tuberculosis*. The unusually acute terminal phase of the disease is remarkable in a patient of this age.

STAFF

During the year one senior technologist was sent for a special two week course in parasitology given by Dr. Cameron, Consultant to the Federal Department of Health. This course was supported by a Professional Training Grant and the training has been of exceptional benefit to the parasitological diagnostic work in the Edmonton laboratory.

DEPARTMENT OF PUBLIC HEALTH

TABLE 1
EXAMINATIONS PERFORMED IN THE PROVINCIAL LABORATORIES
YEAR 1959

CONTROL OF COMMON INFECTIONS		
	Edmonton	Calgary
Diphtheria	5,424	1,533
Enteric-dysentery	6,071	2,933
Fungus infections	3,238	688
Intestinal parasites	392	188
Naso-pharyngitis	10,534	1,775
Tularemia serology	1,528	693
Tuberculosis	12,648	2,353
Undulant Fever serology	1,528	693
Whooping cough	60	24
OTHER DIAGNOSTIC AND MISCELLANEOUS		
Animal inoculations (other than T.B.)	156	59
Antibiotic etc. sensitivities—disc	157,887	51,156
..... tube	24	110
Blood cultures	1,230	156
Leptospirosis	312	.....
Miscellaneous	20,663	5,516
Paul Bunnell test	941	437
P.M. Bacteriology	219	.....
Referred cultures	476	46
Special investigations	7,556	51
Trichomonas	8,698	296
Virus infections	3,304	.....
VENEREAL DISEASE CONTROL		
Chancroid, etc.	4	.....
Gonorrhoea—smears	2,919	6,487
..... cultures	9,347	325
Syphilis	118,235	42,239
SANITARY BACTERIOLOGY		
Food Products	58	87
Milk and Cream	187	608
Water	12,895	7,787
PATHOLOGY		
Utensils .....	.....	.....
Diagnostic cytology—blood smears	164	201
..... cervical smears	329	.....
..... bone marrow	179	4
..... fluids	555	908
Routine diagnostic histology	21,551	6,460
Routine autopsy histology	9,166	447
Referred diagnostic histology	39	.....
Pregnancy diagnosis—frog test	690	.....
..... rabbit test	15	.....
TOTALS	419,222	134,260

TABLE 2
CONTROL OF ENTERIC-DYSENTERY INFECTIONS

EXAMINATIONS		
	Edmonton	Calgary
Blood and Clot Cultures	1,295	681
Faeces Cultures	2,784	1,469
Urine Cultures	91	22
Other examinations	87	.....
Serological tests	1,814	761
DETAILS OF ISOLATIONS INCLUDING REPEATS		
SALMONELLA		
S. typhi	25	6
S. paratyphi B	7	1
S. typhi-murium	15	116
S. heidelberg	80	19
S. newport	3	63
S. tennessee	7	1
Other Salmonellae	7	6
SHIGELLA		
Shigella sonnei	79	41
Shigella flexneri	41	15
Shigella boydii	2	.....
ENTEROPATHOGENIC E. COLI		
Type 0119:B14	55	.....
Other types	11	.....

TABLE 3
CONTROL OF TUBERCULOSIS

EXAMINATIONS	Edmonton	Calgary
Microscopic	6,462	903
(positive)	287	18
Culture	3,965	694
Animal inoculations	2,221	756

SPECIMENS	No.	Positive	No.	Positive
Pulmonary	4,820	362	1,046	16
Meningeal	81	11	24	.....
Renal	921	72	334	3
Other	392	34	246	2

TABLE 4
CONTROL OF SYPHILIS—EXAMINATIONS

	Edmonton	Calgary
CEREBRO-SPINAL FLUIDS Wasserman (Kolmer)	1,605	919
BLOODS		
Presumptive Kahn or VDRL	95,738	30,860
Standard Kahn	7,192	4,992
Quantitative Kahn or VDRL	881	316
Wassermann (Kolmer)	12,819	5,152
Blood and cerebro-spinal fluid 'positive' to reaction	488	215
Blood and cerebro-spinal fluid giving reaction below lab. diagnostic level	1,595	945
PRE-MARITAL BLOODS	12,725	8,486
Positive to reaction	12	7

TABLE 5
SANITARY CONTROL MILK AND CREAM

	Edmonton	Calgary
MILK AND ICE CREAM (No. of specimens)	112	245
Coliform test	51	138
Plate count	112	245
Phosphatase	12	120
Butter fat	12	105

TABLE 6
SANITARY CONTROL WATER

	Edmonton	Calgary
WATER (No. of specimens)	6,126	3,470
Coliform test—Presumptive	6,096	2,565
Confirmed	1,678	910
Special	197	837
Plate count	4,924	3,475
Waters found bacteriologically unsuitable	594	573

TABLE 7
SERA AND VACCINES DISTRIBUTED
(All supplied by Connaught Laboratories unless otherwise noted)

IMMUNIZING AGENTS	Edmonton	Calgary
DIPHTHERIA		
Diluted Diphtheria Toxoid—1 person	59	49
c.c. reactors	79	.....
Schick Test Toxin—25 persons	415	456
Toxoid—1 person	406	291
6 c.c.	118	123
DIPHTHERIA COMBINED		
Diphtheria and Pertussis—1 person	92	161
9 persons	22	64
Diphtheria, Pertussis and Tetanus—1 person	5,373	2,961
9 persons	1,554	927
Diphtheria and Tetanus—1 person	1,538	774
9 persons	707	420
Diphtheria, Pertussis, Tetanus and Polio—10 cc.	11,174	.....
Diphtheria, Tetanus and Polio—10 cc.	2,303	.....
ENTERIC		
Typhoid-Paratyphoid—1 person	719	328
10 cc.	532	116
ENTERIC COMBINED		
T.A.B.T.—3 cc.	901	1,066
25 c.c.	191	.....
MEASLES		
Anti-Measles—5 c.c.	1,142	1,007
Immune Serum Globulin—2 c.c.	1,968	.....
5 c.c.	2,507	.....
ROCKY MOUNTAIN SPOTTED FEVER		
(Lederle Lab.)—3 c.c.	19	5
50 c.c. ....	.....	2
SMALLPOX—		
1 point	3,756	2,829
10 point	7,844	3,800
STAPHYLOCOCCAL INFECTION		
Staphylococcus Toxoid—2 c.c.	716	316
TETANUS (see Diphtheria and Enteric combined)		
Tetanus Toxoid—1 person	3,014	2,962
30 c.c.	12	.....
WHOOPING COUGH (see Diphtheria combined)		
Pertussis Vaccine—1 person	123	401
9 persons	5	27
VACCINE, OTHER		
Autogenous Vaccine (Prov. Lab.)—25 c.c.	12	21
Rabies Vaccine—14 c.c.	15	.....
Rabies Anti-Serum—1000 units (Lederle Lab.)	4	.....
Poliomyelitis Vaccine—10 c.c.	33,398	.....
T.A.B.T.D.—25 c.c.	14	.....

THERAPEUTIC AGENTS

	Edmonton	Calgary
DIPHTHERIA		
Antitoxin—1,000 units	169	65
40,000 units	78	36
GAS GANGRENE		
Antitoxin—10,000 units (Connaught Lab.)	395	382
SCARLET FEVER		
Antitoxin—3,000 units (vial)	23	7
SNAKEBITE ANTIVENIN		
(John Wyeth & Bros. Ltd.)—15 c.c.	3	.....
STAPHYLOCOCCUS		
Antitoxin—10,000 units	16	19
20,000 units	54	31
TETANUS		
Antitoxin—1,500 units	1,867	2,748
20,000 units	115	114

TABLE 8
MINIMUM COMMERCIAL VALUE ASSESSED FROM RECOMMENDED
PROVINCIAL SCALES

Examination	Edmonton	Value	Calgary	Value	Total
Diphtheria	5,424	\$ 5,424	1,533	\$ 1,533	\$ 6,957.00
Enteric-dysentery	6,071	12,142	2,933	5,866	\$ 18,008.00
Fungus infections	3,238	9,714	688	2,064	11,778.00
Intestinal parasites	392	392	188	188	580.00
Naso-pharyngitis	10,534	10,534	1,775	1,775	12,309.00
Tularemia serology	1,528	764	693	347	1,111.00
Tuberculosis	12,648	25,296	2,353	4,706	30,002.00
Undulant Fever serology	1,528	764	693	347	1,111.00
Whooping Cough	60	120	24	48	168.00
Animal inoculations (Other than T.B.)	156	468	59	177	645.00
Antibiotic etc. sensitivities—disc	157,887	31,758	51,156	10,231	41,989.00
tube	24	24	110	110	134.00
Blood cultures	1,230	2,460	156	312	2,772.00
Leptospirosis	312	624	.....	.....	624.00
Miscellaneous	20,663	20,663	5,516	5,516	26,179.00
Paul Bunnell test	941	1,882	437	874	2,756.00
P.M. Bacteriology	219	438	.....	.....	438.00
Referred cultures	476	952	46	92	1,044.00
Special investigations	7,556	22,668	51	153	22,821.00
Trichomonas	8,698	8,698	296	296	8,994.00
Virus infections	3,304	no charge allocated	.....	.....	.....
Chaneroid, etc.	4	8	.....	.....	8.00
Gonorrhoea—smears	2,919	2,919	6,487	6,487	9,406.00
cultures	9,347	9,347	325	325	9,672.00
Syphilis	118,235	236,470	42,239	84,478	320,948.00
Food products	58	116	87	174	290.00
Milk and Cream	187	374	608	1,216	1,590.00
Water	12,895	25,790	7,787	15,574	41,364.00
Utensils .....	.....	.....	.....	.....	.....
Diagnostic cytology—blood smears....	164	328	201	402	730.00
cervical smears	329	658	.....	.....	658.00
bone marrow....	179	358	4	8	366.00
fluids	555	1,665	908	2,724	4,389.00
Routine diagnostic histology	21,551	86,204	6,460	25,840	112,044.00
Routine autopsy histology	9,166	36,664	447	1,788	38,452.00
Referred diagnostic histology	39	156	.....	.....	156.00
Pregnancy diagnosis—frog test	690	3,450	.....	.....	3,450.00
rabbit test	15	75	.....	.....	75.00
-	419,222	\$560,367	134,260	\$173,651	\$734,018.00

DIVISION OF SANITARY ENGINEERING

H. L. Hogge, B.Sc., P.Eng., Director

This Division assists the Department in achieving a high standard of living and good health for the residents of Alberta by conducting specific programs to ensure, or assist in achieving, healthful environmental conditions.

The standards of design, construction and operation of public waterworks and sewerage systems and also the design of public swimming pools are checked and a high standard required. Short courses are held each year for the operators of water and sewage systems, and swimming pools. The pollution of Alberta rivers is regularly evaluated as is the quantity and quality of waste waters released to them. A regular system of air pollution evaluation was started in 1959 to determine existing levels of pollution in urban, industrial and gas and oil field areas. New industries proposing to construct plants in Alberta are reviewed as to control of both air and water pollution.

Sanitation factors, including food and milk handling, refuse disposal, construction of logging camps, and tourist accommodation in all parts of the province not served by local Health Units is supervised by qualified sanitary inspectors of the Division. These sanitarians also assist the staffs of the Health Units with particular problems and foster reasonable uniformity in interpretation and application of public health regulations. In 1959 the special survey of swimming pools in the province was continued from 1958 to assist in achieving an improvement in swimming pool operation.

Inspection of plumbing and individual sewage disposal systems is carried out by Provincial Plumbing Inspectors in all areas of the province outside of the cities, towns and villages that have their own inspectors. The Provincial Inspectors assist and guide the local inspectors and arbitrate appeals from rulings of local inspectors. The plans of all hospitals in the province are checked before they are let for tenders.

The staff of the Division at the end of 1959 was:

Director, 5 Sanitation Engineers, 2 Chemists, 1 Laboratory Assistant, 3 Sanitary Inspectors, 4 Plumbing Inspectors and 3 Stenographer-Clerks.

The activities of the Division are given in more detail in the following section's reports.

1. Municipal Engineering
2. Water and Air Pollution
3. Sanitary Inspection
4. Plumbing Inspection

MUNICIPAL ENGINEERING

As in previous years much of the time spent by the two engineers in this phase of Sanitary Engineering was devoted to plan checking for both new systems and extensions to existing systems.

All the towns proposing to install new water and/or sewerage systems were inspected before they received approval for a Provisional Health Certificate. In most cases one of the Engineers attended the respective communities to speak at their public meeting and answer questions regarding both the health and engineering aspect of the proposed system. These meetings are held before the community takes the respective money bylaw (water and/or sewer) to a vote.

Approximately 60% of the communities having water and/or sewerage systems were visited on routine inspection trips. Some of these communities were visited more than once during the year. Before the end of next year (1960) it is expected that all communities will have been visited at least once since 1958.

Many of our inspection trips in recent years have been made to places with definite problems. This year this included Westlock, Elk Point, Waskatenau, Evansburg and Barrhead.

The Operator's School was again very successful. This year the 3rd and 1st year schools were sponsored. Present attendance figures for these schools are as follows:

(a) Completed 1st year	144
(b) " 2nd year	66
(c) " 3rd year	45
(d) Communities represented	103

A graduate course will also be sponsored in 1960 along with the 1st and 2nd year courses.

The following tables are given to show the 1959 waterworks and sewerage systems construction costs.

A. New Systems

	Provisional Certificate		Final Certificate	
	No. of Certificates	Estimated Cost	No. of Certificates	Estimated Cost
Water	10	\$ 666,234.00	10	\$ 591,053.00
Sanitary Sewer	11	577,695.00	8	471,659.00
Storm Sewer	3	186,375.00	1	88,000.00
Totals	24	\$1,430,304.00	19	\$1,150,712.00
Bowness (using 50% Est. Cost—1958)		Water	3	544,650.00
		Sewer	1	449,800.00
Montgomery (using 90% Est. Cost —1958)		Water	2	551,400.00
		Sewer	1	428,000.00
		TOTAL	26	\$3,124,562.00

B. Extensions To Existing Systems

	Provisional Certificate		Final Certificate	
	No. of Certificates	Estimated Cost	No. of Certificates	Estimated Cost
Water and Sewer Mains	33	\$ 9,087,974.00	102	\$ 6,829,121.00
Water Supply and Treatment	12	2,028,765.00	21	1,634,783.00
Sewage Treatment	5	669,800.00	6	788,500.00
Storm Sewers	4	2,520,000.00	7	3,356,176.00
Total	54	\$14,306,539.00	136	\$12,608,580.00
GRAND TOTAL				\$15,733,142.00

There were a total of 250 certificates issued; of these 10 were superseded. The 240 remaining certificates broken down into - 80 provisional certificates and 160 final certificates issued to 101 different communities. This represents 49.5% of the communities with water and/or sewer in the province.

The above indicates an increase of 24% certificates issued and an increase of 59.5% in the value of work commissioned.

There was a slight increase in the number of new systems compared to that of 1958. A decline in the number of new systems is to be expected in the future as the cost involved in such installation is beyond reach of the smaller communities.

The year 1959 saw the beginning of the installation of water and sewer in the towns of Bowness, Montgomery and Grand Centre. The following table "C" indicates the number of incorporated towns and villages with or without water and sewer systems:

C.

*Population Range	Water System		Sewer System		Name of Community Without Water and/or Sewer
	With	Without	With	Without	
over 10,000	6	....	6	....
2000 - 10,000	36	....	36	....
1500 - 2000	6	....	4	2	Blairmore & Coleman
1000 - 1500	23	2	23	2	McMurray & Bellevue (S) McMurray & Sylvan Lake (W)
500 - 1000	36	11	44	3	
250 - 500	51	16	53	14	
Under 250	12	36	11	37	
**TOTAL (1)	170	65	177	58	
Pop. Served	782,133		785,993		
Others	15	1	10	6	
***TOTAL (2)	185	66	187	64	

*1959 Census

**Total for incorporated communities in Alberta

***Total number of systems in Alberta—includes 3 National Parks, 2 Provincial Institutes and 11 unincorporated centres.

There are 201 different water and/or sewerage systems in the province serving a population of 805,692 or 66.2% of the total population of the province (1,220,611).

It is interesting to note that there are 67 communities under 500 with water and/or sewerage systems in the province and 15 communities with water and/or sewerage systems under 250 population. Edberg (pop. 167) is the smallest incorporated village having both water and sewerage systems.

SWIMMING POOLS

This phase of Municipal Engineering has taken more time this year than previous years and in 1960 more time is expected to be spent discussing and checking plans for approval and following construction of swimming pools.

During 1959 only two pools were approved although numerous different pools were discussed.

In May, three weekend courses for Swimming Pool Operators were conducted in Edmonton, Calgary and Lethbridge. This

school was co-sponsored with Cultural Activities, University of Alberta and the Edmonton Parks Division. Attendance at these schools was as follows:

Edmonton	84
Calgary	58
Lethbridge	40
TOTAL	182

As a result of the course there was a marked increase in the interest by the operators to produce a clear and safe water. This was brought about due to an understanding of their equipment and its use. Thus, the overall result was, improved sanitary conditions throughout the province. It is expected that this school will be continued in the years to come.

Although the sanitary conditions have improved, there is still a need for engineering help to correct swimming pool equipment faults.

Special record forms were supplied to all swimming pools in the province and will also be supplied for the 1960 operating year.

WATER AND AIR POLLUTION STUDIES

Water pollution studies were continued in 1959 to assess current pollution in the rivers of the province and to check the efficiency of waste treatment or control practices by municipalities and industries. Air pollution studies were greatly expanded during the year and much was accomplished in providing adequate equipment to properly assess air pollution levels. Continuous measurement of total sulfur gases, hydrogen sulfide and smoke in the air can be carried out now as well as continuous recording of wind speed and direction. Surveys by 'Exposure Cylinder' technique were also expanded.

WATER POLLUTION

Pollution surveys were made of the main rivers this year with repeat surveys of the Athabasca and North Saskatchewan Rivers at monthly intervals during the winter months.

The Athabasca River was found to have appreciable color and odor as well as B.O.D. as a result of pulp mill operation. The effect extended some 200 miles down river. Repeated tests of the mill effluent showed large concentrations with some variations in amount.

The North Saskatchewan River showed additional improvement in residual dissolved oxygen over 1958 conditions. Repeated tests during winter months showed the water to be free of objectionable odors. It is significant that the City of Edmonton completed their 'interceptor sewer' program to serve the only section of the City not previously connected to the new sewage treatment plant. Tests in December showed the dissolved oxygen to be 4 to 5 ppm. in the river 150 to 200 miles downstream. Also of general interest, a start was made in constructing a power dam on the headwaters of the river which will increase winter river flows when it is completed.

Further studies were made of the Red Deer River and sewage effluents entering it. The City of Red Deer has made preliminary studies to provide sewage treatment facilities.

The Bow River and the effluents from the City of Calgary and adjacent industries were checked four times and the oil refineries, in detail, on one occasion. Significant odors of an oily nature have been noted and further studies are planned.

The Oldman River at the southern part of the province was surveyed once and a number of inspections made of the Lethbridge sewage treatment plant extensions. These extensions are scheduled for completion by April, 1960.

The Town of Taber reported trouble at their water treatment plant apparently caused by a breakdown of waste control at a sugar beet factory.

The South Saskatchewan River downstream from Medicine Hat was surveyed on one occasion and pollution found to be quite low. Similarly samples of the Peace River were analyzed on one occasion and pollution found to be light.

New industries establishing in the province were reviewed as to waste discharges. Included here were two sulfur plants and two tire manufacturing plants. Also, discussions have been held with representatives of the company constructing a pilot plant for processing the Athabasca tar sands. The site was visited on one occasion prior to start-up and further visits and discussions are planned.

AIR POLLUTION

The 'exposure cylinder' surveys for hydrogen sulfide and sulfur dioxide were expanded by 25 new stations in six areas, to give a total of 41 stations in 10 areas of the province. Two of these areas are the cities of Calgary and Edmonton.

Also 'dustfall cans' and a continuous spot tape sampler for smoke and dust have been set in both Calgary and Edmonton.

Continuous measurement of air pollutants was commenced in September following completion of a 27 foot house trailer as a mobile air pollution laboratory. The equipment consists of the following:

1. A 'Titrilog' unit to measure and record total sulfur gases, i.e. sulfur dioxide, hydrogen sulfide and mercaptans.
2. A spot tape hydrogen sulfide sampler (continuous sample).
3. A spot tape sampler for smoke and dust (continuous sample).
4. A Beckman Whitley instrument to record continuously wind speed and direction.

Also a gas wash bottle assembly is provided with the trailer so that spot tests can be run away from the trailer.

The mobile laboratory was used near the Pincher Creek Sulfur Plant for two months and at the Okotoks Sulfur Plant for one month and in Calgary for about three weeks.

New industries establishing in the province are reviewed as to air discharges similar to the check on water pollution.

SANITARY INSPECTION SECTION

In 1959 there were positions for 59 Sanitary Inspectors in Alberta, in the Provincial Department, City Health Departments and Health Units. At the year's end there was one vacancy. Some difficulty was being experienced in obtaining a suitably trained person to fill this vacancy.

An 'In Service Training Course' for Sanitary Inspectors was held in April under the auspices of the Department of Extension of the University. As on previous occasions, the Faculty of Agriculture and the Canadian Institute of Sanitary Inspectors co-operated with the Division of Sanitary Engineering in the preparation of the course. The course was well attended. The consensus of opinion appeared to be that the course was of immense value to those who attended.

For the third successive year no compulsory milk pasteurization bylaws were passed though a few communities expressed interest in such bylaws.

A trend which has developed in recent years in many parts of Canada and the United States became quite marked in Alberta in 1959. The trend is towards the concentration of milk processing in large plants where full advantage can be taken of labour saving equipment. Pasteurized milk is then distributed over considerable distances into areas previously served by small plants.

Only one new pasteurizing plant was opened in Alberta in 1959. It was established in Calgary as a branch of a company operating in Lethbridge. Two plants in Drumheller discontinued operations, together with plants formerly operating in Bassano, Didsbury, East Coulee and Medicine Hat. At the year's end there were 76 plants supplying pasteurized milk to the public and a further eight supplying to schools and institutions.

The transportation of milk over considerable distances frequently involved distribution in areas under several local health authorities. This presented difficulties in supervision from time to time. These had not been fully resolved at the year's end.

Certain changes in the restaurant regulations came into effect on April 1st, 1959. These changes require that restaurants obtain annual permits from Local Boards of Health. The permit system is intended to provide the health authority with a control of public health conditions in restaurants. Some administrative problems were encountered as the system was introduced. Solutions to most of these problems had been worked out by the end of the year. The limited period of operation of the system precludes any comment on its effectiveness in this report.

The Provincial Sanitary Inspectors continued the program of previous years designed to assist local health authorities, particularly in non-health unit areas, to deal with sanitation matters. In addition they engaged in and assisted in a variety of activities closely related to this program.

A total of 948 inspections were made in 1959, approximately the same as the 926 inspections made in 1958.

Seventy-eight inspections were made at dairy farms and milk plants in 1959 compared with 126 in 1958. This reduction is compensated by an increase in inspections at restaurants and other food handling premises from 301 in 1958 to 397 in 1959. The increase in inspections in the second category was occasioned in part by the introduction of the restaurant permit system. Some extra inspections were made to help local health authorities get this system in operation. Another part of the increase in inspections in restaurants and food handling premises was due to inspections in beverage rooms. New regulations which became effective early in 1959 clarified the health authority's responsibility in these premises. A program of beverage room inspections was therefore commenced in 1959. The Alberta Liquor Control Board co-operated very fully so that administration of the new regulations was generally satisfactory.

The number of inspections in 1959 in housing categories was 119 compared with 120 in 1958. These include inspections at tourist accommodation, trailer coach parks, and industrial and construction camps. Included are 25 inspections at logging camps. These camps housed 614 men and were located between 12 and 50 miles from roads used for other than access to the camps. Some of these camps provided very satisfactory accommodation while others were quite unsatisfactory. Improvement was noted in those which had been unsatisfactory in the previous year. As in previous years, the most frequently recurring fault was in the matter of bathing and laundry facilities. In 20 of the 25 camps visited such facilities were quite unsuitable or entirely absent. In other specific features, such as sleeping accommodation, kitchen and dining room facilities, toilets and water supplies, the majority of the camps were found to be satisfactory.

One hundred and nineteen inspections were made at wells, other private water supplies and private sewage disposal systems. These inspections are usually made at farm homes or rural schools in response to requests from users or because of unsatisfactory laboratory reports. These inspections provide an opportunity to give advice to the home owner or responsible authority to enable correction and thus protect the health of users. They often provide a suitable climate for discussion of unsanitary conditions which the Inspector may observe.

A special project directed towards improvement in swimming pools which had been begun in 1958 was continued in 1959. This project occupied one inspector for 8 weeks during the year. In all 59 inspections were made at 45 pools in 29 Alberta communities. The following table shows some of the findings of the 1959 project:

	No data	Poor	Fair	Good	Very Good	Total
Condition of equipment	4	7	17	17	10	49
Clarity of water	4	12	9	10	14	49
Bacterial quality of water.....	9	16	6	12	6	49

The two year project has resulted in noticeable improvement in conditions at swimming pools. Pool employees are generally better informed so that they are able to obtain the best possible results from equipment available to them.

Co-operation with other Departments of the Government continued to be quite satisfactory. As one example it may be noted that the Chief Sanitary Inspector was asked to attend two meetings of the Dairy Manufacturing Plant Licensing Advisory Board. In this way it was possible to acquaint the Board with the opinions of the health authority relative to licensing of milk pasteurizing plants.

New communities continued to receive particular attention from Provincial Sanitary Inspectors. The Chief Sanitary Inspector has been a member of the Board of Administrators of the New Town of Lodgepole since the Board was organized. In September, 1959, he was appointed a member of a similar Board for the New Town of Swan Hills. It is anticipated that Swan Hills which is literally being carved out of the forest will grow rapidly. This has placed a great deal of responsibility on the Board of Administrators and has required considerable of the Board member's time.

The Provincial Sanitary Inspectors carried out a diversified program in the field of sanitation during the year. They provided a basic inspection service in those parts of the province not served by health units or city health departments. In addition, a special swimming pool project was proceeded with and various other undertakings in programs having a bearing on public health were carried out.

PLUMBING INSPECTION

The staff of this section was increased from two to four in 1959. One of the new inspectors is stationed in Red Deer and the other works out of the Edmonton office.

The addition of these inspectors has definitely improved the service which this office is now able to give to home owners, plumbing contractors, local plumbing inspectors, etc. The fact that we are now able to have inspectors in the field has increased the number of plumbing permits issued during 1959. The increase over 1958 is 48.26%.

This office issued 384 plumbing permits, at a value of \$3,358.35 during the 1959 calendar year. This is an increase of 125 permits issued and an income increase of \$598.35 over 1958.

The number of plumbing fixtures installed during the year totalled 88,115 which represents approximately 18 million dollars worth of plumbing installed during 1959. The number of individual types of fixtures installed was as follows:

Water Closets	23,602	Lavatory Basins	24,117
Baths	14,208	Sinks	15,009
Laundry Tubs	2,316	Special Fixtures	8,863

The number of privies eliminated through the installation of plumbing was 1608.

The plumbing plans of all hospitals which are to be built in Alberta are now coming to this office for approval before the plans are put in the hands of contractors for bidding purposes. This step has allowed the architect and the mechanical engineer to correct these plans before bids are received and has thereby

permitted a much more accurate bid being received. It has also done away with the confusion and added costs which result when addendums to plans and specifications are sent out from the office of the architect after an installation has commenced.

During 1959 the Extension Division of the Department of Agriculture arranged 26 plumbing short courses throughout the province. Our inspectors attended these courses and instructed urban and rural dwellers as to the proper method of installing a plumbing system to serve their homes. These courses are very well received and have brought to our attention the fact that people living in rural homes are anxious to have any plumbing installed in their homes inspected by a competent inspector.

During 1959 an investigation was completed with regard to acceptable methods of sewage disposal for the Canmore area. This investigation revealed that sub-soil conditions throughout most of this area, as well as the high water table which is prevalent, could only allow the use of tight pumpout tanks for the collection of sewage or sewage effluent. The contents of these tanks would be pumped into a tank wagon provided for this purpose and then it would be taken to an approved location for disposal.

There was a marked increase in requests received for 'Certificates of Approval' during 1959. It is becoming the practise of Architects, School Boards, Grain Companies, Gas and Oil Companies, Central Mortgage and Housing Corporation and private owners to request these certificates before the final payment or settlement is made with the plumbing contractor.

The number of trailer parks constructed during 1959 increased sharply and in the large majority of cases plumbing services were provided. A considerable amount of time was devoted to these installations in order to ascertain that the services were installed correctly. Plumbing contractors are not familiar with our requirements as yet, inasmuch as these requirements are not included in our regulations.

CIVIL SERVICE NURSE

K. E. Jorgensen, R.N.

In looking back over the past year, we are made very conscious that the general health pattern changes constantly. This year we find that our most increasing problem is 'psychogenic'. Several employees have been hospitalized at Oliver for treatment and some are undergoing psychiatric care while employed. Our most difficult cases are those who are mentally ill but are not aware of their condition.

We are always happy to see people who look upon good health as a very important possession. These people are generally anxious to learn how the errors and chances of unhealthiness can be avoided or certainly reduced.

During the past year, there have been many more interested in and can see the value of good nutrition in reference to good health. Proper diets for the 'underweight' and 'overweight' groups are certainly of increasing concern. In some cases we advise the patient to consult their doctor.

In speaking individually to about seven thousand civil servants annually we do stress the importance of: (1) maintaining good health, (2) striving to prevent illnesses and accidents and (3) getting medical attention at the first sign or symptom of trouble.

We have been encouraged and reassured of the value of detecting urgent cases. An outstanding case was one with an internal haemorrhage. This patient walked into our office and two hours later she was undergoing surgery. Her doctor told her, later, that her case would have been fatal if it had been neglected for another two or three hours.

We have referred five cases, some with rather insignificant looking sores, to the doctors who have diagnosed them as skin cancer. One man had been losing sleep for over a year because he had a sore on his arm that would not heal. He felt sure it was cancer and was afraid to see his doctor. We removed an embedded sliver and the patient was immediately relieved.

Again we take this opportunity of thanking all who so kindly assisted those who were ill or injured while at work. We also thank those in 'personnel' who are so co-operative in making staff appointments - it is such a time-saver.

During 1959 approximately 82 employees were driven either home, to the hospital or to the doctor's office. This would include very ill or injured patients or ones with an infectious disease. The following figures we wish to submit.

	Office Calls	Home Calls	Compen- sation	Certificates
January	537	53	19	52
February	376	33	5	13
March	463	54	11	21
April	454	57	11	40
May	455	39	21	27
June	415	31	11	13
July	285	31	15	25
August	367	21	11	15
September	369	33	12	21
October	406	50	12	19
November	463	47	20	29
December	465	37	18	23
1959	4455	486	166	298
1958	5,231	431	166	246

DIVISION OF ARTHRITIS SERVICES

R. K. Thomson, B.Sc., M.D., R.C.P.(C), F.A.C.P., Director

The Division of Arthritis, with clinics in Edmonton and Calgary, accepts patients up to the age of twenty-five years. There has been no change in policy during the year 1959, but the Calgary Clinic was removed from the Holy Cross Hospital to 2104 - 2nd Street, S.W., Calgary.

As will be seen from the statistical report which is attached, there is no essential change in the number of new patients seen during the year. The new cases almost completely balance the cases which became ineligible. An attempt is made, however, to keep in contact with former patients who are now ineligible due to age. There was one death. So far as can be determined from complete autopsy findings, the death was due to an illness not related to Rheumatoid Arthritis.

As in 1958, there is a maintained increase in the hospital days and total treatments.

Some newer cortocoid preparations have been available, and where they have been shown to be of value they have been used in the treatment of some of the cases. These newer preparations have not produced any basic change in the treatment of Rheumatoid Arthritis in the Division. The care of these patients at this time is essentially that of education of patients and family plus the application of the fundamentals of rest, exercise, physiotherapy and medical adjuncts where necessary.

STATISTICAL COMPILATION OF CASES TREATED IN 1959

	Edmonton	Calgary	Total
Initial examinations made	17	8	25
Repeat examinations made	136	13	149
Rheumatoid Arthritis cases in 1959—new	14	5	19
Total Rheumatoid Arthritis Cases under the Division of Arthritis	106	47	153
Hospital Days	528	711	1,239
Physiotherapy treatments	280	59	339
Injections	161	212	373
Office visits	29	268	297

TREATMENTS

January 1st to December 31st, 1959

Hospital days	1,239
Clinic and office visits	471
Physiotherapy treatments	339
Other: including surgical, injections and special procedures	385
Total Treatments	<u>2,434</u>

DIVISION OF CEREBRAL PALSY CLINICS

F. G. Day, BSc, MD, LMCC, FRCPS

MChOrth, FICS, FAACP, Director

During 1959, at the Cerebral Palsy Clinics in Edmonton and Calgary, a total of 94 new patients were seen and diagnosed; of these 71 were cerebral palsy. During 1958, 112 new patients were seen at approximately the same number of examining clinics. This decline shows that we are succeeding in decreasing the very extensive backlog of patients existing prior to the commencement of the Government sponsored clinics; and that the public are becoming aware that these facilities exist. The birth rate of cerebral palsy remains constant, at 7 per 100,000 general population. The facilities available at these clinics will become closer to being adequate as we progressively decrease the backlog.

The treatment of cerebral palsy, a very old disease, is relatively a new science and therefore a rapidly changing one. A number of the Government Staff attended the Western Regional Workshop on Cerebral Palsy at Winnipeg, in May, 1959; this proved to be a stimulating and informative conference. The Director of the Cerebral Palsy Clinic in Calgary, Dr. T. Richardson, attended the American Academy for Cerebral Palsy Meeting in Los Angeles. It is only with these attendances that the clinics can continue to remain up to date and efficient.

We are still finding many undiagnosed older patients who have reached the age where treatment is most difficult. We feel, however, that our educational program in training medical students, nurses and physiotherapists will assist us, in the future, in discovering these type of patients earlier.

Standardization of the classification system for both diagnosis and treatment has now been instituted in both Clinics. It will take several years before this classification is complete but will no doubt be of the greatest assistance to us in determining the efficiency of treatment methods.

It has become increasingly evident that to function economically, treatment facilities should largely be reserved for those children who have the mental ability to be educable. We have, therefore, used the services of the Provincial Guidance Clinics in determining the mental status of all patients prior to admission for treatment in the clinics.

A report elaborating our statistical accomplishments for the year 1959 follows:

	Edmonton	Calgary	Total
Number of examining clinics	42	42	84
Number of Staff rounds	17	....	17
Number of Case Conferences	6	....	6
Total number of patients examined	452	262	714
Total number of patients examined by Pediatrician	120	21	141
Total number of patients examined by Dentist	41	42	83
Number of rechecks	388	232	620
Number of new cases	64	30	94
(a) Cerebral Palsy	45	26	71
(b) Pending	5	4	9
(c) Miscellaneous	14	....	14

Patients on Active Treatment

Number of patients treated on rotating basis	166*	73	239
Monthly average of those who received treatment	60	29	89
* 48—new cases 12—children from special classes 32—children from regular classrooms (some attending after school hours)			

Physiotherapy

Number of treatments	3,621	3,341	6,962
Number of cases benefiting	127	62	189

Progress

Co-ordination	5	4	
Sitting balance	3	2	
Reciprocation (tricycle)	5	....
Crawling	3	1	
Walking (a) with help unbraced	8	....
(b) in walker	4	....
(c) in parallel bars	4	3	
(d) with crutches	1	1	
(e) with canes	3	2	
(f) unaided (braced) .....	....	4	
(g) unaided (not braced)	7	2	

General Improvement

Minor gait improvement	17	22	
Considerable gait improvement	15	11	
Deformities reduced	31	6	
Group muscle control	21	....
General muscle control	20	7	
Minor activity increase	12	16	
Greater independence in wheelchair	2	....
No progress (some new cases)	20	16	

Bracing

(a) for control for first time	17	7	
(b) removed	11	....
(c) increased	2	....
(d) special chair for posture	4	7	
Physical training class	12	....
Physiotherapy home program	32	....
Total parent instructions	212	no record	51
Home visits	2	....
Casts	8	....
Muscle tests	2	....

Occupational Therapy

	Edmonton	Calgary	Total
Number of treatments	1,666	2,887	4,553
	(11 mos.)		
Number of cases benefiting	86	64	150
Activities of daily living—			
(a) dressing	21	22	
(b) feeding	10	7	
(c) other (bathroom, kitchen, household)	11	8	
Upper limb function—			
(a) range and duration of used movement	27	6	
(b) co-ordination (including hand to eye)	21	9	
Special skills—			
(a) handicrafts and hobbies *1	15	16	
(b) typing	4	3	
(c) writing and pre-writing (including motor and perceptual difficulties)	19	16	
Assessments	20	7	
Upper limb braces and appliances	44	16	
Group therapy and socialization		11	
	see below *2		
Parent instruction and home programs	44	54	
Emotional problems	8	.....

*1—Weaving, basketry, water-colour and oil painting and modelling, simple woodwork, sewing, (machine and hand), metalwork, leatherwork, "jewelcraft", "modelmaking".
*2—All children are subjected to the socializing influence of the playroom group.

Speech Therapy

		(2 mos.)	
Number of treatments	1,049	307	1,356
Number of cases benefiting	58	18	76
Pre-speech activities	6	2	
Respiration	9	2	
Articulation	24	10	
Language (comprehension)			
(a) oral	5	3	
(b) lip reading	2	2	
Language (expression)			
(a) verbal	15	.....
(b) non-verbal	6	.....
Voice training .....	.....	4	
Emotional problems (stammerers etc.)	6	2	

Cases on supervision only—

In Clinic	4	1
On home program	14	2

General Improvement

Considerable	21	3
Satisfactory	15	7
Little or no progress	12	8
Speech and language assessments	7	20
Audiometric tests	3	1
Parent interviews	76	11

School

	Edmonton		Calgary	Total
	Schoolroom I	Schoolroom II		
Number of instructions	1,619	1,217	1,588	4,424
Number of cases benefiting	58	20	26	104
Number of parents instructed	30	8	15	53

Edmonton—Schoolroom I

Pre-school testing and training	25
(some functioning at 4-5 year level)	
Remedial tutoring	18
(grades I-II, but below normal grade level)	
Reading readiness	15
(some entered regular school—September 1959)	
Completed Grade I	6
(3 with excellent standing)	

Edmonton—Schoolroom II
(10 mos.)

Pupils	Grade
	ungraded
	I
4	II
6	III
5	IV
3	V
2	VI

Calgary—Schoolroom
(10 mos.)
(teaching provided by the
Calgary School Board)

Pupils
8
5
5
2
6

Pupils received a full day of schooling with exception of therapy periods. Course of Study—Alberta School curriculum with modification according to handicap.

A number of these pupils attending once weekly for therapy receive remedial program in the schoolroom.

	Edmonton	Calgary	Total
Patients on Home Management	98	132	230
Admitted to Special Classes in Public Schools	6	7	
Admitted to Provincial Training School at Red Deer	2	5	
Admitted to School for Mentally Retarded	2	4	
Admitted to School for the Deaf .....	.....	1	
Admitted to the Rose Crest Home in Edmonton	2	2	
Admitted to Providence Creche .....	.....	2	
Transferred to	4	6	
Found gainful employment .....	.....	1	
Surgery	23	10	
Deceased	2	2	

Foster Home Program

Number of boarding cases	25	18	43
Total days—domiciliary allowance	2,551	1,459	4,010

Braces

Ischial bearing long leg braces	2		
Long leg braces with knee lock, hip joint, fully adjustable, fibreglas, body support	2 pr.		
Long leg braces with knee locks, fully adjustable, fibreglas, body support	2 pr.		
Long leg braces with no knee joints	1 pr.	1	
Long leg braces, fully adjustable, with special spring return at knee	1 pr.		
Long leg braces with knee lock, hip joints and pelvic band	1 pr.	1	
Full control braces (3 were modified used ones) .....	.....	1	
Simple unjointed light standing brace .....	.....	1	
Long leg double bar brace .....	.....	2 pr.	
Twister type brace with pelvic band .....	.....	1 pr.	
Twister type brace with pelvic band (unilateral) .....	.....	1	
Below knee irons	25 pr.	5 pr.	
Below knee irons (unilateral)	19	3	
Short leg double bar braces with drop foot stop (unilateral) .....	.....	1	
Short leg double bar braces with drop foot stop .....	.....	1 pr.	
Perlstein type night splints .....	.....	6 pr.	
Perlstein type night splints (unilateral) .....	.....	9	
Gutter type night splints (unilateral) .....	.....	2	
Gutter type night splints	2 pr.	3 pr.	
Night splints	7		
Magnusson night splints	14		
Frejka splint with straps .....	.....	1	
Ponseti bars	2		
Canvas Corset	1		
Fibreglas arm brace with cock-up splint	2	1	
Plaster fibre shoulder appliance with extension to wrist, cock-up and palm piece .....	.....	1	
Plaster wrist splint .....	.....	2	
Plastic and fibre wrist splints .....	.....	3	
Waist belts with arm restrainers	7		
Figure of eight shoulder restraint	1		
Fibreglas cock-up splints	2		
Fibreglas supination splint	3		
Fibreglas thumb splint	2		
Sandwich splint	1		
Head and jaw support	2		
Special feeding apparatus	19		
Special weaving adaptations	6		
Special items for Therapists	22		

Braces (Continued)

	Edmonton	Calgary	Total
Adaptions to toys	12		
Special walker and walking device	2		
Mouthpiece	3		
Wordboards (3 wooden, 1 plastic)	4		
Special chair and wheelchair adaptions.....	7		
Special adjustable table	1		
Straps	3 doz.		
Crutch adjustments .....	.....	1	
Tripod canes and tips .....	.....	1	
Shoe corrections	112	58	
Brace adjustments and repairs	63	62	

Staff Education

Films from Health Education Department viewed and discussed	5	5	
Staff members attended Western Regional Workshop on Cerebral Palsy (Edmonton presented a case)	6	1	
Staff member made study tour of Cerebral Palsy Centres on West Coast .....	.....	1	
Medical Director attended Cerebral Palsy Academy in Los Angeles .....	.....	1	

Instructions

Social Workers and Psychologists	10	9	
Physiotherapists and Physiotherapy students	3	12	
Nurses	50	338	
Medical Students (3rd year)	50	.....
Occupational Therapists	4	4	
Speech Therapists	2	4	
Students from University of Alberta—Dept. of Education (interested in Special Education) .....	.....	8	
Teachers of Homebound (5 teachers) and Special Teachers	55		
High School Students .....	.....	10	
Miscellaneous	15	5	
Film "A day in the Life of a Cerebral Palsied Child" .....	.....	26	
Parents interviewed by Supervisor .....	.....	133	

Instructions—Film—Tour

Second year Physiotherapy Students	10		
Intermediate Student Nurses from General Hospital	92		
Special Teachers from Edmonton Public Schools	28		

MOVIES

Movie Film progress records

Total cases filmed to date	180		
Number of new cases filmed	33		
Number of cases filmed in 1959	75	37	

Movie films assembled for educational purposes

Athetoid Case	—	Edmonton
Appliance Film	—	Edmonton
Brace Film	—	Edmonton
New Types Film	—	Edmonton and Calgary

Clinic Films shown

Athetoid Case	Members attending Western Regional Workshop on Cerebral Palsy Staff of the Saskatoon Cerebral Palsy Clinic Occupational Interns from Toronto Staff of the Calgary Cerebral Palsy Clinic Special Teachers from Edmonton Public Schools Girl Guides Psychology Students from University of Alberta (Summer School Session)
Case Films	Cerebral Palsy Steering Committee Staff of the Cerebral Palsy Clinic - Edmonton
Appliance Film	Cerebral Palsy Steering Committee Staff of Saskatoon Cerebral Palsy Clinic
Brace Film	Brace Shop Committee - Saskatoon
Types Film	Medical Students Dental Students

Firedrill

	Edmonton	Calgary
Practice sessions	2	
Inspected drill (building evacuated in 3 minutes)	1	

Lunchroom

Lunches served	3,172
Total number of volunteers assisting under supervision (periods)	985
Total number of Nurses Aides in training assisting under supervision	42

Acknowledgements

Our sincere thanks are extended to all who have so generously contributed to the operation of the Cerebral Palsy Clinics in Edmonton and Calgary.

Our appreciation is extended to the Provincial Guidance Clinics and the Provincial Training School at Red Deer for their assistance and interest; also to the Edmonton and Calgary Public and Separate School Boards who have provided us with assistance and co-operation in our educational program.

Our grateful appreciation is extended to the Nursing Supervisors and Staffs of the Clinics for their willing co-operation and valuable services throughout the year.

DIVISION OF TUBERCULOSIS CONTROL

G. R. Davison, M.D., C.M., Director

In summing up the activities for this, the Forty-first Annual Report of the Division of Tuberculosis Control, one is reminded of the principles enunciated many years ago and how applicable they are today - the sanatorium as a treatment and teaching centre, the importance of public health agencies, medical schools and preventive medicine; the family physicians in prevention and early diagnosis, travelling consultants and tuberculosis clinics, follow-up work and education of the public. The cumulated effect of following these fundamentals, along with the more recent advances in treatment and knowledge of tuberculosis have gone far toward controlling this disease. An important duty today lies in keeping people from assuming that tuberculosis is on its way out. The satisfaction over reduced mortality has blinded many to the sustained morbidity. 553 new cases of active disease were discovered in Alberta in 1959 indicating a morbidity rate of one active case for every two thousand of the population. Our death rate, however, of about 3 per 100,000 is the lowest in our history.

There is some justification for optimism. Treatment was never more effective, case finding and diagnostic facilities never so available, and governmental assistance never greater.

DIAGNOSTIC SERVICES

All clinic services required are provided without charge to the individual. Clinics are held regularly at the Sanatoria in Edmonton and Calgary, and at intervals at several of the larger centres throughout the province. Mobile Chest X-ray Surveys operated throughout the year, with the city surveys being carried out during the winter months. These latter are confined to industry. The Tuberculin Skin Testing Program was continued among the school population of the health units. Grateful acknowledgement is made of the efforts of the medical officers of health and their staffs. All positive reactors were x-rayed, as were the members of their families. X-ray units in the provincial gaols are fruitful sources of cases of tuberculosis and other diseases. X-ray units in the City Halls of Edmonton and Calgary discovered a considerable number of persons with pulmonary disease processes. This service is supplied by the Alberta Tuberculosis Association, which also defrays half the expense of Mobile Chest Units. Altogether 275,324 services were rendered to Alberta residents.

The program of x-raying the chests of all admissions to general hospitals turned up one new case in every 1,356 films. It is lamentable that only a small percentage of admissions have chest films taken.

PREVENTION

B.C.G. Vaccination in the northern areas of the province, where the incidence of disease is the highest, was further expanded with particular reference to children of Indian blood. It is to be hoped that a declining incidence of disease will be noticeable in a few years. It is expected also that if disease develops among the vaccinated, it will be more or less benign. The expense of this project is borne by the Alberta Tuberculosis Association. Vaccination of nurses and nursing aides in training and others in hazardous occupations is continuing. During 1959—9,966 vaccinations were carried out.

TREATMENT

The Baker Memorial and Aberhart Memorial Sanatoria provide complete treatment services which include surgery, both for pulmonary and non-pulmonary disease. The use of the anti-microbial drugs has proven to be the greatest forward step in treatment, but unfortunately tubercle bacilli are developing resistance to the drugs. This is particularly so if patients are inadequately treated. This applies especially to persons who leave hospital against medical advice, and to others who following discharge do not take their drugs as prescribed. Sixty-nine per cent of discharged patients in 1959 were supplied with drugs.

There were 1,134 patients given sanatorium care during 1959. This is the same as for 1958. There were 736 admissions in 1959, as against 692 the previous year. The majority of cases come from the Northern areas of the province, and are admitted to the Aberhart, with the result that this institution operates to capacity while the Baker Sanatorium in Calgary has vacant beds. The bed occupancy at the latter institution was considerably higher during the last quarter of the year. The average stay in hospital was 222.1 days (1958 - 254 days). The main reason for empty sanatorium beds is the shortened stay in hospital, rather than a decrease in admissions. Number of admissions 1959 - 736; 1958 - 691; 1957 - 718; 1956 - 693. Then too, because of the efficacy of the anti-microbial drugs and resultant advances in surgery, there is practically no back log of long-term chronics who remained in the sanatorium for several years.

Regardless of the expanding case-finding program, the percentage of patients who have positive sputum on admission has remained about the same for the last three years, but lower than any year previous to 1957. The number of cases with far advanced disease is also tending to decline.

It is the concensus that some slight progress is being made in reducing the menace of tuberculosis to the individual and to the province. In the light of our increasing population it may be that all sanatorium beds will again be required, unless a definite decline in morbidity soon occurs.

MEDICAL AND NURSING TRAINING

The Aberhart Memorial Sanatorium is associated with the University Medical Faculty. Lectures and clinics are given the third-year medical students by Sanatorium physicians during the University term. Fourth-year medical students are taken on the

Sanatoria staffs at Calgary and Edmonton during the summer vacation. It is felt that the courses are well worthwhile, considering the amount of time allotted in the curriculum. The Sanatoria are accredited for graduate training.

The Nursing Training Schools of the province are affiliated with the Sanatoria for short courses for nurses in their second or third years. These classes are under the supervision of an instructor with the medical and nursing staffs participating in the teaching. The students not only learn something of the nursing of infectious disease but also receive some groundwork in tuberculosis. They also have the opportunity to know the patient as a human being as well as a case.

PATIENT EDUCATION AND REHABILITATION

Instruction in all school grades is given by well-qualified teaching staff. The curriculum of the Department of Education is followed so that children are able to keep up with their classes and on discharge return to their respective schools with their same age groups.

Very active occupational therapy departments are also operated. This training is looked upon as educational rather than diversional and the patient's aptitude is judged along with scholastic attainment when rehabilitation is being considered.

ACKNOWLEDGEMENTS

A very heartfelt vote of thanks is extended to the Medical Superintendents and staff of the Sanatoria for a job well done during nineteen hundred and fifty-nine.

The statistical summary which follows sets forth the accomplishments of the Diagnostic Services of the Division and Treatment Services of the Baker Memorial Sanatorium in Calgary and the Aberhart Memorial Sanatorium in Edmonton.

DIAGNOSTIC CLINICS

1. STATIONARY CLINICS

	Number Sessions	New Cases of Tub. Active		Total Examinations
		Pul.	Non-Pul.	
Baker Memorial Sanatorium	98	23	2	4,520
Aberhart Memorial Sanatorium	101	41	10	4,881
Calgary	14	....	....	65
Camrose	5	....	....	100
Drumheller	12	2	....	256
Lethbridge	12	2	....	1,067
Medicine Hat	12	5	....	760
Red Deer	11	1	....	282
Vegreville	4	....	....	57
TOTAL	269	74	12	11,988

OTHER CLINICS

*Miscellaneous	84	1	10,596
Total all Clinics	158	13	22,584

In addition to the above 171 newly discovered cases of active tuberculosis there was also discovered 500 cases of inactive tuberculosis.

DEPARTMENT OF PUBLIC HEALTH

2. Tuberculin Testing and X-ray Surveys (Conducted by Public Health Nurses, Teachers, Business Firms, Hospitals etc.)		No. Tbn. Tested	No. X-rayed
School Board, Rural		66	255
School Board, Edmonton		96	153
Nursing Aide Trainees		469	1,076
Food Handlers		32	379
Health Unit		135	24
University Students		26	339
Red Cross Blood Transfusion Service		10	11
Provincial Laboratory		33	79
Alberta School for Deaf		244	51
Good Samaritan Hospital, Edmonton		105	28
Canada Cement Plant, Exshaw .....		.....	.....
Travelling Nurse		1,188	.....
School Survey (see section 2b)		42,983	2,146
TOTAL		45,387	4,541

Total number given service through this program is 46,275, i.e. number tuberculin tested plus number x-rayed but not tested and minus number known to be x-rayed on Mass Survey.

- 2a. Number out-patient injections (Aberhart Memorial Sanatorium and Baker Memorial Sanatorium)—Streptomycin—1,501 Viomycin—13
*Films sent in from various points and paid for by the Tuberculosis Division.

SCHOOL SKIN TESTING SURVEY									
2b.	No. Tested		No. Reactors		No. X-rayed		New Cases Tub.		
	School	Contacts	School	Contacts	School	Contacts	Active	Inactive	
Alberta East					(12)				
Central H.U.							1		
Athabasca Health Unit...	1,110	140	156	48	105(48)	105(81)	5	3	
Barons Eureka H.U.	1,406	114	56	46	33(11)	31(14)	.....	2	
Breton Municipal Nurse	157	.....	20	.....	3	.....	.....	.....
Calgary	2,180	.....	214	53	*237	2(2)	.....	.....
Chinook H.U.	1,954	117	98	.....	105(7)	.....	.....	.....
Drumheller H.U. ....	.....	.....	.....	.....	31(31)	18(18)	1	.....
Edson H.U.	3,774	281	144	74	103(9)	94(45)	3	5	
Foothills H.U.	4,577	.....	33	.....	22(9)	12(10)	.....	.....
Jasper Place H.U.	105	16	7	1	1(1)	.....	.....	.....
Leduc Strathcona H.U.	538	49	12	11	31(25)	15(11)	.....	1	
Lethbridge H.U. ....	.....	.....	.....	.....	.....	1(1)	.....	1	
Medicine Hat H.U.	5,834	149	48	38	28(3)	13(1)	.....	.....
Minburn-Vermilion H.U.	1,161	194	78	73	55(21)	78(25)	.....	1	
Mount-View H.U. ....	.....	.....	.....	.....	30(30)	64(64)	.....	.....
North-Eastern	2,232	284	135	76	139(30)	95(49)	.....	4	
Alberta H.U.	4,116	148	89	70	16	19	.....	.....
Peace River H.U. ....	.....	.....	.....	.....	.....	.....	.....	.....
Red Deer H.U.	1,397	89	87	27	69(44)	55(52)	3	2	
Stony Plain-Lac Ste.	1,664	49	38	9	93(71)	89(85)	.....	9	
Anne H.U.	2,307	64	38	28	14(4)	11(5)	.....	1	
Sturgeon H.U. ....	.....	.....	.....	.....	13(13)	9(9)	.....	.....
Vegreville H.U.	1,650	22	20	13	15(13)	6(6)	.....	.....
Wetoka H.U.	3,460	421	124	120	73(16)	67(10)	.....	4	
Youngstown Municipal	939	151	52	41	70(41)	59(45)	.....	.....
Nurse .....	.....	.....	.....	.....	3(3)	.....	.....	.....
School of Agriculture, Vermilion	134	.....	20	.....	14	.....	.....	.....
TOTAL	40,695	2,288	1,472	728	1,303(442)	843(533)	13	38	

Figures in brackets indicate number of persons x-rayed under this program whose Tuberculin Test results have not yet been reported to the Division.

*234 of these x-rayed at the City Hall Unit and are included in count of Mass Surveys.

X-RAY SURVEYS

Surveys at 168 rural points	139,703
Industrial City Hall, Calgary	1,081
Industrial Mobile Unit, Calgary	8,738
School Survey, City Hall, Calgary	234
City Hall, Calgary (general public)	7,859
Nursing Aide Trainees, City Hall, Calgary	466
City Hall, Edmonton (general public)	9,934
Industrial Mobile Unit, Edmonton	5,685
Calgary Gaol	669
Fort Saskatchewan Gaol	2,707
Lethbridge Gaol	1,218
Total	178,294

SUMMARY MOBILE UNIT SURVEYS

Number X-rayed	178,294	
Probable Tuberculosis Active	67	(33 previously discovered)
Probable Tuberculosis Inactive	877	(620 previously discovered)
Further Examination Requested	1,340	
Non-Tuberculous Chest Conditions	1,606	
Undiagnosed (including 350 spoiled films)	355	
Pleurisy Active	1	
Pleurisy Inactive	144	(43 previously discovered)
No Disease	173,904	

4.—SUMMARY CLINICS AND SURVEYS

	Total Number Examinations
Stationary Clinics	11,988
Other Clinics	10,596
Surveys (excluding Mobile Unit and School Surveys)	3,060
School Surveys	42,749
Mobile Unit	178,294
Department of Indian and Northern Health Services	15,416
Hospital Admission Program	13,221
TOTAL	275,324

5.—SOURCES OF DISCOVERY NEW CASES OF TUBERCULOSIS

	1958	%	1959	%
Clinics	828	60.9	671	57.9
Referred for admission by family doctor	228	16.8	273	23.6
Surveys (refer No. 2)	1	.07	3	.3
Referred by Department Veterans Affairs or National Defence	19	1.4	17	1.5
Provincial and Hospital Laboratories....	15	1.1	7	.6
Hospital Admission Program	87	6.4	61	5.2
Other sources	92	6.8	23	1.9
Indian and Northern Health Services (includes 87 Treaty Indians 1959)..	89	6.6	103	8.9
TOTAL	1,359		1,158	

The following table sets forth the sources of discovery giving credit to programs actually referring the cases to the Tuberculosis Clinics and for admission to Sanatorium beds for the establishing of diagnoses, i.e. the various programs originally responsible for the 671 cases being referred to Tuberculosis Clinics are credited with the discovery of the case in the following breakdown.

	1958	%	1959	%
Family Doctor	361(218)	26.6	328(227)	28.3
Mass Surveys	215(44)	15.8	171(38)	14.8
Contacts	143(90)	10.5	116(85)	10
Indian & Northern Health Services	88(76)	6.5	109(98)	9.4
X-San Other Provinces or Countries	91(8)	6.7	97(16)	8.4
Hospital Admission	102(7)	7.5	77(9)	6.6
Department National Health and Welfare	80(3)	5.9	75(3)	6.5
School Surveys	72(24)	5.3	55(17)	4.8
City Hall Units	30(12)	2.2	30(13)	2.6
Other Sources	90(13)	6.6	27(17)	2.4
Department of Veterans Affairs and National Defence	27(5)	1.9	19(7)	1.6
Travelling Nurse			16(7)	1.4
Food Handlers	19	1.4	13(3)	1.1
Gaol	16(7)	1.2	13(6)	1.1
Provincial & Hospital Laboratories	16(16)	1.2	5(5)	.4
Surveys (refer No. 2)	6	.4	5	.4
Beet Workers			2(2)	.2
Hungarian Refugees	3(2)	.2		
TOTAL	1,359(525)		1,158(553)	

Figures in brackets indicate number of active cases.

6.—CLASSIFICATION OF NEW CASES OF ACTIVE AND INACTIVE TUBERCULOSIS

Minimal	570	
Moderately Advanced	192	
Far Advanced	66	
Primary	120	
Tuberculous pleurisy with effusion and evidence of previous pleurisy....	90	
Non-pulmonary tuberculosis	115	
Miliary	5	
TOTAL	1,158	
Number newly discovered cases active tuberculosis	553	
Number newly discovered cases inactive tuberculosis	605	
Number of cases reactivated	48	
Number non-residents diagnosed tuberculosis (includes 48 immigrants)	62	
Number known contacts of newly discovered cases	2,785	
Number known contacts checked	1,960	70.3%

OLD TUBERCULIN SENT 1959

	BMS	AMS
Dilution No. 2	64	96
Dilution No. 3	509	1,048
Dilution No. 4	24	.....
	<u>597</u>	<u>1,144</u>

In addition to the above, Patch Tests were sent to Health Units, Municipal Nurses and Family Doctors upon request. The Tuberculosis Division recommends however that the Mantoux Test be used as often as possible in preference to the Patch Test.

B.C.G. VACCINATIONS 1959

1. Nurses (a) Graduates	2
(b) Students	315
(c) Other Nursing Personnel	355
2. Other Hospital Personnel	35
3. Medical Students	3
4. Indians and Eskimos, adults and children (Indian and Northern Health Services)	1,442
5. All Other Persons	
(a) Newborn contacts	13
(b) Adults and children, contacts	34
(c) Newborn, not contacts .....	.....
(d) Adults and children, not contacts	7,767
TOTAL	9,966

INSTITUTIONAL REPORT

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium
Number of patients under treatment January 1, 1959..	143	252
Number admitted during 1959	288	451
Number transferred in during 1959	1	4
Number treated during 1959	432	707
Number discharged or died during 1959	282	454
Number transferred out during 1959	4	1
Number discharged, died or transferred during 1959....	286	455
Number of patients under treatment December 31, 1959	146	252
Number of patients under treatment January 1, 1959	395	
Number of admissions during 1959	739	
Number of patients treated in Alberta during 1959 ...	1134	

DIAGNOSIS OF PATIENT ADMISSIONS

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium	
Non-tuberculosis .....	....	23	
For diagnosis	63	29	
Pleural effusion	10	15	
Tuberculosis inactive	22	2	
Primary tuberculosis	31	59	
Non-Pulmonary Tuberculosis:			
Genito-urinary	9	18	
Pelvic	2	16	
Bone	6	18	
Adenitis	6	23	
Meningitis .....	....	9	
Abscess .....	....	4	
Erythema Nodosum	1	....
Pericarditis .....	....	1	
Empyema .....	....	1	
Synovitis .....	....	1	
Pulmonary Tuberculosis Active:			
Minimal	23	64	
Moderately Advanced	59	111	
Far Advanced	53	55	
Miliary	3	1	
Silico-tuberculosis .....	....	1	
TOTAL	288	451	
Number with positive sputum on admission	72	99	
Number with negative sputum on admission	216	352	
Number negative on admission, positive later	1	4	
Number of readmissions during 1959	61	108	
Number both admitted and readmitted during 1959	6	13	
Number left against advice during 1959	8	47	
Number of patient days	54,200	83,958	
Number of patient days in other provinces under reciprocal agreement			1,835
Total number of patient days including those in other provinces under reciprocal agreement			139,993
Number of patients in other provinces January 1, 1959			6
Number of admissions in other provinces under reciprocal agreement			6
Number of institutional patient days provided for non-residents in Alberta under reciprocal agreement			3,346
Number of patients in Alberta Sanatoria, non-residents under reciprocal agreement, January 1, 1959			11
Number of admissions, non-residents, under reciprocal agreement			9

OPERATING ROOM REPORT

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium	Total
Aspiration of chest	135	57	192
Bronchogram	34	36	70
Bronchoscopy	43	43	86
Casts	5	26	31
Implantation D.O.C.A.	5	15	20
Lobectomy	25	15	40
Lobectomy and removal segment from lower lobe .....	....	1	1
Lobectomy and decortication .....	....	1	1
Lobectomy, wedge resection, decortication .....	....	1	1
Nephrectomy	1	1	2
Pneumonectomy	1	7	8
Segmental resection	2	7	9
Thoracoplasty	31	11	42
Thoracotomy	1	....	1
Orthopaedic operations	10	7	17
Miscellaneous procedures and examinations	480	51	531
TOTAL	773	279	1052

DEPARTMENT OF PUBLIC HEALTH

SUMMARY PNEUMOTHORAX CASES

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium	Outside Points	Total
Under treatment January 1, 1959	2	....	....	2
Number of new cases during 1959 .....	....	....	....	....
Number cases under treatment on admission	2	....	....	2
Number cases discontinued	1	....	....	1
Number of cases transferred out of Alberta .....	....	....	....	....
Number transferred to other sections of Division	1	....	....	1
Number under treatment December 31, 1959	1	....	....	1
Unsuccessfully attempted .....	....	....	....	....
Refills:				
Resident	6	....	....	6
Out-patient	12	....	....	12
	18	....	....	18

SUMMARY PNEUMOPERITONEUM CASES

Under treatment January 1, 1959	3	9	1	13
Number of new cases during 1959 .....	....	2	....	2
Number of cases under treatment on admission .....	....	....	1	1
Number discontinued	3	11	2	16
Number transferred out of province	3	5	....	8
Number transferred to other sections of Division .....	....	1	....	1
	3	6	....	9
Number under treatment December 31, 1959 .....	....	5	2	7
Number of refills:				
Resident	31	112	....	143
Out-patient	1	147	54	202
	32	259	54	345

Patients received pneumoperitoneum refills at the following outside points:
Elk Point
Lac La Biche

NUMBER DISCHARGED ON DRUGS 1959

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium	Total
Isoniazid and Para-amino Salicylic Acid	127	237	364
Isoniazid and Streptomycin .....	....	22	22
Streptomycin and Para-amino Salicylic Acid	3	2	5
Isoniazid, Streptomycin and Para-amino Salicylic Acid	7	10	17
Isoniazid and Seromycin B 6 .....	....	1	1
Streptomycin and Seromycin .....	....	2	2
Seromycin and Viomycin .....	....	1	1
Isoniazid and Largactyl .....	....	1	1
Isoniazid	1	12	13
Isoniazid, Streptomycin and Aristocort .....	....	1	1
TOTAL	138	289	427

LABORATORY REPORT

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium	Total
SPUTUM EXAMINATIONS:			
Positive	503	444	947
Negative	2,904	2,534	5,438
TOTAL	3,407	2,978	6,385
URINE EXAMINATIONS	6,716	5,908	12,624
BLOOD EXAMINATIONS:			
Blood Counts	3,844	4,546	8,390
Sedimentation Rates	2,412	3,075	5,487
Blood Sugars	156	499	655
TOTAL	6,412	8,120	14,532
MISCELLANEOUS:			
Pleural Fluid	15	2	17
Spinal Fluid	49	135	184
Gastric Analysis	20	16	36
Culture	2,182	1,582	3,764
Guinea Pig Inoculation	510	1,202	1,712
Other	1,963	982	2,945
TOTAL	4,739	3,919	8,658
WASSERMAN REPORT:			
Positive	7	13	20
Negative	249	353	602
TOTAL	256	366	622
Basal Metabolism Rate .....	.....	19	19
Cardiograph .....	.....	117	117

DENTAL REPORT

Number of patients (individuals)	289	683	972
Number of treatments	40	520	560
Number of prophylactic treatments	110	15	125
Number of fillings	26	246	272
Number of extractions	109	258	367
Number of new dentures and repairs	35	59	94

X-RAY DEPARTMENT REPORT

	Baker Memorial Sanatorium		Aberhart Memorial Sanatorium		Total		Grand Total
	In Pts.	Out Pts.	In Pts.	Out Pts.	In Pts.	Out Pts.	
RADIOGRAPHS MADE:							
Chest—Full Sized	1,304	970	1,980	2,313	3,284	3,283	6,567
Miniature	146	4,283	61	4,300	207	8,583	8,790
Ribs	2	.....	2	2	4	2	6
Pelvis	14	16	28	16	42	32	74
Extremities	52	105	64	20	116	125	241
Spines—Cervical	2	6	4	3	6	9	15
Dorsal	30	52	32	22	62	74	136
Lumbar	50	58	27	13	77	71	148
Skull	7	2	2	.....	9	2	11
Sinus	4	1	7	.....	11	1	12
F. P. Abdomen	3	3	5	2	8	5	13
G. B. Series .....	.....	.....	3	.....	3	.....	3
G. I. Series	8	.....	3	.....	11	.....	11
Barium Enema	1	.....	2	.....	3	.....	3
Intravenous Pyelogram	27	.....	50	15	77	15	92
Retrograde Pyelogram	10	.....	11	2	21	2	23
Sinogram	2	.....	23	3	25	3	28
Bronchogram	33	.....	41	5	74	5	79
Ordographs	79	1	85	10	164	11	175
Dental	4	.....	73	.....	77	.....	77
K. U. B.	3	1	.....	.....	3	1	4
Cystogram	1	.....	1	.....	2	.....	2
Clavicle	1	1	.....	.....	1	1	2
Sacro-iliac	1	.....	.....	.....	1	.....	1
Jaw .....	.....	1	.....	.....	.....	1	1
Shoulder .....	.....	5	.....	.....	.....	5	5
Nasal Bones .....	.....	.....	.....	1	.....	1	1
TOTAL	1,784	5,505	2,504	6,727	4,288	12,232	16,520
Fluoroscopic Examinations	220	15	109	151	329	166	495
Films sent in for interpretation .....	.....	10,575	.....	17,726	.....	.....	28,301
Basal Metabolism Rate .....	.....	6	.....	.....	.....	.....	6
Cardiograph .....	.....	19	.....	.....	.....	.....	19

DEPARTMENT OF PUBLIC HEALTH

CLASSIFICATION OF DISCHARGED PATIENTS

	On ad- mission	31 days or less	Over 31 days	On discharge			
				In.	Al.	Au.	D.
1. For diagnosis	119	83	36	3	4	1	8
2. Primary tuberculosis	97	7	90	29	68	....	....
3. Reinfection type pulmonary tuberculosis clinical:							
Minimal	85	18	67	39	45	....	1
Moderately advanced	*76	11	65	27	43	2	2
Far advanced	*29	10	19	15	6	....	6
4. Reinfection type pulmonary tuberculosis positive:							
Minimal	25	....	25	4	20	1	....
Moderately advanced	81	2	79	21	56	2	2
Far advanced	89	4	85	19	45	6	19
Miliary	5	1	4	1	3	....	1
5. Tuberculous pleurisy	18	1	17	6	12	....	....
6. Non-pulmonary tuberculosis:							
Meningitis	13	4	9	5	6	....	2
Genito-urinary	28	6	22	6	21	1	....
Adenitis	26	6	20	2	21	3	....
Pelvic	19	3	16	2	17	....	....
Bone	18	3	15	8	8	2	....
Abscess	6	1	5	1	5	....	....
Tuberculous	1	....	1	....	1	....	....
Addison's disease	1	1	....	....	1	....	....
Total active tuberculosis	617	78	539	185	378	17	33
Total treated .....	....	....	575	151	358	8	26
Total untreated .....	....	161	....	37	22	8	15
Grand total	736	....	....	188	380	16	41

EXPLANATION OF ABBREVIATIONS AND TERMS USED

The standard classification is that of the National Tuberculosis Association. Minimal, Moderately Advanced and Far Advanced refer to anatomical extent of disease.

In.	Inactive
Al.	Active improved
Au.	Active unimproved
D.	Died

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

*2 cases diagnosed moderately advanced tuberculosis on admission and 2 cases diagnosed far advanced tuberculosis on admission were found to have non-tuberculous disease. This accounts for the apparent discrepancy in the above table.

CLASSIFICATION ON ADMISSION OF 736 DISCHARGED PATIENTS

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium	Total
For diagnosis	69	50	119
Primary tuberculosis	34	63	97
Pulmonary tuberculosis	148	242	390
Tuberculous pleurisy	6	12	18
Non-pulmonary tuberculosis	25	87	112
TOTAL	282	454	736

CLASSIFICATION ON DISCHARGE OF TREATED CASES OF ACTIVE TUBERCULOSIS AND TUBERCULOUS PLEURISY

	On admission Number	On discharge		Died
		Improved	Unimproved	
Minimal	94	93	....	1
Moderately advanced	143	*139	....	2
Far advanced	102	*77	6	17
Primary	91	91	....	....
Miliary	4	4	....	....
Non-pulmonary tuberculosis	88	85	1	2
Tuberculous pleurisy	17	17	....	....
TOTAL	539	506	7	22

*2 cases diagnosed moderately advanced tuberculosis on admission and 2 cases diagnosed far advanced tuberculosis on admission were found to have non-tuberculous disease. This accounts for the apparent discrepancy in the above table.

RESIDENCE OF DISCHARGED PATIENTS

SUMMARY

	Baker Memorial Sanatorium	Aberhart Memorial Sanatorium	Total
Cities	147	150	297
Towns	29	95	124
Villages	9	1	10
Enlarged Municipal Districts	51	84	135
Local Improvement Districts	26	113	139
Special Areas Board	3	1	4
Non Resident	7	7	14
Counties	10	3	13
TOTAL	282	454	736

SEX OF DISCHARGED PATIENTS:

Male	168	239	407
Female	114	215	329
TOTAL	282	454	736

AGE ON ADMISSION

From 1 to 9 years	42	70	112
From 10 to 14 years	9	23	32
From 15 to 19 years	9	45	54
From 20 to 29 years	38	86	124
From 30 to 39 years	51	71	122
From 40 to 49 years	41	54	95
From 50 to 59 years	40	53	93
From 60 to 69 years	28	28	56
70 and over	24	24	48
TOTAL	282	454	736

SOCIAL STATUS OF DISCHARGED PATIENTS

Single	108	210	318
Married	147	211	358
Divorced	2	1	3
Separated	4	10	14
Widowed	21	22	43
TOTAL	282	454	736

RESIDENCE IN ALBERTA

Born in Alberta	100	277	377
1 year or less	19	12	31
1 - 5 years	35	27	62
6 - 9 years	19	9	28
10 to 14 years	8	19	27
15 - 19 years	18	7	25
20 to 29 years	13	15	28
30 or more years	10	88	158
TOTAL	282	454	736

RACIAL ORIGIN

Metis	23	152	175
Negro	1	—	1
Chinese	7	4	11
Indian	1	4	5
Japanese	4	1	5
TOTAL	36	161	197

LENGTH OF STAY IN SANATORIUM OF DISCHARGED PATIENTS

DEATHS:

Number in Sanatorium under 31 days	10	5	15
Number of patient days	106	70	176
Average patient days	10.6	14	11.7
Number in Sanatorium 31 days or more	15	11	26
Number of patient days	16,345	8,150	24,495
Average patient days	1,089.7	740.9	942.1

DISCHARGES:

Number in Sanatorium under 31 days	92	54	146
Number of patient days	1,135	980	2,115
Average number patient days	12.3	18.1	14.5
Number in Sanatorium 31 or more days	165	384	549
Number of patient days	49,897	86,764	136,661
Average number of patient days	302.4	225.9	248.9
Total number deaths and discharges	282	454	736
Total number patient days	67,483	95,964	163,447
Average number patient days	239.2	211.4	222.1

DIVISION OF MENTAL HEALTH

R. R. MACLEAN, M.D., *Cert. in Neurol. and Psychiatry,*
F.A.P.A., *Cert. M.H.A. (A.P.A.), Director*

ADMINISTRATION

The Office of the Director coordinated the preventive and treatment services of the entire Division of Mental Health, and encouraged improvement in the various programs and enterprises. Progress was made through further increases in the numbers of personnel in the Institutions and Guidance Clinics.

The advantages of advanced training were stressed and many staff members took advantage of Bursaries offered by the Department of Public Health.

The facilities for the treatment and care of the mentally ill and the mentally deficient were further improved. The value and need for active rehabilitation services were emphasized.

The respective individual reports of the various branches of the Mental Health Services reflect the aims and objects of the work of the Division as a whole.

PREVENTIVE SERVICES

Provincial Guidance Clinics

The total work load of the Clinics increased by over 25% compared with the previous year. The Clinics reported continued success in their treatment programs.

Teams from the various full-time Clinic centres visited some 35 points outside their immediate areas.

The bulk of the cases seen and treated were in the categories of emotionally disturbed and otherwise maladjusted children: about 38% of the new cases seen were mentally retarded. From the Clinic reports it would again appear that some 30 severely emotionally disturbed children were being treated at any particular time.

Much work was done in the field of public education by the staff members of the various Clinics. Individuals or teams participated in panel discussions, work shops, institutes, and radio and television appearances.

The Clinics continued to assist in follow-up work with the patients discharged from the Mental Hospitals. Services were also provided to the Cerebral Palsy and other Health Department Clinics.

Separate reports from the various Clinics follow.

PROVINCIAL GUIDANCE CLINICS

PROVINCIAL GUIDANCE CLINIC, EDMONTON

A. R. SCHRAG, M.D., *Spec. Psych., Clinic Psychiatrist*

During 1959 there were numerous staff changes. Dr. A. R. Schrag was granted an Educational Leave-of-Absence from January to March, inclusive, for studies in residential treatment of emotionally disturbed children at Lafayette Clinic, Detroit, Michigan. Miss J. L. Dixon, Senior Psychologist, was granted an Educational Leave-of-Absence in September to pursue studies leading to her Doctorate Degree in Psychology at Wayne State University, Detroit, Michigan. The two Assistant Psychiatrists, who had been working part-time, left the service in July and September. It was not possible to replace them. Two staff members who had been away on a Federal Health Grant returned to the service. The staff positions were increased to six Social Workers, six Psychologists, two Assistant Psychiatrists, and four Secretarial Assistants. However, because the space was not available for expansion, one Social Worker and one Secretarial Assistant were not employed.

The in-service training program was stepped up because of the number of untrained persons it was necessary to take on the staff to round out the complement.

The demand for Clinic services, both in the City of Edmonton and in rural areas, continued.

New cases examined numbered 1,137, which was 40 cases less than last year. 422 re-registered cases were seen which was an increase of 31 cases over the preceding year. The total work load was 13,745, an increase of 210 hours, representing increased time given to staff training and more intensive work being done with a large number of treatment cases.

Age and Sex Distribution—The ratio of male to female cases was 1.73 to 1.00. Of all the new cases 95.9 percent were under the age of 20 years, 41.4 percent being in the five to nine year age group, 31.05 percent in the ten to fourteen year age group.

Classification of Types of New Cases—There was an increase in the number of persons diagnosed as Intellectual Inadequacy, 22.16 percent of the total new cases being in that category. The various classifications remain essentially the same as in past years.

Educational Activity—Medical Students and Students in the Bachelor of Science Nursing Course, as well as Student Nurses from the local hospitals, continued to visit the Clinic. Talks and addresses to public organizations numbered 39, which was an increase over the past year.

City of Edmonton—The total number of new cases examined amounted to 708 which was an increase of 33. Re-registered cases were 325, which was an increase of 58. The total work load was 12,074, an increase of 2,409.

Edmonton Rural—69 new cases and 12 re-registered cases were examined, for a total work load of 176 periods, a decrease of 14 periods.

Athabasca-Lac La Biche—34 new cases and 10 re-registered cases were seen, for a work load of 151 periods. An extra Clinic was given to Athabasca because of the back-log of cases.

Barrhead-Westlock-Thorhild—25 new cases and six re-registered cases were seen for a work load of 93 periods. One trip to Westlock was cancelled in February.

Camrose-Killam — Two trips were made in 1959. New cases numbered 28 and re-registered cases three, for a total work load of 121 periods.

Edson — 16 new cases and four re-registered cases were seen for a total work load of 54 periods. There was pressure from this area for increased services.

Lamont-Smoky Lake—No clinics were held in Smoky Lake, the occasional case from this area being examined in the City of Edmonton. In Lamont 16 new cases and two re-registered cases were seen for a total work load of 57 periods.

Peace River-Grande Prairie—One trip was made into the Peace River-Grande Prairie area in the spring. The fall trip was cancelled. 79 new cases and 21 re-registered cases were seen for a total work load of 338 periods.

Bonnyville-St. Paul-Two Hills—Two trips were made into this area and the Clinic at Two Hills was omitted in the fall and this time given to the St. Paul area for the examination of cases for a proposed Opportunity Class at Elk Point. 58 new cases and 10 re-registered cases were examined for a total work load of 215 periods.

Vegreville-Vermilion-Wainwright — 78 new cases and 26 re-registered cases were seen for a total work load of 384 periods. One trip was cancelled in January.

Wetaskiwin—22 new cases and three re-registered cases were examined for a total work load of 82 periods. One trip was cancelled in January.

PROVINCIAL GUIDANCE CLINIC, PONOKA

F. J. EDWARDS, M.D.C.M., R.C.P.S. (C), *Clinic Psychiatrist*

During 1959, Guidance Clinics were again conducted by members of the staff of the Provincial Mental Hospital, Ponoka, on a part-time basis, the work being carried out by various Psychiatrists, Social Workers and Psychologists.

A total of 27 individual cases was seen at the Provincial Mental Hospital, while one Clinic was held in the Town of Ponoka, at which seven cases were seen. Sixteen of these cases were under the age of 18.

Stettler and Castor—Two Clinics were held in Stettler and one in Castor. A total of 28 cases was seen at these Clinics, 27 of whom were under the age of 18.

The Clinics conducted from this centre usually consisted of one day spent in each town, during which time an average of six to eight persons were examined. As in previous years, cases were referred by the School Principals or Superintendents, or by the Public Health Nurses.

Those examined were persons who presented some psychiatric, emotional, or educational problem which was causing difficulty in adjustment in the home, school or community. In each case efforts were made to evaluate the situation, and to come to some conclusion as to its cause. Advice was offered as to ways and means of dealing with the presenting situation, which often involved an attempt at environmental manipulation. Where local practitioners were involved advice was given as required. In cases where epilepsy was considered in the differential diagnosis, arrangements were made for electroencephalography at the Provincial Mental Hospital.

Facilities for the work varied from place to place, but generally use was made of accommodation temporarily vacated by School or Health Unit personnel.

PROVINCIAL GUIDANCE CLINIC, RED DEER

L. J. LE VANN, L.R.C.P., Edin., L.R.C.S., Edin.,
L.R.F.P.S., Glas., *Clinic Psychiatrist*

There was a relative increase in clinic hours in 1959. A total of 535 clinic hours were utilized.

The Rocky Mountain House Clinic was visited on nine occasions and 29 cases were seen there.

The addition of a psychologist and trained social worker to the Clinic team proved to be extremely valuable and once again school referrals began to increase towards the latter portion of the year.

Referrals came from school authorities and private physicians. To maintain the good relationship, in every instance, it was requested that patients be referred by their own doctor or school or religious authority. This proved very successful inasmuch as it was possible to enlist the help of the referring agency wherever required.

The Clinic hours were utilized in the following way:

Psychiatrist	320 hours
Psychologist	74 hours
Social Worker	73 hours
Medical Officer	68 hours

In addition to these interviews, 56 psychometric examinations were done.

Work at the Municipal Hospital—Electric shock therapy was carried out on 25 occasions.

Extra Clinic Services—This year, as in previous years, the Guidance Clinic Staff gave 14 talks during the year.

PROVINCIAL GUIDANCE CLINIC, CALGARY

N. C. HORNE, M.B., M.R.C.S., D.P.M., *Clinic Psychiatrist*

In 1959 this Clinic was under the direction of a full-time Psychiatrist for the first time in three years. During the year the staff establishment was increased to two Psychiatrists, four Psychologists, four Psychiatric Social Workers and three Clerical staff members. Unfortunately, because of the scarcity of qualified applicants it was not possible to fill all the vacancies.

The resignation of the Senior Psychologist, which became effective in August, was greatly regretted, this valuable staff member having been in charge of the Clinic during the time when no full-time Psychiatrist was available.

The Clinic quarters were expanded by the addition of two offices and a second play therapy room, giving a total of eight offices and two play rooms.

Drumheller—One Clinic was held in Drumheller, none other being requested. Five new cases were seen at this centre for a total work-load of 22.

Rural Area Surrounding Calgary—Many clients were seen from the rural areas, some travelling nearly 200 miles to attend the Clinic in Calgary.

Calgary—A total of 415 new cases was examined—(246 males and 169 females), which represented an increase of 134 over the previous year. Re-registered cases amounted to 287, an increase of 64 over the number seen in 1958.

The work-load almost doubled in comparison to the previous year, with a total of 7,258 periods. (In 1958 the work-load amounted to 3,844 periods.) The work-load breaks down as follows:

Psychiatrist	2,392	
Psychologists	2,111	—(Plus periods devoted to the
Social Workers....	2,755	Lethbridge Clinic.)

Of the new cases examined, 81.4 percent were under the age of 19 years, with 37.1 percent of these being between the ages of five to nine years.

Schools referred 16 percent of the cases seen, medical practitioners 14 percent, self or family 26 percent, and Child Welfare Agencies (Provincial and Municipal) accounted for 15 percent.

A total of 131 mental defectives was examined.

Clinic therapy was recommended in 171 cases, of which 48 were treated specially with ataractics under medical supervision.

PROVINCIAL GUIDANCE CLINIC, LETHBRIDGE

J. BOWER, M.D., *Clinic Psychiatrist*

This Clinic functioned with the services of a full-time Psychiatrist, Social Worker, and Receptionist, with extra assistance being provided during part of the year through the services of a graduate student in Psychology and a senior student in Sociology. Periodic assistance was also obtained through the courtesy of the

Provincial Guidance Clinic at Calgary, which loaned a Psychologist to the Lethbridge Clinic on three occasions, for a work-load of 55 periods.

A total of 296 new cases was examined, this being an increase of 25 over the previous year. Re-registered cases totalled 138, an increase of 15. Interviews given by the Psychiatrist, Psychologists and Social Workers numbered 2,537, which represented an increase of 858 over the figures for 1958.

The following table shows the area distribution of the cases seen by the Clinic:

Area	New Cases	Re-Registration
Lethbridge	269	114
Medicine Hat	19	23
Crow's Nest Pass	7	0
Fort Macleod	1	1
TOTALS	296	138

Provincial Gaol—A total of 40 new cases was seen at the Provincial Gaol, and a large number of previously registered cases was seen on one or more occasions for re-evaluation or psychotherapy.

Work with Other Institutions—A consultant service was provided at the Galt Rehabilitation Centre and at the Provincial Gaol. The Clinic spent one day per month at the School for Retarded Children, assisting the staff in the handling of problems. Regular attendance was provided at the Provincial Auxiliary Mental Hospital, Raymond, and the Provincial Auxiliary Mental Hospital, Claresholm. Clinical demonstrations and lectures were conducted for student nurses.

Educational Activities—Many speaking engagements on Mental Health topics were carried out by Clinic staff, throughout the southern part of the Province. Talks were also given on radio and television. Good relations were maintained with the medical profession and clergy, many of whom, as well as other professional groups, availed themselves of the privilege of using the Clinic library.

TABLE 1
SUMMARY OF NEW AND RE-REGISTERED CASES EXAMINED, TREATMENT PERIODS, INTERVIEWS, PSYCHOLOGICAL EXAMINATIONS, AND TOTAL WORK LOAD OF CLINICS

CLINIC DISTRICTS	NEW CASES				RE-REGISTERED CASES				DISTRIBUTION OF WORK				TOTAL WORK LOAD
	M	F	T	T	M	F	T	T	Pat.	Col.	Gen.	P. E.	
Edmonton and District	727	410	1137	261	161	422	3659	4356	4210	1520	13,745		
Calgary and District	246	169	415	191	96	287	1802	3075	1818	563	7258		
Lethbridge and District	181	115	296	82	56	138	875	1350	129	183	2537		
Ponoka and Red Deer District	79	70	149	31	21	52	332	267	15	90	704		
TOTALS	1,233	764	1,997	565	334	899	6668	9048	6172	2356	24,244		

Notes: Total new cases examined since the Clinics opened in 1929 is now 24,800.

Edmonton and District includes all the area served from Wetaskiwin north. It includes Clinics held in the Peace River-Grande Prairie area and such points as Athabasca, Barrhead, Bonnyville, Horden, Lac La Biche, St. Paul, Two Hills, Vegreville, Vermilion, Wainwright, Westlock and Wetaskiwin.

Calgary and District includes the area served south of Didsbury, excluding the Lethbridge area. It includes Clinics held at such points as Didsbury, Drumheller, Cochrane, High River and Strathmore.

Lethbridge and District includes the area in the far south of the Province, with Clinics held at such points as Medicine Hat, Fort Macleod, Claresholm, Cardston and the Crow's Nest Pass.

Ponoka and Red Deer District includes the area from Didsbury on the south to Wetaskiwin on the north. It includes Clinics at such points as Castor, Ponoka, Red Deer, Rimbey, Rocky Mountain House and Stettler.

Re-registered cases are those that have been examined previously at a Clinic, and are seen again for further consultation and/or treatment.

Pat.—Patient contacts including treatment periods.

Col.—Collateral, or contacts with a patient's parents, or relatives, or with others closely interested.

Gen.—General contacts regarding Clinic activities and work, including those with other Agencies and Community Services. It includes as well talks and addresses, and teaching periods by staff members.

P. E.—Psychological examinations and tests.

Total Work Load—This is the sum of the periods of work noted under each of the four headings Patient, Collateral, General and Psychological examinations.

TABLE 2
AGE AND SEX CLASSIFICATION OF NEW CLINIC CASES

AGE GROUP	EDMONTON AND DISTRICT			CALGARY AND DISTRICT			LETHBRIDGE AND DISTRICT			PONOKA AND RED DEER DISTRICT			TOTALS			PERCENTAGES		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	0-4	86	35	121	39	22	61	8	8	16	7	5	12	140	70	210	11.4	9.2	10.6
5-9	317	154	471	95	59	154	19	50	69	20	20	40	482	252	794	39.1	33.0	36.8
10-14	233	120	353	52	30	82	17	29	46	26	18	44	340	185	525	27.5	24.2	26.2
15-19	71	75	146	21	21	42	17	28	45	7	4	11	127	117	244	10.3	15.3	12.2
20-24	4	10	14	12	10	22	13	13	23	2	3	5	31	33	64	2.5	4.3	3.2
25-29	4	1	5	7	8	15	11	11	19	1	3	4	23	20	43	1.9	2.6	2.1
30-34	2	3	5	10	3	13	15	13	24	3	3	6	30	18	48	2.4	2.4	2.4
35-39	2	2	4	7	7	14	4	4	10	2	4	6	9	21	30	0.7	2.7	1.5
40-44	0	3	3	3	3	6	2	2	5	3	3	5	7	12	19	0.6	1.6	1.0
45-49	3	3	6	4	3	7	4	4	9	3	2	5	12	13	25	1.0	1.7	1.3
50 and over	5	2	7	4	3	7	13	10	23	4	4	8	26	17	43	2.1	2.2	2.1
Unknown	0	0	0	0	0	0	4	4	7	2	3	5	6	6	12	0.5	0.8	0.6
TOTALS	727	410	1137	246	169	415	181	115	296	79	70	149	1233	764	1997	100.0	100.0	100.0

TABLE 3A
 DIAGNOSTIC CLASSIFICATION OF NEW CLINIC CASES—PRE-SCHOOL GROUP (0 to 5 years 11 months)

Nature of Case	Edmonton and District			Calgary and District			Lethbridge and District			Ponoka and Red Deer District			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Educational Problem with Adequate Intellect	18	9	27	4	3	7	1	1	2	8	3	11	22	13	35
Intellectual Inadequacy	42	24	66	18	14	32	5	5	12	1	1	2	75	46	121
Emotional Disorder	27	16	43	16	4	20	2	2	4	1	2	7	43	24	67
Thinking Disorder	7	7	14	3	2	5	.....	.....	.....	.....	.....	.....	7	8	15
Speech Disorder	14	6	20	3	2	5	.....	.....	.....	.....	.....	.....	18	8	26
Paucity Feeding Habits	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Sleep Disturbances	1	.....	1	.....	2	2	.....	.....	.....	.....	.....	.....	.....	2	2
Anti-Social Trends	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Sexual Difficulties	5	1	6	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1
Attack Disorders .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Psychoneuroses .....	.....	1	1	.....	4	8	.....	.....	.....	.....	.....	.....	.....	1	1
Non-Psychotic	1	1	2	4	4	12	.....	.....	.....	.....	.....	.....	.....	6	4
Normal Child	6	3	9	7	5	12	.....	.....	.....	.....	.....	.....	.....	10	28
Undiagnosed .....	.....	.....	.....	2	1	3	.....	.....	.....	.....	.....	.....	.....	3	10
TOTALS	121	60	181	55	35	90	17	11	28	11	6	17	204	112	316

TABLE 3C
 DIAGNOSTIC CLASSIFICATION OF NEW CLINIC CASES—ADULT GROUP (19 years and over)

Nature of Case	Edmonton and District			Calgary and District			Lethbridge and District			Poona and Red Deer District			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	Educational Problem with Adequate Intellect	6	1	7	2	2	4							8	3	11
Intellectual Inadequacy	7	17	24	6	6	12		5					23	29	52
Emotional Disorder	1	2	3	1	1	2		1					3	4	7
Thinking Disorder	3	4	7	3	3	6		1					6	4	10
Speech Disorder				1		1		1					1	1	2
Faulty Feeding Habits															
Sleep Disturbances															
Anti-Social Tendencies															
Moral Difficulties	2	3	5	1	1	2		3					5	2	7
Attack Disorders	2	3	5	4	16	20		6					2	2	4
Psychoneuroses	3	7	10	3	10	13		18					18	40	58
Psychoses	2	7	9	14	5	19		16					27	23	50
Non-Psychotic	1		1	2	2	4		4					4	15	19
Normal				1	2	3		2					1	4	5
Undiagnosed				1	2	3		11					27	23	50
Totals: Table 3C	25	97	122	41	39	80		71					155	150	305
Table 3E	581	323	904	150	95	245		93					204	874	1,078
Table 3A	121	60	181	55	35	90		17					72	502	574
GRAND TOTALS	727	410	1,137	246	169	415		181					1,233	764	1,997

TABLE 4
SOURCES REFERRING NEW CASES TO THE CLINICS

Referring Source	Edmonton and District			Calgary and District			Lethbridge and District			Ponoka and Red Deer District			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Schools and School Authorities	263	103	366	43	24	67	45	21	64	25	10	35	374	158	532
Private Doctors and Medical Clinics	126	66	192	33	25	58	32	45	77	21	38	59	212	174	386
Medical Clinics, as Rehabilitation, Cerebral Palsy, T.B., O.P.D.	27	12	39	17	8	25	4	2	6	.....	.....	.....	48	22	70
Health Units, Medical Health Officers, Public Health Nurses	95	56	151	14	11	25	21	9	30	10	13	23	140	89	229
Child Welfare Agencies, Provincial and Municipal Juvenile and Family Court, Juvenile Offenders' Branch, Bowden Institution	74	78	152	39	24	63	3	5	8	.....	1	1	116	108	224
Provincial Gaols, Adult Courts	19	20	39	4	1	5	8	3	11	4	.....	4	35	24	59
Parents, Relatives, Friends, and Self	3	3	6	3	4	7	38	1	39	.....	.....	.....	44	5	49
Department of Public Health	95	54	149	65	44	109	23	18	41	12	8	20	195	124	319
Other Sources	15	9	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	16	31
	10	9	19	28	31	59	9	4	13	7	.....	7	54	44	98
TOTALS	727	410	1137	246	169	415	181	115	296	79	70	149	1233	764	1997

TABLE 5
MAJOR RECOMMENDATIONS MADE IN REGARD TO NEW CLINIC CASES

Recommendations	Edmonton and District			Calgary and District			Lethbridge and District			Ponoka and Red Deer District			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	Admission to:														
(a) Mental Hospital	4	3	7	3	3	3	14	16	30	7	2	9	28	21	49
(b) Provincial Training School	26	30	56	25	19	44	15	14	29	8	8	16	74	71	145
Placement in:															
(a) Protective or Correctional Home or Institution	19	35	54	2	2	2	.....	2	2	.....	.....	.....	21	35	56
(b) Foster Home	19	9	28	2	1	3	.....	.....	.....	.....	.....	.....	21	12	33
Educational Advice:															
(a) Modified School Program or Special Class Placement	177	63	240	9	6	15	23	6	29	16	7	23	225	82	307
(b) Vocational Counselling	14	12	26	3	3	3	.....	1	1	1	2	3	18	15	33
(c) Other	53	33	86	3	2	5	3	.....	3	3	6	9	62	41	103
Modified Home Management	117	55	172	55	31	86	19	7	26	9	8	17	200	101	301
Referred for Medical Treatment	91	41	132	8	10	18	15	11	26	13	17	30	127	79	206
Treatment in Guidance Clinic	115	71	186	104	67	171	9	17	26	8	14	22	236	169	405
Other Recommendations	92	58	150	32	33	65	83	41	124	14	6	20	221	138	359
TOTALS	727	410	1137	246	169	415	181	115	296	79	70	149	1233	764	1997

TABLE 6
SUMMARY OF THE NUMBER OF MENTAL DEFECTIVES EXAMINED, BY YEARS

Year	I.Q. 0 to 25 Probably Idiots			I.Q. 26 to 50 Probably Imbeciles			I.Q. 51 to 75 Probably Morons			I.Q. Unknown, Mental Deficiency Indicated			Totals			Percentage of New Cases	Cumulative Totals
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T		
1951	7	13	20	33	35	68	85	70	155	3	6	9	128	124	252	20.0%	2998
1952	7	4	11	36	31	67	114	94	208	4	2	6	161	131	292	22.7%	3250
1953	6	4	10	30	39	69	102	68	170	19	7	26	157	118	275	18.1%	3542
1954	3	4	7	42	43	85	125	93	218	13	12	25	183	152	335	22.2%	3817
1955	5	3	8	54	40	94	127	95	222	30	17	47	216	155	371	23.6%	4152
1956	7	5	12	65	46	111	146	88	234	27	21	48	245	160	405	25.0%	4523
1957	11	13	24	40	32	72	115	86	201	18	23	41	184	154	338	20.7%	4928
1958	16	11	27	38	29	67	119	80	199	24	27	51	197	147	344	18.7%	5266
1959	13	10	23	56	44	100	159	121	280	27	15	42	255	190	445	22.3%	6055

Notes: I.Q.—Intelligence Quotient.
M—Male F—Female T—Totals

ACTIVE TREATMENT MENTAL HOSPITALS

THE PROVINCIAL MENTAL HOSPITAL, PONOKA

THE PROVINCIAL MENTAL INSTITUTE, EDMONTON

The Provincial Mental Hospital, Ponoka, admitted 754 patients, 438 males, 316 females (including readmissions). The Provincial Mental Institute, Edmonton, admitted 1,022 patients, 605 males, 417 females (including readmissions). The total number of admissions to these two active treatment hospitals was 1,776, 1,043 males, 733 females. The total number of admissions (including readmissions) was 117 greater than the previous year. Again this increase was approximately the figure which has been usual for many years. The Provincial Mental Institute admitted 121 remand cases, whereas the Provincial Mental Hospital admitted 19.

The discharge rate of the two hospitals averaged approximately 85%. This was five percent higher than the previous year, and might indicate a trend toward greater success in the treatment and rehabilitatory services.

Both active treatment hospitals reported the extensive and successful use of the tranquillizer and antidepressant drugs, and group therapy. Both hospitals reported an appreciable reduction in the use of Electro and Insulin Shock therapy. There was also extension of the "Open-door" policy in both hospitals.

The female patient population of the Provincial Mental Hospital, Ponoka, was reduced temporarily by some 200 patients who were transferred to Deerhome while renovations were being carried out on a women's building at Ponoka. An additional number of mentally deficient patients (approximately 40 women) were transferred to Deerhome for permanent residence there. The Provincial Mental Hospital also transferred 66 patients (43 men, 23 women) to Rosehaven, Camrose. The Provincial Mental Institute transferred 26 patients (20 men, 6 women) to Deerhome, and 54 patients (23 men, 31 women) to Rosehaven.

The combined population of the two active treatment hospitals was reduced. In the case of the Provincial Mental Hospital, Ponoka, this was largely on a temporary basis, while in the case of the Provincial Mental Institute, Edmonton, there was an actual reduction of seven patients.

The Nurses' training programs continued. Ten students completed the combined course in General and Psychiatric Nursing at the Provincial Mental Hospital, Ponoka. Sixteen Graduate Nurses completed the six months' course in Psychiatric Nursing at the Provincial Mental Hospital. Six male students completed

TABLE 1
TABULATED SUMMARY—INSTITUTIONS—MOVEMENT OF POPULATION

Institutions	Patients in Hospital December 31st, 1958			Admissions (Excluding Transfers)			Discharges			Deaths			Patients in Hospital December 31st, 1959		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
ACUTE MENTAL HOSPITALS															
P.M.H., Ponoka	836	542	1378	438	316	754	382	276	658	21	79	777	257	1034	
P.M.I., Edmonton	973	461	1434	605	417	1022	475	378	853	67	93	984	443	1427	
Total	1809	1003	2812	1043	733	1776	857	654	1511	125	172	1761	700	2461	
CHRONIC MENTAL HOSPITALS															
*Rosehaven, Camrose	281	214	495	*67	*54	*121	...	...	...	63	50	282	221	508
P.A.M.H., Claresholm .....	...	98	98	...	3	3	...	...	...	...	5	...	106	106
P.A.M.H., Raymond .....	...	132	132	...	...	...	...	...	...	...	2	...	133	133
Total	281	444	725	67	57	124	...	...	...	63	57	282	460	742
INSTITUTIONS FOR MENTAL DEFECTIVES,															
RED DEER															
Provincial Training School	402	356	758	56	28	84	11	16	27	5	6	403	331	734	
**Deerhome	175	160	335	**73	**308	**381	4	6	10	...	4	238	437	675	
Total	577	516	1093	129	336	465	15	22	37	5	10	641	768	1409	
Grand Total	2667	1963	4630	1239	1126	2365	872	676	1548	193	114	2684	1928	4612	

*Rosehaven, Camrose: All Admissions by Transfer from Other Alberta Mental Hospitals.

**Deerhome, Red Deer: All Admissions by Transfer from Other Alberta Mental Hospitals, with the exception of 12 Male and 11 Female, for a total of 23 Direct Admissions.

the three year course at the above Hospital also. At the Provincial Mental Institute, Edmonton, eight men and one woman completed the three year course.

One hundred and thirty-one students from the general hospital Schools of Nursing were given the eight weeks of affiliation training at the Provincial Mental Hospital, Ponoka, and 196 were given similar affiliation training at the Provincial Mental Institute, Edmonton.

In connection with construction, work was commenced on new Nurses' Residence Annexes, one at the Provincial Mental Hospital and one at the Provincial Mental Institute. A new Laundry was completed at the Provincial Mental Institute. Renovation of the women's wards known as F4, 5 and 6 was commenced at the Provincial Hospital, Ponoka, which accounted for the temporary transfer of women patients to Deerhome, Red Deer.

TABLE 2
DIAGNOSIS BY FIRST ADMISSION

DIAGNOSTIC CLASSIFICATION	Male	Female	Total
Syphilis with Psychosis	3	—	3
Schizophrenia (All Categories)	126	92	218
Manic Depressive (All Categories)	20	24	44
Involuntional Melancholia	11	24	35
Paranoia and Paranoid States	18	14	32
Senile Psychosis	80	42	122
Pre-Senile Psychosis	3	4	7
Psychosis with Cerebral Arteriosclerosis	57	26	83
Alcoholic Psychosis	23	2	25
Psychosis of Other Demonstrable Etiology	16	3	19
Other and Unspecified Psychoses	16	12	28
Anxiety Reaction	15	4	19
Hysterical Reaction	4	8	12
Obsessive Compulsive Reaction	2	2	4
Neurotic Depressive Reaction	17	14	31
Other and Unspecified Psychoneurotic Reactions	5	14	19
Pathological Personality (All Categories)	67	6	73
Immature Personality	2	3	5
Drug Addiction	4	7	11
Alcoholism Without Psychosis	62	14	76
Mental Deficiency Without Psychosis	11	20	31
Syphilis Without Psychosis	—	1	1
Primary Behaviour Disorders	8	6	14
Other and Unspecified Disorders of Character, Behaviour and Intelligence	8	13	21
Epilepsy	9	2	11
Mental Observation without Need for Further Psychiatric Care	28	9	37
Puerperal Psychosis	—	2	2
Other Non-Psychiatric Conditions	3	3	6
TOTALS	618	371	989

TABLE 3—TABULATED SUMMARY OF DEATHS IN INSTITUTIONS DURING 1959

DISEASE	P.M.H., Ponoka		P.M.I., Edmonton		P.A.M.H., Claresholm		P.A.M.H., Raymond		Rosehaven Camrose		P.T.S., Red Deer		Deerhome, Red Deer		TOTALS	
	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. Tuberculosis of Respiratory System	2	2	2	1	2	1	2	1	2	1	2	1	2	1	2	1
2. Syphilis and Sequelae	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. All Other Diseases Classified as Infective and Parasitic	2	3	3	3	1	4	1	4	2	6	1	6	2	15	2	3
18. Neoplasms Malignant	1	1	2	1	2	1	1	1	1	1	1	1	2	2	2	2
19. Neoplasms Benign	5	2	4	6	2	2	1	1	3	7	10	2	2	8	14	22
20. Diabetes Mellitus	11	2	10	3	6	10	2	2	6	21	1	1	1	1	6	10
22. Vascular Diseases of Central Nervous System	6	8	2	2	2	2	1	1	15	6	2	2	1	8	13	51
25. Chronic Rheumatic Heart Disease	11	14	10	14	3	13	2	2	1	1	1	1	1	1	19	22
26. Arteriosclerotic and Degenerative Heart Disease	6	8	2	2	2	2	1	1	1	1	1	1	1	1	2	2
27. Other Diseases of the Heart	19	3	34	3	37	1	1	1	37	33	70	2	1	3	1	1
28. Hypertension with Heart Disease	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30. Influenza	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31. Pneumonia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32. Bronchitis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33. Ulcer of Stomach and Duodenum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34. Intestinal Obstruction and Hernia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35. Nephritis and Nephrosis	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
38. Congenital Malformations	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
41. Senility	3	2	8	5	13	1	1	1	1	1	2	1	3	4	1	5
46. All Other Diseases	58	21	67	26	93	5	5	2	63	50	113	5	6	11	4	307
GRAND TOTALS	58	21	67	26	93	5	5	2	63	50	113	5	6	11	4	307

PROVINCIAL MENTAL HOSPITAL, PONOKA

T. C. MICHIE, M.D., R.C.P.S. (C.), *Medical Superintendent*

PATIENT POPULATION CHANGES

The number of patients in residence on January 1st, 1959, was 1,378, and of these 836 were male and 542 female. On December 31st, 1959, the number in residence was 1,034 of whom 777 were male and 257 female. This was an overall reduction of 344 patients. The details are as set out in Table I. The disproportionate reduction in female patients was partly due to the temporary transfer of over 200 to Deerhome, and an increase in the number of those transferred to the Provincial Auxiliary Mental Hospital at Claresholm.

ADMISSION OF PATIENTS

There were 754 patients admitted, exclusive of transfers from other Provincial Mental Institutions. Of these 438 were male, and 316 female.

There was a relative increase in those admitted by Warrant, and a decrease in the number admitted by Medical Certificates. The ratio of those who came voluntarily was essentially unchanged, this being 31% of those admitted under "The Mental Diseases Act."

14 patients were admitted by transfer.

SEPARATION OF PATIENTS

658 patients were discharged, of whom 382 were male, and 276 female. This was an increase of 68 over the previous year. 355 patients were transferred to other institutions, and more than half of these were women temporarily moved to Deerhome to make possible renovations to this hospital.

79 patients died, nearly all of whom were in very advanced years.

ACCIDENTS AND ELOPEMENTS

20 patients suffered from fractures, 11 of these being men and nine women. In nearly all instances, these were among the aged. This was a slight decrease over the previous year.

There were no suicidal deaths.

A relatively few patients left the hospital without permission.

GENERAL HEALTH OF PATIENTS

The general health of patients throughout the year was good. There were no epidemics.

Three men were transferred to the Tuberculosis Unit at the Provincial Mental Institute, Edmonton.

CLINICAL WORK

There was increased emphasis on group therapy in many forms. Wide use was made of the so called tranquilizing and

antidepressant drugs. The utilization of electro-shock therapy was sharply decreased. When used, it was for the most part as an adjuvant to other forms of therapy in the initial phase of treatment. Insulin-coma therapy was continued for a limited number of Schizophrenic patients. Approximately half the patients were accommodated on open wards. The aim was to keep restrictive measures at a minimum. From time to time, Medical Specialists were called in consultation from Edmonton.

OCCUPATIONAL THERAPY

If anything, there was increased emphasis on this form of treatment. Its ramifications extended far beyond formal classes. It was found that those formerly considered helpless patients, could with proper support and direction, undertake a great variety of projects. This was to the advantage of the hospital community in general, and to the patient individually.

An innovation during the year was the permission granted to the Ponoka Art Club to conduct their activities at the hospital. This Club had been in operation for some time in the Town of Ponoka for local residents, under the direction of The Department of Extension of the University of Alberta. Facilities were offered to the Club and accepted, whereby classes could be held at the hospital, with the provision that a reasonable number of patients might attend. It is felt this project has been successful. The residents of Ponoka and district, who were members of the Club, co-operated in a highly commendable manner.

The Library and Canteen continued to give excellent service to the patients.

RECREATIONAL THERAPY

The program was elaborate and varied. It included a great number of activities designed to suit the season of the year, and the needs of the groups, large and small. It encompassed drama, music, cultural projects, and also the usual sports activities. It was closely integrated with the Nursing and Occupational Therapy services.

RELIGIOUS SERVICES

The Clergy from the Town of Ponoka held services regularly each Sunday, and made frequent visits to individual patients, either at the request of the latter, or their physicians. The Clergy at all times had full access to the hospital and did everything possible to provide a much needed service.

SOCIAL SERVICES—SOCIAL WORKER

The incumbent resigned midway through the year, and was replaced by a male Psychiatric Nurse, who had shown aptitude for the work. Almost 400 calls were made throughout the Southern half of the Province. These were concerned with after-care, the obtaining of information regarding patients, or arrangements preparatory to discharge. This entailed the travelling of approximately 9,000 miles. Liaison was maintained by the Social

Worker between the hospital and various Welfare Organizations. The Social Worker also assisted at the hospital in group therapy, and in the preparation of patients for discharge.

PSYCHOLOGICAL SERVICES—PSYCHOLOGIST

One Psychologist was employed. She administered tests to 224 patients and carried out examinations, in one form or another, on 30% of all admissions. Assistance was given in group therapy, and psychological tests were administered to student nurses. She participated in the teaching program of the School of Nursing, and also attended a number of Guidance Clinics in Central Alberta.

DENTAL SERVICES

Adequate dental service was provided to all patients by a full time dentist. New drilling equipment was installed. All newly admitted patients were seen by the dentist. Those requiring prolonged hospitalization were examined periodically. Many hundreds of individual treatment procedures were carried out. He also provided dental service to the patients in the Provincial Auxiliary Mental Hospitals at Claresholm and Raymond.

X-RAY SERVICES

Almost 4,000 examinations were made on patients and staff members. Chest plates were referred to the staff of the Baker Memorial Sanatorium, Calgary, for interpretation. Whenever necessary, other plates were sent to radiologists in Edmonton and Red Deer.

LABORATORY SERVICES

In general, the services provided were adequate. The pathologist resigned toward the end of the year, and no replacement was available. When necessary, specimens were referred to the Provincial Laboratory of the University, for examination. Electroencephalographic tracings were interpreted by an Edmonton neurologist.

MEDICAL EDUCATION

A program was initiated providing instruction periods here of two weeks to groups of medical students from the senior year at the university. The number in residence varied from three to five.

One member of the medical staff gave lectures at the University of Alberta.

Some visiting medical service was provided for patients at Deerhome, Red Deer.

Various members of the Medical Staff and others addressed public meetings, most of which were arranged by Home and School Associations.

Guidance Clinic groups from this hospital were sent to give service from time to time at various points in Central Alberta.

SCHOOL OF NURSING

The Teaching program was essentially unchanged. There were six full time Instructors.

In the basic four year Course, leading to qualification in General and Psychiatric Nursing, 39 students were registered. Of these, 26 were in residence, and 13 were affiliated with General Hospital Schools of Nursing. During the year, ten students successfully passed the Con-joint Examination set by the University of Alberta making them eligible to graduate from this School, and for registration.

42 male students were enrolled in the three year course in Psychiatric Nursing. Six completed the course and received Certificates.

The arrangement for an eight week affiliation course in Psychiatric Nursing, for students from General Hospital Schools of Nursing was continued throughout the year. The number so received during the year was 131. In addition, 11 Graduate Nurses without previous Psychiatric training, were accepted for deferred affiliation.

In the six months course in Psychiatric Nursing for Graduate Nurses, eight students completed the course in March, and eight in July. It is of interest that three of these women subsequently enrolled in the Teaching and Supervision Course at the University of Alberta. Most of the others continued in Psychiatric Nursing here or elsewhere.

A group of Public Health Diploma Course students from the University of Alberta spent two weeks here for field experience.

NURSING SERVICES

Nursing services were maintained at very satisfactory standards. The role of the nurse is changing decidedly in psychiatric treatment, and the nursing staff not only adjusted to these alterations, but led in many ways in setting the patterns of treatment orientation.

VISITORS

The visiting of patients by relatives was encouraged. Visiting hours were as before, morning and afternoon every day of the year.

Inspections of the hospital were made on a number of occasions by the Minister of Health, Dr. J. Donovan Ross, and the Deputy Minister of Health, Dr. A. Somerville. The Director of the Division of Mental Health, Dr. R. R. MacLean, made frequent tours of the hospital. He was consulted on all treatment procedures, and his advice on such matters was often sought and freely given.

A number of local organizations were actively interested in the patients welfare, and contributed time and effort in a variety of ways.

The hospital was pleased to welcome as visitors Dr. Clyde Simson, Director of Children's Services, Lafayette Clinic, Mental

Health Services, State of Michigan, and Dr. Martin Roth, Professor of Psychiatry at the University of Durham, England. The former addressed the Medical Staff, and the latter the Medical and Nursing Staff. Dr. Roth was accompanied by Dr. Keith Yonge, Professor of Psychiatry, University of Alberta.

Under the auspices of the Calgary Branch of the Canadian Mental Health Association, a number of groups of representative citizens from Calgary toured the hospital, and were made acquainted with treatment procedures.

The Visiting Board carried out the annual inspection with its usual thoroughness.

THE EUGENICS BOARD

Five meetings were held at this hospital. Seven male and 21 female patients were presented to the Board. 16 patients from other Provincial Mental Institutions were presented at meetings of the Board here. Ten patients, three male and seven female, were sexually sterilized.

SURGICAL SERVICES

Surgical services were rendered by the regularly appointed consultant from Red Deer. Service was also given by specialists from Edmonton and elsewhere, as the necessity arose.

HOUSEKEEPING DEPARTMENT

The standards of cleanliness and attractiveness were well maintained.

FIRE PROTECTION

The fire brigade held periodic practices. The equipment was efficient and modern. Its operation was closely integrated with the training given to the nursing staff in fire protection.

NEW BUILDINGS AND EQUIPMENT

The addition to Male 12 building was completed. It supplied additional needed day-room and toilet facilities.

The new Nurses' Residence was essentially completed and the classrooms were occupied late in the year. These provided greatly improved teaching accommodation.

Early in the year, Female Four, Five and Six building was evacuated, the patients being moved temporarily to Deerhome at Red Deer. A massive renovation and reconstruction of this building was commenced. The work was well under way by the end of the year.

A reorientation of the power house was begun for the installation of new machinery, and to make possible an extension to the main kitchen. Demolition and reconstruction of the power house was proceeded with during the year.

The tall, brick smoke stack for so long a landmark in this area, and now no longer of use, was demolished.

Reconstruction was begun late in the year of the closed-in verandahs on the front of the main building.

BUSINESS OFFICE

This Department operated with efficiency. The Business Manager was responsible for the supervision of the various ancillary services.

PROVINCIAL MENTAL HOSPITAL FARM

The yield of field crops was relatively good, although the summer was dry. There was an increase in egg and milk production. The dairy herd was healthy. The supply of pork was adequate.

ANCILLARY SERVICES

In general, these various hospital departments, including the laundry, linen room, print shop, sewing room, shoe shop and tailor shop provided satisfactory services.

THE DEPARTMENT OF PUBLIC WORKS

Maintenance Department

This Department was responsible for the maintenance and repair of buildings. This included plumbing, and the distribution of power. A great deal of redecorating was done. In addition, a number of fairly extensive internal reconstruction projects were completed.

Mechanical Branch

This Department, under the direction of the Chief Engineer, provided an adequate supply of heat, light and water to the buildings.

CONCLUSION

For some years, and in the light of new therapeutic agents, a changing pattern in the operation of the hospital has been apparent. This was emphasized in the past year. The number of admissions was the highest on record. This did not necessarily mean an increase in the incidence of mental illness, but more likely greater utilization of the hospital by those in need. There was an increase in the public interest in the treatment facilities. The discharge rate also was higher than ever before, and many of those discharged had spent long periods in hospital. There was a definite increase in the number admitted who were suffering from the disorders associated with senility, and in this group, only continued care could be anticipated. It seemed fairly apparent that the turnover of patients at this hospital was increasing. There were still those admitted, however, suffering from organic disorders, and profound psychogenic disturbances, who will require long term or permanent hospitalization, unless more effective therapeutic agents are discovered.

Those responsible for the administration of the hospital are deeply grateful for the encouragement and direction given by the senior officers of The Department of Public Health.

TABLE 1
MOVEMENT OF PATIENT POPULATION DURING THE YEAR 1959

	M			F			T		
In residence December 31st, 1958	836			542			1378		
On Leave or otherwise absent	18			30			48		
On books December 31st, 1958	854			572			1426		
ADMISSIONS:									
First Admissions:									
	M	F	T	M	F	T	M	F	T
Voluntary	50	53	103						
Certificates	61	51	112						
Warrant	174	69	243						
				285	173	458			
Re-admissions:									
Voluntary	60	63	123						
Certificates	20	43	63						
Warrant	72	37	109						
M. D. Act	1	....	1						
				153	143	296			
Total admissions	438			316			754		
Transfers in	5			9			14		
							443	325	768
							1297	897	2194
SEPARATIONS:									
Discharges:									
Recovered	119	84	203						
Improved	155	124	279						
Unimproved	8	7	15						
Not Psychotic	100	61	161						
				382	276	658			
Deaths				58	21	79			
Transfers out				48	307	355			
							488	604	1092
On books December 31st, 1959	809			293			1102		
On Leave or otherwise absent	32			36			68		
In residence December 31st, 1959	777			257			1034		

TABLE 2
PROVINCIAL MENTAL HOSPITAL, PONOKA, ALBERTA
RESIDENT PATIENT POPULATION BY PSYCHOSES—December 31st, 1959

CLASSIFICATION:	Male	Female	Total
Syphilis with Psychosis	40	2	42
Schizophrenia	432	97	529
Manic Depressive	40	29	69
Involuntal Melancholia	6	11	17
Paranoia and Paranoid States	59	21	80
Senile Psychosis	21	19	40
Pre-senile Psychosis	5	4	9
With Cerebral Arteriosclerosis	10	18	28
Alcoholic Psychosis	12	1	13
Other and Unspecified Psychoses	87	21	108
Anxiety	5	3	8
Hysteria	1	1	2
Obsessive Reaction .....	....	1	1
Neurotic Depressive Reaction	3	9	12
Other Psychoneurotic Reactions	3	4	7
Pathological Personality	8	2	10
Chronic Alcoholism	6	3	9
Drug Addiction	1	1	2
Mental Deficiency	19	3	22
Epilepsy	5	1	6
Other and Unspecified	3	5	8
Syphilis without Psychosis	2	1	3
Without need for further care	4	....	4
Other non-psychiatric conditions	5	....	5
TOTALS	777	257	1034

TABLE 3
PROVINCIAL MENTAL HOSPITAL, PONOKA, ALBERTA
FIRST ADMISSIONS DURING 1959 BY PSYCHOSES

CLASSIFICATION:	Male	Female	Total
Syphilis with Psychosis	2	....	2
Schizophrenia	58	41	99
Manic Depressive	11	9	20
Involuntional Psychosis	8	12	20
Paranoid Conditions	9	6	15
Senile Psychosis	44	21	65
Pre-senile Psychosis .....	....	3	3
With Cerebral Arteriosclerosis	27	7	34
Alcoholic Psychosis	12	1	13
Other and Unspecified	11	11	22
Anxiety Reaction	12	1	13
Hysterical Reaction	2	3	5
Obsessive-compulsive Reaction	1	....	1
Neurotic Depressive Reaction	7	8	15
Other Psychoneurotic conditions	1	4	5
Pathological Personality	16	1	17
Alcoholism	27	8	35
Drug Addiction	3	7	10
Mental Deficiency	3	8	11
Epilepsy	5	1	6
Other and unspecified	7	11	18
Syphilis without Psychosis .....	....	1	1
Mental observation without need for further medical care	16	6	22
Other non-psychiatric conditions	3	3	6
Totals	285	173	458

TABLE 4
PROVINCIAL MENTAL HOSPITAL, PONOKA, ALBERTA
AGE OF FIRST ADMISSIONS DURING 1959

Age	Male	Female	Total
Under 15 years	4	5	9
15 to 19 years	17	12	29
20 to 24 years	23	7	30
25 to 29 years	24	17	41
30 to 34 years	31	24	55
35 to 39 years	31	14	45
40 to 44 years	29	10	39
45 to 49 years	18	17	35
50 to 54 years	12	12	24
55 to 59 years	11	14	25
60 to 64 years	8	2	10
65 to 69 years	9	9	18
70 to 79 years	48	13	61
80 years and over	20	17	37
TOTALS	285	173	458

TABLE 5
PROVINCIAL MENTAL HOSPITAL, PONOKA, ALBERTA
DISCHARGES BY PSYCHOSES AND CONDITION ON DISCHARGE

CLASSIFICATION	Recovered		Improved		Un- changed		Not Psy.		Totals		
	M	F	M	F	M	F	M	F	M	F	T
Syphilis with Psychosis .....	....	1	1	....	....	....	....	....	1	1	2
Schizophrenia	50	40	80	62	4	2	....	....	134	104	238
Manic Depressive	25	23	7	10	....	....	....	....	32	33	65
Involuntional Psychosis	4	8	4	11	....	1	....	....	8	20	28
Paranoid States .....	....	2	25	11	2	....	....	....	27	13	40
Senile Psychosis .....	....	....	3	4	1	....	....	....	4	4	8
With Cerebral Arteriosclerosis	1	....	3	1	....	....	....	....	4	1	5
Alcoholic Psychosis	27	3	3	....	....	....	....	....	30	3	33
Other and Unspecified	5	5	9	11	....	....	....	....	14	16	30
Anxiety Reaction	2	1	11	2	1	2	....	....	14	5	19
Hysterical Reaction	1	....	1	3	....	....	....	....	2	3	5
Obsessive-compulsive Reaction .....	....	....	....	1	....	....	....	....	....	1	1
Neurotic Depressive Reaction	4	1	7	4	....	1	....	....	11	6	17
Other Psychoneurotic Reactions .....	....	....	1	4	....	....	....	....	1	5	6
Pathological Personality .....	....	....	....	....	....	....	23	7	23	7	30
Alcoholism .....	....	....	....	....	....	....	37	12	37	12	49
Drug Addiction .....	....	....	....	....	....	....	2	10	2	10	12
Behaviour Disorders .....	....	....	....	....	....	....	4	1	4	1	5
Mental Deficiency .....	....	....	....	....	....	....	9	7	9	7	16
Other and unspecified .....	....	....	....	....	....	....	1	11	1	11	12
Epilepsy .....	....	....	....	....	....	....	4	4	4	4	8
Syphilis without Psychosis .....	....	....	....	....	....	....	1	....	1	....	1
Mental observation without need for further medical care .....	....	....	....	....	....	....	15	6	15	6	21
Other non-psychiatric conditions .....	....	....	....	....	....	....	4	3	4	3	7
TOTALS	119	84	155	124	8	7	100	61	382	276	658

TABLE 6
PROVINCIAL MENTAL HOSPITAL—PONOKA, ALBERTA
DISCHARGES BY PSYCHOSIS AND DURATION OF RESIDENCE

CLASSIFICATION	Under 3 months		Under 6 months		Under 1 year		Over 1 year		Totals		
	M	F	M	F	M	F	M	F	M	F	T
Syphilis with Psychosis .....	....	1	....	....	....	....	1	....	1	1	2
Schizophrenia	47	54	37	25	14	10	36	15	134	104	238
Manic Depressive	21	25	8	2	1	1	2	5	32	33	65
Involuntional Psychosis	3	13	4	5	1	1	....	1	8	20	28
Paranoid States	2	5	10	3	7	1	8	4	27	13	40
Senile Psychosis	2	2	2	2	....	....	....	....	4	4	8
With Cerebral Arteriosclerosis	3	....	1	....	....	....	....	1	4	1	5
Alcoholic Psychosis	26	2	1	1	1	....	2	....	30	3	33
Other and unspecified	6	9	2	6	1	1	5	....	14	16	30
Anxiety Reaction	11	2	2	1	1	2	....	....	14	5	19
Hysterical Reaction	2	1	....	1	....	1	....	....	2	3	5
Obsessive-compulsive Reaction .....	....	....	....	1	....	....	....	....	....	1	1
Neurotic Depressive Reaction	7	4	2	....	2	2	....	....	11	6	17
Other Psychoneurotic Reactions .....	....	4	1	1	....	....	....	....	1	5	6
Pathological Personality	12	4	8	2	2	1	1	....	23	7	30
Alcoholism	30	8	5	2	2	2	....	....	37	12	49
Drug Addiction	1	9	....	1	1	....	....	....	2	10	12
Behaviour Disorders	3	1	1	....	....	....	....	....	4	1	5
Mental Deficiency	4	7	2	....	2	....	1	....	9	7	16
Other and unspecified	1	7	....	3	....	1	....	....	1	11	12
Epilepsy	1	2	3	1	....	....	....	1	4	4	8
Syphilis without Psychosis	1	....	....	....	....	....	....	....	1	....	1
Mental observation without need for further medical care	14	6	....	....	....	....	1	....	15	6	21
Other non-psychiatric conditions	4	3	....	....	....	....	....	....	4	3	7
TOTALS	201	169	89	57	35	23	57	27	382	276	658

TABLE 7
PROVINCIAL MENTAL HOSPITAL, PONOKA, ALBERTA
CAUSES OF DEATH DURING 1959
ABRIDGED INTERNATIONAL CLASSIFICATION

CLASSIFICATION	Male	Female	Total
3. Syphilis and sequelae	2	....	2
17. Other infective and parasitic	1	....	1
18. Malignant neoplasms	2	3	5
19. Benign and unspecified neoplasms .....	....	1	1
22. Vascular lesions affecting C.N.S.	5	2	7
26. Arteriosclerotic and degenerative heart disease	11	2	13
27. Other diseases of the heart	6	8	14
31. Pneumonia	19	3	22
33. Ulcer of stomach and duodenum	1	....	1
35. Intestinal obstruction and hernia	1	....	1
38. Nephritis and Nephrosis	3	....	3
45. Senility etc., and ill-defined causes	4	....	4
46. All other diseases	3	2	5
TOTALS	58	21	79

TABLE 8
DEATHS BY PSYCHOSES

	Male	Female	Total
Syphilis with Psychosis	4	....	4
Schizophrenia	9	3	12
Manic Depressive	1	....	1
Involuntional Melancholia	1	2	3
Paranoid States	2	....	2
Senile Psychosis	15	7	22
With Cerebral Arteriosclerosis	16	3	19
Alcoholic Psychosis	1	....	1
Other and Unspecified	7	3	10
Neurotic Depressive	1	2	3
Other non-psychiatric conditions	1	1	2
TOTALS	58	21	79

PROVINCIAL MENTAL INSTITUTE, EDMONTON

A. D. MACPHERSON, M.D., R.C.P.S.(C.),
Medical Superintendent

PATIENT POPULATION CHANGES

On December 31, 1958, there were in residence 973 male and 461 female patients, a total of 1,434. The number in residence December 31, 1959, was 984 men and 443 women, a total of 1,427. This was a decrease of seven.

ADMISSION OF PATIENTS

During the past year, 605 men and 417 women were admitted, a total of 1,022. In addition, 5 men and 6 women were transferred from different Mental Institutions in the province, making a total of 610 men and 423 females admitted. A combined total of 1,033 was admitted during the year. This was an increase from the previous year of 97. Admissions by Voluntary applications were 371, by Medical Certificates 279, by Warrant 362, and under the Mental Defectives Act there were 10.

SEPARATION OF PATIENTS

During the year 475 men and 378 women, a total of 853 was discharged. This was an increase over the previous year of 140. In addition, 47 men and 40 women, a total of 87, was transferred to other Mental Institutions. There were 93 deaths, at least 67 being associated with degeneration changes due to old age, during the year. There were 53 autopsies performed. The total number of separations during the year was 1,033. During the year more than 1,800 patients were out on leave for periods longer than 24 hours.

GENERAL HEALTH

This was good during the year. There were no epidemics. T.A.B.T. immunization was carried out on all admissions and new staff. Chest X-rays were done on all new staff, plus a complete resurvey of all patients and staff.

CLINICAL WORK

During the year, the use of tranquillizing drugs continued on a large scale. It is doubtful if the quantity used was increased, but there were more new drugs taken into use. New preparations were constantly tried as they become available. It has become increasingly evident that no one tranquillizer was the answer. There was constant review of the effects of the various tranquillizers being used. There was a marked improvement, especially in the continued treatment group. There was a considerable reduction in the Electric Shock treatment used, and the use of Insulin coma decreased markedly. The use of group therapy was expanded, and there were group therapy programs on most of the wards. The use of the open-door policy was expanded.

Approximately one-half the patients had the privilege of being out and around the grounds by themselves. Nearly all the remaining patients were accompanied out by nursing staff.

OCCUPATIONAL THERAPY

This Department continued to play a very large part in the treatment program. Therapy was carried on in nearly all the wards, as well as in the Occupational Centre.

SOCIAL SERVICES

The work in this field continued to increase, especially in the investigation of family background, rehabilitation of discharged patients, and in public relations.

PSYCHOLOGISTS

This Department continued to be very busy. As far as possible, all new patients and especially all remand cases were given a battery of psychological tests. This work was invaluable in the clinical program. In addition, the psychologists took an active part in the group therapy program.

RECREATIONAL PROGRAM

A full-time program was continued. This covered all wards, and forms of recreational activity. The recreational activities began in the forenoon and continued through to evenings daily. The Department of Veterans' Affairs continued to assist in providing stage shows and tickets to many activities in the city. During the year, groups of volunteers from the Canadian Mental Health Association continued to take part in the patients' activities, and the Women's Catholic League and Lutheran Ladies' Group continued their visiting group program. The United Church also developed their visiting group program, and this group made visits to various wards. The canteen continued to function successfully and was used by both patients and staff.

RELIGIOUS SERVICES

The Lutheran Minister continued to be very helpful. He held services every Sunday and brought out visiting groups. The Roman Catholic services were held every Sunday. Anglican and United Church services were held alternating Sundays. The Jewish and Ukrainian women's organizations visited frequently. The Chinese Benevolent Association also visited regularly.

LIBRARY

This Department remained very active during the year. It was open daily. During the year the Institute was fortunate in receiving a very large number of donations of magazines for the library.

BEAUTY PARLOR

This Department remained very active. The number of patients receiving this treatment continued to increase constantly.

DENTAL SERVICES

This Department continued to operate in its usual efficient manner. All patients were examined regularly during the year and, where required, treatment was carried out. All new admissions were also examined and treated. A total number of 4,010 procedures were carried out. In addition, the Dentist supplied services to Rosehaven Hospital, Camrose, and held clinics for students of the University of Alberta.

X-RAY SERVICES

This Department continued to be very busy and efficient. During the year a total of 5,158 examinations was carried out. This was down somewhat from last year. In addition, this Department carried out Short Wave Diathermy treatments, B.C.G. vaccinations and Tuberculin tests of new staff and patients. B.C.G. vaccine was given to 42 staff.

LABORATORY SERVICES

During the year a total of 12,000 examinations was done. This was down somewhat from the previous year. Both Laboratory and X-Ray Departments assisted in the training given to technicians from the school operated by the Department of Public Health, students being sent here for two-week periods of instruction.

SURGICAL SERVICES

There were 58 major operations and 45 minor operations.

ELECTROENCEPHALOGRAPH

A total of 350 E.E.G.'s, 125 E.C.G.'s, and 28 B.M.R.'s were carried out during the year. In addition the technician did the E.E.G. work at the Provincial Mental Hospital, Ponoka.

SCHOOL OF NURSING

Nine students, eight men and one girl, graduated in Psychiatric Nursing in 1959, completing a three-year course. The affiliation program for student nurses from the general hospitals was continued. One hundred ninety-six students were given an eight-week course in Psychiatric Nursing throughout the year. The number of students in attendance on each course averaged 28. These affiliation students came from the Edmonton General Hospital, the Misericordia Hospital, the Royal Alexandra Hospital, the Holy Cross Hospital, Calgary, and the Lethbridge Municipal Hospital. In addition, 15 graduate nurses enrolled in the Diploma Course in Public Health Nursing at the University of Alberta spent two weeks at the Provincial Mental Institute for field experience. In-service training consisted of ward teaching and short courses of lectures were continued for all staff.

BUILDING AND MAINTENANCE

The maintenance was kept up very well during the year. Construction was begun and completed on the extension of the Nurses' Residence.

FIRE PROTECTION

Regular fire practices were held throughout the year. Instructions were given throughout the hospital to all new staff. The fire equipment was inspected, and was kept at a peak of efficiency. No fires occurred during the year.

HOUSEKEEPING

This Department continued to function efficiently. Everything possible was done to keep the wards comfortable and attractive.

LAUNDRY

This continued to be very busy. The new part was occupied, with its first-class equipment. This greatly increased the capacity of the laundry.

TAILOR AND SEWING SHOP

Both Departments remained very busy. Work consisted mostly of repairs which were very well done, resulting in a very considerable saving of the clothing.

SHOE REPAIRS

This Department remained very active and very busy. Excellent work was done.

DIETARY DEPARTMENT

This Department continued to function very well. In addition to the large number of regular meals to staff and an average daily patient population amounting to around 1,500, there was also a large number of special diets required.

POLICE COURT

This service continued to be very busy. A large number of cases were received "on remand". A number of the Medical Staff appeared in Court on numerous occasions in connection with this work. Although this service involved a considerable amount of work, it was felt this particular service was justified. There were a total of 177 remands during the year.

BUSINESS OFFICE

This Department continued to be very busy. The work continued to expand. A Collection Department was added during the year. An addition of some up-to-date equipment facilitated the work.

MEDICAL RECORDS

The work in this Department continued to be done efficiently.

HOSPITAL FARM

1959 was a very good year. Crop production was high. Multiple production was the highest on record.

GARDEN AND GROUNDS

The garden crop was very good, and the yield was high. The quality of vegetables was also very good. The production was sufficient to supply the hospital needs throughout the year.

STAFF

The staff situation, both male and female, remained satisfactory. There was very little difficulty keeping the establishment filled except for a shortage of graduate nurses.

VISITORS

During the year the hospital was visited regularly by the Honourable Dr. J. D. Ross, Dr. R. R. MacLean, Director, Division of Mental Health, and the Honourable Mr. G. Taylor. The Visiting Board carried out its annual inspection. A number of community organizations also conducted visits to the hospital, as did the Canadian Mental Health Association.

PUBLIC RELATIONS

Members of the staff continued to address public organizations whenever possible on the work of the hospital and the problems in the psychiatric fields.

The work of the hospital continued to increase annually at a very constant rate. There were more people being admitted in the early stages of illness, and more returning in the early stages of relapses. This resulted in a greater number of discharges, and shorter stays in the hospital.

The present trend of community participation in the hospital activities and integration of the hospital as part of the community health programs, was evident during the year. This was very desirable and was encouraged by the hospital staff as much as possible. The extension of the open-door policy was facilitated by the above trend. The hospital staff has always been conscious of the advantage of open doors, but has been somewhat hindered by the community attitude up until recently. In conclusion, appreciation is expressed to the Honourable Dr. Ross and Dr. MacLean, for their sympathetic understanding and help.

TABLE 1
MOVEMENT OF PATIENT POPULATION DURING 1959

	M	F	T	M	F	T
In residence December 31, 1958				973	461	1434
On leave or otherwise absent				76	99	175
Total on books December 31, 1958				1049	560	1609
ADMISSIONS:						
FIRST ADMISSIONS:						
(a) Voluntary	85	54	139			
(b) Medical Certificates	90	96	186			
(c) Warrant	156	46	202			
(d) Mental Defectives Act	2	2	4			
Total	333	198	531			
RE-ADMISSIONS:						
(a) Voluntary	138	94	232			
(b) Medical Certificates	28	65	93			
(c) Warrant	101	59	160			
(d) Mental Defectives Act	5	1	6			
Total	272	219	491			
TRANSFERS IN	5	6	11			
TOTAL ADMISSIONS	610	423	1033			
SEPARATIONS:						
DISCHARGES:						
(a) Recovered	196	240	436			
(b) Improved	111	41	152			
(c) Much Improved	99	66	165			
(d) Unchanged	69	31	100			
Total	475	378	853			
TRANSFERS OUT	67	26	93			
DEATHS	67	26	93			
TOTAL SEPARATIONS	589	444	1033			
Total on books December 31, 1959				1070	539	1609
On leave or otherwise absent				86	96	182
Total in residence December 31, 1959				984	443	1427

TABLE 2
PSYCHOSES OF THE PATIENT POPULATION DECEMBER 31, 1959

	Male	Female	Total
300 Schizophrenic Disorders	635	289	924
301 Manic Depressive Reaction	42	36	78
302 Involitional Melancholia	4	23	27
303 Paranoia and Paranoid States	30	19	49
304 Senile Psychosis	39	20	59
305 Presenile Psychosis	2	11	13
306 Psychosis with Cerebral Arteriosclerosis	24	21	45
307 Alcoholic Psychosis	13	2	15
308 Psychosis of Other Demonstrable Etiology	44	10	54
309 Other and Unspecified Psychosis	54	26	80
310 Anxiety Reaction without mention of Somatic Symptoms.....	1	6	7
311 Hysterical Reaction without mention of Somatic Symptoms .....	.....	2	2
314 Neurotic—Depressive Reaction	6	4	10
318 Psychoneurotic Disorders, Other, Mixed and Unspecified Types	2	5	7
320 Pathological Personality	19	5	24
321 Immature Personality	1	1	2
322 Alcoholism	13	.....	13
324 Primary Childhood Behaviour Disorders	7	3	10
325 Mental Deficiency	92	39	131
326 Other and Unspecified Character, Behavior and Intelligence Disorders	2	1	3
020 Juvenile Neurosyphilis	1	.....	1
025 General Paralysis of the Insane	24	4	28
026 Other Syphilis of Central Nervous System	4	1	5
083 Late Effects of Acute Infectious Encephalitis	1	2	3
353 Epilepsy	7	7	14
688 Puerperal Psychosis .....	.....	1	1
793 Observation without need for further Medical care	3	1	4
Total	1070	539	1609

TABLE 3
PSYCHOSIS BY FIRST ADMISSIONS—1959

	Male	Female	Total
300 Schizophrenic Disorders	68	51	119
301 Manic Depressive Reaction	9	15	24
302 Involutional Melancholia	3	12	15
303 Paranoia and Paranoid States	9	8	17
304 Senile Psychosis	36	21	57
305 Presenile Psychosis	3	1	4
306 Psychosis with Cerebral Arteriosclerosis	30	19	49
307 Alcoholic Psychosis	11	1	12
308 Psychosis of Other Demonstrable Etiology	16	3	19
309 Other and Unspecified Psychosis	5	1	6
310 Anxiety Reaction without Mention of Somatic Symptoms.....	3	3	6
311 Hysterical Reaction without Mention of Somatic Symptoms.....	2	5	7
313 Obsessive—Compulsive Reaction	1	2	3
314 Neurotic—Depressive Reaction	10	6	16
318 Psychoneurotic Disorders, Other, Mixed and Unspecified Types	4	10	14
320 Pathological Personality	51	5	56
321 Immature Personality	2	3	5
322 Alcoholism	35	6	41
323 Other Drug Addiction	1	.....	1
324 Primary Childhood Behavior Disorders	8	6	14
325 Mental Deficiency	8	12	20
326 Other and Unspecified Character, Behavior and Intelligence Disorders	1	1	2
353 Epilepsy	4	1	5
025 General Paralysis of the Insane	1	.....	1
083 Late Effects of Acute Infectious Encephalitis .....	.....	1	1
688 Puerperal Psychosis	1	2	2
793 Observation without Need for Further Medical Care	12	3	15
Total	333	198	531

TABLE 4
AGES OF PATIENTS ADMITTED DURING 1959

Ages	First Admission			Readmission			Transfers			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
Under 15 years	2	4	6	.....	4	4	.....	.....	.....	2	8	10
15 to 19 years	26	16	42	7	9	16	.....	.....	.....	33	25	58
20 to 24 years	21	15	36	19	23	42	.....	.....	.....	40	38	78
25 to 29 years	39	22	61	27	21	48	.....	.....	.....	66	43	109
30 to 34 years	26	26	52	44	34	78	1	.....	1	71	60	131
35 to 39 years	46	15	61	43	37	80	.....	1	1	89	53	142
40 to 44 years	35	12	47	32	28	60	1	1	2	68	41	109
45 to 49 years	26	18	44	29	24	53	.....	1	1	55	43	98
50 to 54 years	10	13	23	38	14	52	1	.....	1	49	27	76
55 to 59 years	17	13	30	15	10	25	.....	1	1	32	24	56
60 to 64 years	15	6	21	7	4	11	.....	.....	.....	22	10	32
65 to 69 years	11	6	17	3	4	7	1	.....	1	15	10	25
70 and over	59	32	91	8	7	15	1	2	3	68	41	109
Total	333	198	531	272	219	491	5	6	11	610	423	1033

TABLE 5
DISCHARGES CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSIS AND CONDITIONS FOR 1959

	Recovered			Improved			Much Improved			Unchanged			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
300 Schizophrenic Disorders	108	117	225	1	8	9	17	17	34	2	2	2	126	144	270
301 Manic Depressive Reaction	15	34	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	34	49
302 Involutional Melancholia	4	21	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	21	25
303 Paranoia and Paranoid States	1	.....	1	2	1	2	8	4	12	.....	.....	.....	11	4	15
304 Senile Psychosis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
305 Presenile Psychosis	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	1
306 Psychosis with Cerebral Arteriosclerosis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
307 Alcoholic Psychosis	18	2	20	.....	.....	.....	4	7	11	.....	.....	.....	.....	12	16
308 Psychosis of Other Demonstrable Etiology	6	8	14	2	.....	.....	5	3	8	.....	.....	.....	.....	19	21
309 Other and Unspecified Psychosis	4	4	8	1	.....	.....	8	8	11	.....	.....	.....	.....	13	25
310 Anxiety Reaction	1	10	11	.....	.....	.....	3	3	3	.....	.....	.....	.....	13	20
311 Hysterical Reaction	2	1	3	.....	.....	.....	2	2	4	.....	.....	.....	.....	4	14
313 Obsessive-Compulsive Reaction	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	7
314 Neurotic-Depressive Reaction	16	17	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	7
318 Psychoneurotic Disorders	5	10	15	.....	.....	.....	2	2	4	.....	.....	.....	.....	16	17
320 Pathological Personality	2	2	4	24	14	38	19	5	24	.....	.....	.....	.....	7	33
321 Immature Personality .....	.....	.....	.....	1	4	7	3	3	3	.....	.....	.....	.....	8	20
322 Alcoholism	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27	115
323 Other Drug Addiction	8	1	9	69	7	76	19	1	20	.....	.....	.....	.....	5	11
324 Primary Childhood Behavior	3	5	8	1	.....	.....	4	.....	.....	.....	.....	.....	.....	100	109
325 Mental Deficiency .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
326 Other and Unspecified Disorders .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	12
025 General Paralysis of Insane	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	27
353 Epilepsy .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	3
688 Puerperal Psychosis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
793 Observation .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	196	240	436	111	41	152	99	66	165	31	100	475	378	853	853

TABLE 6
DISCHARGES DURING 1959 SHOWING DURATION OF RESIDENCE IN HOSPITAL

PSYCHOSIS	Under 3 mths.		Under 6 mths.		Under 9 mths.		Under 12 mths.		Under 18 mths.		Under 2 years		Over 2 years		TOTAL							
	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						
300 Schizophrenic Disorders	53	46	99	88	13	14	27	7	9	16	1	11	12	4	6	11	11	22	126	144	270	
301 Manic Depressive Reaction	11	16	27	3	13	16	2	2	1	1	1	1	1	1	1	1	1	1	15	24	39	
302 Involutional Melancholia	1	10	11	3	7	10	3	3	1	1	1	1	1	1	1	1	1	1	4	21	25	
303 Paranoia and Paranoid States	6	2	8	5	1	6	1	1	1	1	1	1	1	1	1	1	1	1	11	4	15	
304 Senile Psychosis	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	6
305 Presenile Psychosis	3	7	10	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
306 Psychosis with Cerebral Arteriosclerosis	14	2	16	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	12	16
307 Alcoholic Psychosis	7	3	10	3	6	9	2	2	2	2	2	2	2	1	1	1	1	1	1	13	12	21
308 Psychosis Other Demonstrable Etiology	10	2	12	1	1	2	3	3	1	1	1	1	1	1	1	1	1	1	1	13	12	25
309 Other and Unspecified Psychosis	1	5	6	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	13	17	20
310 Anxiety Reaction	2	1	3	1	2	2	3	1	1	1	1	1	1	1	1	1	1	1	4	10	14	14
311 Hysterical Reaction	1	2	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1	1	4	5	7	7
312 Obsessive-Compulsive Reaction	13	10	23	1	5	6	1	1	1	1	1	1	1	1	1	1	1	1	16	17	33	33
313 Neurotic-Depressive Reaction	5	8	13	3	3	3	2	2	2	2	2	2	2	1	1	1	1	1	6	13	19	19
318 Psychoneurotic Disorders	81	21	102	3	4	7	4	1	5	1	1	1	1	1	1	1	1	1	89	27	116	116
320 Pathological Personality	5	3	8	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	5	6	11	11
321 Immature Personality	96	9	105	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	9	109	109
322 Alcoholism	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
323 Other Drug Addiction	1	5	7	12	3	3	1	2	3	1	1	1	1	1	1	1	1	1	1	8	12	20
324 Primary Childhood Behavior	5	15	20	1	2	3	2	2	2	2	2	2	2	1	1	1	1	1	1	9	18	27
325 Mental Deficiency	3	3	3	3	3	3	3	2	2	2	2	2	2	1	1	1	1	1	3	3	3	3
326 Other and Unspecified Disorders	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2
025 General Paralysis of Insane	5	4	9	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	6	6	6	6
353 Epilepsy	688	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	14	5	19	19
793 Observation	14	4	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	5	19	19
Total	343	184	527	65	108	173	22	32	54	16	14	30	8	18	26	3	6	9	34	475	378	853

TABLE 7

DEATHS DURING 1959 BY ABRIDGED INTERNATIONAL STATISTICS CLASS

	Male	Female	Total
1. Tuberculosis of Respiratory System	2	....	2
3. Syphilis and Sequelae	1	....	1
17. All Other Diseases Classified as Infective and Parasitic.....	....	1	1
18. Malignant Neoplasms	3	1	4
19. Benign and Unspecified Neoplasms .....	....	1	1
20. Diabetes Mellitus	2	....	2
22. Vascular Lesions Affecting Central Nervous System .....	....	2	2
25. Chronic Rheumatic Heart Disease	4	6	10
26. Arteriosclerotic and Degenerative Heart Disease	10	3	13
27. Other Disease of Heart	2	....	2
28. Hypertension with Heart Disease .....	....	2	2
30. Influenza .....	....	1	1
31. Pneumonia	34	3	37
33. Ulcer of Stomach and Duodenum	1	....	1
45. Senility Without Mention of Psychosis, Ill-Defined, and Unknown Cause .....	....	1	1
46. All Other Diseases	8	5	13
Total	67	26	93

TABLE 8

DEATHS DURING 1959 BY PSYCHOSIS

	Male	Female	Total
300 Schizophrenic Disorders	13	6	19
301 Manic Depressive Disorders	3	3	6
302 Involutional Melancholia .....	....	1	1
303 Paranoia and Paranoid States	4	....	4
304 Senile Psychosis	10	5	15
305 Presenile Psychosis	1	....	1
306 Psychosis with Cerebral Arteriosclerosis	18	9	27
308 Psychosis of Other Demonstrable Etiology	5	1	6
309 Other and Unspecified Psychosis	6	1	7
325 Mental Deficiency	3	....	3
025 General Paralysis of Insane	4	....	4
Total	67	26	93

CHRONIC HOSPITALS

PROVINCIAL AUXILIARY MENTAL HOSPITAL, CLARESHOLM

PROVINCIAL AUXILIARY MENTAL HOSPITAL, RAYMOND

ROSEHAVEN, CAMROSE

The patients in the Provincial Auxiliary Mental Hospital, Claresholm, were moved into the newly constructed ward beginning in January. This new ward accommodates 12 additional patients, making the usual patient population 112. Twenty-two mental defectives were transferred from this hospital to Deerhome during the year. Forty patients were transferred from the Provincial Mental Hospital, Ponoka, to Claresholm in the course of the year. By virtue of the opening of the new ward and the transfer of the defectives to Deerhome, general conditions improved greatly. There were five deaths.

The Provincial Auxiliary Mental Hospital, Raymond, continued to care for a female population of 133, more or less. There was little movement of population during the year. Three patients were received by transfer from the Provincial Mental Hospital, Ponoka, and three were admitted directly from the community. There were two deaths.

Rosehaven, Camrose, cared for a daily population of approximately 510 men and women. The average age was over 80. All admissions were by transfer from the Provincial Mental Hospital, Ponoka, and the Provincial Mental Institute, Edmonton. Sixty-six patients (43 men, 23 women) were received from the former, and 54 patients (23 men, 31 women) from the latter. The deaths totalled 113 (63 men, 50 women). During the year leaves-of-absence were granted to some 45 patients.

PROVINCIAL AUXILIARY MENTAL HOSPITAL,
CLARESHOLM

R. R. MACLEAN, M.D., *Cert. in Neurol., and Psychiatry,*
F.A.P.A., *Cert. M.H.A. (A.P.A.)*

MOVEMENT OF PATIENTS

There were 98 patients in residence January 1, 1959, and there were 106 patients in residence December 31, 1959.

Forty patients were transferred to this hospital from the Provincial Mental Hospital, Ponoka.

Twenty-two patients were transferred from this hospital. Twenty-one patients were transferred to Deerhome, Red Deer. These were patients who were mentally deficient. One patient was transferred to the Provincial Mental Hospital, Ponoka, for medical reasons.

Three patients were discharged during the year.

There were five deaths during the year.

NEW BUILDINGS

The patients were transferred from the old ward to a newly constructed ward January 3, 1959. At present the old building is being used for the occupational therapy, and sewing room work.

The new ward has bright airy rooms and the colour schemes are very attractive. The building is all on one floor and the infirm and elderly patients do not have to climb stairs to get to their dormitories.

ACCIDENTS AND ELOPEMENTS

There were no elopements or accidents during the year.

GENERAL HEALTH

The necessary X-Ray and laboratory tests were done at the Municipal Hospital. A local physician made regular visits, and his interest has been greatly appreciated. The general health of the patients has been good.

OCCUPATIONAL DEPARTMENT

The Occupational Department maintained its high standard of work. The finished articles were sold to local residents throughout the year.

One ward aide was assigned to the deteriorated patients on the ward, and has encouraged them to do simple tasks, or some needle work, jig saw puzzles, or make scrap books.

A ward aide took a special group out to the garden and these patients enjoyed this form of occupation very much.

RECREATIONAL ACTIVITIES

Parties were held for Valentine's, Easter, Hallowe'en, and Christmas. Bingo, cards, and dancing were enjoyed by the patients. Sports day was held with the usual races, ball game, and outdoor lunch, and was enjoyed by all.

Christmas parties held during the festive season were enjoyed. The Carolers from town sang for the patients, which was enjoyed. Residents from town, and the staff drove the patients around to see the Christmas lights. Lunch was served after this outing.

The United Church Choir, and the Salvation Army visited the hospital. These visits were greatly enjoyed.

Gifts were received at Christmas from several groups, and helped make a happy time for the patients. A group from Granum, "adopted", eighteen patients, and have been sending them birthday cards and other gifts.

The Callow Coach from Lethbridge took the patients out every second week from June to October, weather permitting. These trips were greatly enjoyed by the patients. Following the drives local organizations entertained the patients for lunch.

The patients held a tea for representatives from each organization that had entertained them. This was very successful.

A group of ladies from town served a turkey dinner for eight patients, which was enjoyed; one resident served tea on several occasions.

Films were shown every week during the winter. Most of the patients attended these shows.

During the winter the patients went for daily walks, weather permitting. In the summer months all the patients were allowed out on the lawns twice a day.

BEAUTY PARLOUR

Many of the patients had their hair done regularly by the ward staff, and have been given permanents.

RELIGIOUS SERVICES

Local clergymen conducted services each Sunday afternoon. Roman Catholic services were conducted once a month.

DENTISTRY

The Dentist, from the Provincial Mental Hospital, Ponoka, visited the hospital in June and gave the necessary dental care. Emergency dental work was done by the local dentist.

FIRE PROTECTION

The buildings have been inspected by the fire inspector. Fire practices were held and equipment checked regularly.

BUILDINGS

The maintenance staff have made the necessary repairs to the buildings and equipment.

GARDENS AND GROUNDS

The vegetable crop was good.

VISITORS

The Visiting Board visited the hospital in October.

Dr. R. R. MacLean, Director, Division of Mental Health, visited the hospital several times and his help and advice were greatly appreciated.

Relatives and friends visited the patients during the year.

TABLE 1
MOVEMENT OF PATIENT POPULATION DURING 1959

	M	F	T	M	F	T
In Residence January 1, 1959	98	98
On leave or otherwise absent	2	2
ADMISSIONS:						
FIRST ADMISSIONS:						
(a) Voluntary
(b) Certificate
(c) Warrant
(d) M. D. Act
RE-ADMISSIONS:						
(a) Voluntary
(b) Certificate
(c) Warrant
(d) M. D. Act
Transfers	40	40	....	40	40
Total Admissions	40	40	....	140	140
SEPARATIONS:						
DISCHARGES:						
(a) As Recovered
(b) As Improved
(c) As Unimproved	3	3	....	3	3
Total Discharges	3	3	....	....	....
Transfers	22	22	....	22	22
Deaths	5	5	....	5	5
Total Separations	30	30
On leave or otherwise absent	110	110
In Residence December 31, 1959	4	4
In Residence December 31, 1959	106	106

TABLE 2
ORIGINAL DIAGNOSIS ON ADMISSION TO MENTAL HOSPITAL

	Male	Female	Total
03 Psychoses with Epidemic Encephalitis	2	2
08 Psychoses with Cerebral Arteriosclerosis	2	2
11 (a) Pre-Senile Psychoses	1	1
16 Psychoneuroses	1	1
17 Manic-Depressive Psychoses.....	4	4
18 Dementia Praecox (Schizophrenia)	75	75
19 Paranoia and Paranoid Conditions	9	9
21 Psychoses with Mental Deficiency	5	5
23 Without Psychoses	3	3
12 Involuntary Psychoses	1	1
05 Alcoholic Psychoses	2	2
10 Psychosis with Convulsive Disorder	1	1
01 General Paresis	2	2
123 Tabo-Paresis	1	1
309.2 Undiagnosed Psychosis	1	1
	110	110

TABLE 3
CAUSES OF DEATH DURING 1959
ABRIDGED INTERNATIONAL CLASSIFICATION

DISEASE	Male	Female	Total
31 Pneumonia	1	1
27 Other Diseases of Heart	2	2
22 Vascular Diseases of Central Nervous System	1	1
32 Bronchitis	1	1
Total	5	5

TABLE 4
CLASSIFICATION OF DEATHS ACCORDING TO ORIGINAL PSYCHIATRIC
DIAGNOSIS—1959

DISEASE	Male	Female	Total
Pre-senile Psychosis	1	1
Dementia Praecox—Catatonic	1	1
Psychosis with Convulsive Disorder—Idiopathic Epilepsy	1	1
Paranoia and Paranoid Conditions—Paraphrenia	1	1
Dementia Praecox—(Hebephrenic)	1	1
Total	5	5

PROVINCIAL AUXILIARY MENTAL HOSPITAL
RAYMOND

R. R. MACLEAN, M.D., *Cert. in Neurol. and Psychiatry,*
F.A.P.A., *Cert. M.H.A. (A.P.A.)*

MOVEMENT OF PATIENTS

On January first, 1959, there were 132 patients in residence. During the year there were three admissions and three patients received from the Provincial Mental Hospital, Ponoka. There were two deaths and two patients permitted home on parole leaving a total of 136 patients, (134 in residence and two on parole), as of December 31, 1959.

ACCIDENTS AND ELOPEMENTS

There were no elopements and no accidents except of a minor nature.

GENERAL HEALTH

The annual booster inoculation against Typhoid Fever was given to patients and staff in the spring. During the summer months the staff were given two inoculations of Salk Vaccine. Two patients developed malignant tumors which were removed by surgery. The dentist made his annual visit and cared for all the patients' teeth, three receiving new dentures. Emergency dental care was handled by the local dentist. A clinic of four Medical Doctors in the town of Raymond was on call, as was a Psychiatrist from Lethbridge. All patients were given a complete physical examination.

OCCUPATIONAL THERAPY

Patients were occupied in the laundry, sewing room, kitchen, Nurses' Home and in the wards and dormitories. A few patients helped to pick vegetables in the garden and one patient had the responsibility of gathering the eggs. There was a full time attendance by other patients in the Occupational Parlor where all kinds of needlework, knitting, rag rug making and darning was done. Tea was served each afternoon and a radio provided entertainment.

LIBRARY

The patients' library was situated in the Occupational Parlor which was also used as a reading room. One new book was added each month. The Raymond Town Library donated several magazines bound in five year lots, which proved most interesting and entertaining. Current issues of many popular magazines were provided through subscriptions or donations from local friends.

RELIGIOUS SERVICES

Both Catholic and United Church services were held at the hospital once monthly. These clergymen also presided at patients' funerals when required to do so.

RECREATION AND ENTERTAINMENT

The patients were delighted with the initiation of a monthly "Birthday Party" by the Lethbridge Ladies' Auxiliary to the Federation of Civic Employees. Each month these ladies brought a beautifully decorated birthday cake, cookies, a gift and card for each patient whose birthday fell in that month, and entertained them at tea. A new television set was purchased for the Annex which relieved the crowding in the main ward. The Callow Coach made weekly calls from early spring to late fall, taking patients for afternoon trips to nearby towns and beauty spots. Picture shows were shown on the ward once weekly during the winter months and bi-monthly in the spring and fall. The annual Sports Day was held and picnic suppers were served on the lawns. Several Chapters of the Independent Order Daughters of Empire and several United Farm Women's Associations from the various districts, the Lethbridge Mental Health Association and other community groups donated jewellery, clothing, home baking and money for treats. The Calgary Women's Auxiliary to retired Royal Canadian Mounted Police donated and mailed a Christmas parcel to each patient who habitually does not receive one from home or relations.

Special holidays were celebrated with a dance, concert or party. There was a radio and piano on the ward and also in the Annex sitting room.

STAFF CHANGES

The Public Health staff were granted the 40-hour work week requiring one ward aide and one kitchen maid being added to the staff complement. One member of the Public Works Boiler Room staff reached retirement age and this vacancy was satisfactorily filled.

VISITORS

Periodic visits of inspection were made by the Department of Public Health, Public Works, Fire Department and Fire Inspector, Electrical and Boiler Inspectors. The Director of the Division of Mental Health made several visits and the Provincial Visiting Board made its annual visit.

GARDENS AND GROUNDS

The vegetable gardens provided fresh vegetables all summer but needed considerable irrigation. The early killing frost in the fall destroyed much of the potato crop but did little damage to other winter vegetables. The lawns and flower beds were beautifully kept and as new beds for cut flowers were planted, the wards were abundantly supplied with bouquets. The hospital grounds were very attractive and many visitors commented pleasurably.

CONCLUSION

The general health of the patients was satisfactory and the hospital capacity was maintained.

DEPARTMENT OF PUBLIC HEALTH

TABLE 1
MOVEMENT OF PATIENT POPULATION DURING 1959

	M	F	T	M	F	T
In Residence January 1, 1959	132	132
ADMISSIONS:						
(a) Voluntary		1	1			
(b) Certificates		2	2			
(c) Warrant						
(d) Order						
(e) Transfer		3	3	...	6	6
RE-ADMISSIONS	138	138
SEPARATIONS:						
(a) As recovered						
(b) As improved						
(c) As unimproved						
(d) Transferred to other hospitals						
(e) Eloped						
(f) Deported						
(g) As with Psychosis						
(h) Deaths		2	2	...	2	2
In Residence December 31, 1959	136	136

TABLE 2
ORIGINAL DIAGNOSIS ON ADMISSION TO MENTAL HOSPITAL

	Male	Female	Total
300 Schizophrenic Disorders		78	78
301 Manic-Depressive Reactions		7	7
303 Paranoia and Paranoid States		11	11
304 Senile Psychosis		7	7
306 Psychosis with Arteriosclerosis		1	1
307 Alcoholic Psychosis—Chronic Alcoholic Hallucinations		1	1
308 Psychosis with other demonstrable Etiology (Epilepsy)		3	3
309 Other and Unspecified Psychosis		7	7
325 Mental Deficiency		19	19
326 Not Psychotic—Mental Deficiency with Psychoneurosis		1	1
025 General Paresis of Insane		1	1
Total		136	136

TABLE 3
CAUSES OF DEATH DURING 1959
ABRIDGED INTERNATIONAL CLASSIFICATION

CLASSIFICATION	Male	Female	Total
27 Disease of the Heart		1	1
31 Pneumonia		1	1
Total		2	2

TABLE 4
DEATHS BY ORIGINAL DIAGNOSIS

	Male	Female	Total
301 Manic-Depressive Reactions		1	1
308 Psychosis with Other Demonstrable Etiology (Epilepsy)		1	1
Total		2	2

ROSEHAVEN, CAMROSE

R. R. MACLEAN, M.D., *Cert. in Neurol. and Psychiatry,*
F.A.P.A., *Cert. M.H.A. (A.P.A.)*

MOVEMENT OF RESIDENTS

On January 1, 1959, the resident population at Rosehaven numbered 495, of which 281 were men and 214 were women. The total number in residence on December 31, 1959, was 503; 282 men and 221 women.

There were 168 residents admitted to Rosehaven during 1959. Of this number, 66 were received from the Provincial Mental Hospital at Ponoka, 54 from the Provincial Mental Institute at Edmonton, one was readmitted and 47 returned from leave of absence.

Separations from Rosehaven during 1959 numbered 170, 113 attributable to death, two were transferred to other mental institutions and 55 went on leave of absence.

Admissions throughout the year were in the form of transfers from other mental hospitals in Alberta and filled beds made available by death or discharge. The average daily population was 503.5.

Deaths were due to degenerative causes.

ACCIDENTS AND ELOPEMENTS

During the year a number of residents received injuries either from accidental falls or as a result of interference from other residents. Some of these resulted in contusions and lacerations of a minor nature and required only first aid treatment. There were 55 accidents which required medical care or X-ray investigation. These included 31 fractures, four dislocations, 14 X-ray investigations, three severe contusions and three suturings. Two residents left the grounds without permission and were returned by relatives or staff members.

GENERAL HEALTH

The general health of the residents was considered good in view of the age of the individuals. An increasing mental and physical decline in the majority of residents necessitated an increased amount of nursing care.

An average of 37.5 residents required bed care each day. During the year, 43 residents were admitted to St. Mary's Hospital for medical, surgical or orthopedic attention. Out-patient work done at St. Mary's Hospital for Rosehaven residents consisted of 146 laboratory procedures, 57 X-ray pictures and five electrocardiograms. 22 specimens were sent to the Provincial Laboratory. Nine residents attended the Tuberculosis Clinic for chest X-ray and examinations.

Medical care was supplied by the Smith Clinic of Camrose.

Dental care was given by the dentist from the Provincial Mental Institute, Edmonton. Emergency dental work was done by a local dentist.

OCCUPATIONAL THERAPY

Occupational therapy classes were operated throughout the year. Groups of men and women from each ward attended with an average of 58 residents at classes twice a week. A successful bazaar was held in November and the articles made by the residents sold readily. An average of 13 residents worked in institutional services; laundry, kitchen and garden. The average number employed on wards in light housekeeping tasks was 70.

RELIGIOUS SERVICES

Weekly Protestant Church services were held at Rosenaven and arranged by the local Ministerial Association. An average of 125 residents attended each Sunday. Roman Catholic services were held several times during the year.

RECREATION

Walking parties and lawn groups were taken out when weather permitted. An average of 125 residents had grounds privileges and were out almost daily. A movie film was shown once every two weeks from September to May with an average attendance of 140 residents. Parties in the form of bingo, tea dances and cards were arranged each month as well as special entertainment at Christmas, Easter and Thanksgiving holidays. Several picnic outings were arranged in the summer months. Cards, games, television and radios were available to residents. Several local organizations and church groups sponsored car rides, concerts and teas for the residents. Ex-servicemen were visited regularly by members of the Ladies' Auxiliary to the Canadian Legion who arranged outings for them. An increased interest in the residents was shown by outside groups.

BUILDINGS

The buildings have been well maintained and repairs were done promptly.

GARDEN AND GROUNDS

The garden and grounds were well maintained during the year.

STAFF

The general health of the staff was good. Vacancies arising from resignations were readily filled. All staff members received T.A.B. vaccine and the majority received Salk vaccine.

VISITORS

Regular visits were made to Rosehaven by the Director of Mental Health.

The annual visit was made by the Visiting Board.

TABLE 1
MOVEMENT OF POPULATION DURING 1959

	M	F	T	M	F	T
In Residence December 31, 1958				281	214	495
ADMISSIONS:						
From P.M.H., Ponoka	43	23	66			
From P.M.I., Edmonton	23	31	54			
Readmitted	1	...	1			
Returned from L.O.A.	10	37	47			
	<u>77</u>	<u>91</u>	<u>168</u>	<u>77</u>	<u>91</u>	<u>168</u>
				358	305	663
SEPARATIONS:						
Deaths	63	50	113			
Discharge to P.M.I. ....	...	1	1			
Discharge to P.M.H.	1	...	1			
On L.O.A.	12	33	45			
	<u>76</u>	<u>84</u>	<u>160</u>	<u>76</u>	<u>84</u>	<u>160</u>
In Residence December 31, 1959				282	221	503

TABLE 2
ORIGINAL DIAGNOSIS ON ADMISSION TO MENTAL HOSPITALS

300 Schizophrenic Disorders	111
301 Manic Depressive Reaction	25
302 Involutional Psychosis	2
303 Paranoia and Paranoid States	33
304 Senile Psychosis	164
305 Presenile Psychosis	1
306 Psychosis with Arteriosclerosis	112
307 Alcoholic Psychosis	2
308 Psychosis of Demonstrable Etiology	9
309 Other and Unspecified Psychosis	15
311 Hysterical Reaction	1
320 Pathological Personality	1
321 Immature Personality	1
322 Alcoholism	5
323 Other Drug Addiction	1
325 Mental Deficiency	7
024 Tabes Dorsalis	3
025 General Paralysis of Insane	5
026 Other Syphilis of Central Nervous System	3
930 Not Psychotic	2
Total	<u>503</u>

TABLE 3
CAUSES OF DEATH DURING 1959
ABRIDGED INTERNATIONAL CLASSIFICATION

DISEASE	Male	Female	Total
17. All other diseases classified as Infective and Parasitic	1	...	1
18. Neoplasms, Malignant	4	2	6
20. Diabetes Mellitus	1	...	1
22. Vascular Disease of Central Nervous System	3	7	10
26. Arteriosclerotic and Degenerative Heart Disease	15	6	21
31. Pneumonia	37	33	70
35. Intestinal Obstruction .....	...	1	1
38. Nephritis—Nephrosis	1	...	1
46. All other diseases	1	1	2
Total	<u>63</u>	<u>50</u>	<u>113</u>

TABLE 4
CLASSIFICATION OF DEATHS ACCORDING TO ORIGINAL PSYCHIATRIC
DIAGNOSIS—1959

DISEASE	Male	Female	Total
300 Schizophrenic Disorders: Catatonic	1	1	2
Paranoid	4	...	4
301 Manic Depressive Reaction	1	3	4
303 Paranoia and Paranoid States	3	1	4
304 Senile Psychosis	28	31	59
306 Psychosis with Arteriosclerosis	19	10	29
308 Psychosis with Demonstrable Etiology	1	1	2
309 Other and Unspecified Psychosis	1	...	1
322 Alcoholism .....	...	1	1
325 Mental Deficiency	1	1	2
025 General Paralysis of Insane	1	1	2
930 Not Psychotic	3	...	3
Totals	<u>63</u>	<u>50</u>	<u>113</u>

INSTITUTIONS FOR MENTAL DEFECTIVES

THE PROVINCIAL TRAINING SCHOOL, RED DEER

DEERHOME, RED DEER

The Provincial Training School's population decreased from 758 to 734 during the year, by virtue of transfers of patients to Deerhome. There were 71 (39 men, 32 women) transfers to Deerhome. There were 69 (48 male, 21 female) new admissions to the Training School. There were 11 deaths. The training program was maintained at a high standard of efficiency. There were 27 (11 male, 16 female) discharges.

The population of Deerhome increased from 335 (175 male, 160 female) to 675 (238 male, 437 female). Two hundred and thirty-six women were received from the Provincial Mental Hospital, Ponoka, 71 (39 men, 32 women) were received from the Provincial Training School, Red Deer, 26 (20 men, 6 women) from the Provincial Mental Institute, Edmonton, 21 women from the Provincial Auxiliary Mental Hospital, Claresholm, and 23 (12 men, 11 women) were admitted directly from the community. There were 10 (4 male, 6 female) discharges, and a large number of leaves-of-absence (223) granted. There were four deaths, all females.

Despite the fact that this institution was called on to care for some 200 psychotic women patients from the Provincial Mental Hospital, Ponoka, temporarily, it functioned very well in its dual capacity.

Two new dormitories, one the Infirmary, were opened and occupied and construction of women's staff quarters, an administration building, and a Public Works service building was commenced.

PROVINCIAL TRAINING SCHOOL,
RED DEER

L. J. LE VANN, L.R.C.P. *Edin.* L.R.C.S. *Edin.* L.R.F.P.S. *Glas.*,
Medical Superintendent

IN RESIDENCE, ADMISSIONS, DISCHARGES, DEATHS

Patient days this year totalled 277,260, the greatest number of trainees being in residence, 767.

69 new admissions were effected during the year, 48 males and 21 females. There were 15 readmissions and three transfers from Deerhome, two for surgery and one for the purpose of bed nursing.

Facilities were made by the Director of the Division of Mental Health to transfer a total of 73 patients, of the chronic custodial type, to Deerhome. These consisted of 33 females and 40 males. This relieved some of the urgent waiting list of the lower grade patients who present considerable difficulty in being cared for amongst the normal population.

27 patients were discharged to return to the community as partially or as wholly self-sustaining workers. There were 11 males and 16 females.

There were 11 deaths during the year, the major causes of death being cardio-vascular disease and respiratory infections.

APPLICATIONS FOR ADMISSION

171 new applications were received, again, predominantly lower grade patients. Of this list 17 were admitted on the basis of urgency.

EUGENICS BOARD VISITS, STERILIZATIONS, ETCETRA

The School was visited by the Eugenics Board on four occasions and 34 cases were presented. One patient was deferred and one patient was presented on behalf of the Deerhome Institution. In conformity with the Board's recommendations, 36 defective persons were sterilized, 33 from the Provincial Training School, two from Deerhome and one from Calgary. Of these, 19 were males and 17 females. 12 appendectomies were performed in relation to eugenics surgery and four miscellaneous surgical procedures carried out.

STAFF CHANGES AND ACTIVITIES

The staff picture was very healthy. There was no staff shortage and when vacancies occurred they were filled fairly readily at all levels, excepting, Medical Staff, Psychologist and Social Workers who continued to be in great demand and short supply.

HEALTH OF TRAINEES AND STAFF

The health of the School population and staff continued at a high level. Prophylactic medical measures continued this year as previous years, mainly, immunizations against polio-

myelitis, diphtheria, whooping cough and the enteric fevers. The mass X-ray survey of the School was carried out by the Alberta Tuberculosis Association and no cases of Tuberculosis were discovered in either patients or staff.

TRAINING PROGRAM FOR NURSES AND ATTENDANTS

This was continued as during the previous year, maintaining a high standard. During the years the study requirements were raised, yet despite this, considerable enthusiasm was shown by the augmented number of Attendants and Nurses taking classes leading to the Mental Deficiency Graduates' Diploma. 114 students were enrolled in the nursing course during the year.

TRAINING PROGRAM FOR TRAINEES

With minor variations, the training program was much like last year's, with the greatest emphasis being placed on studying the needs of each individual, his capabilities and how they might best be utilized to prepare him for discharge as a self-sustaining member of the community.

116 pupils attended academic classes during the year. Nine of these reached their peak of scholastic achievement and were graduated to full-time occupational and vocational training activities. Good progress was generally made by most of the children and 58 promotions to more senior classes were made in June.

The educational program included many field trips to areas in the community which included monthly shopping trips by the senior classes. Special efforts were made to give the trainees a better understanding of money and its purchasing value, by permitting them to make their personal purchases in the shops in Red Deer.

Traffic safety features were taught, such as the recognition of street signs, rules for pedestrians and in addition, the constant stress on the need for good behavior, courtesy and consideration for others.

The highlight of the school year was the performance of a play of approximately one hour's duration on the local T.V. station. There was favorable response from the public on the high level of performance and approval that retarded children could be trained to such a level of proficiency.

SENSE TRAINING

71 children attended Sense Training Classes for periods of approximately one to one and a half hours per day. The program here concerned itself mainly with teaching the children co-ordination, socialization, appreciation of rhythm, color distinction and practical living techniques, such as a simple courtesy, personal tidiness and cleanliness. 11 children were promoted from a junior to a senior sense training level.

RECREATIONAL ACTIVITIES

175 children attended recreational classes daily. The work of the Recreational department was made considerably easier

by the addition of new equipment, such as gym mats, swings and slides. 26 pairs of skates were also purchased for ice-hockey and skating.

The holiday festivities for recreation included Valentine's, St. Patrick's, Easter, Hallowe'en, Thanksgiving, Remembrance Day, Christmas and New Year's parties.

During Christmas week various groups of children were taken downtown around the city area to see the Christmas trees, lights and decorations.

Cinema performances were held during the fall and winter months and during the summer, one picture show was given each month for trainees who were unable to go home for various reasons.

Amongst the athletic activities there were broom ball, skating, sleigh riding and skiing, and during the summer baseball and football. Also during the summer months there were several weiner roasts, track and field events. 183 trainees attended the Red Deer Fair.

Arrangements were made with the City to give the School the facility of the City Swimming Pool and 30 children at a time attended swimming classes twice a week during June, July and August. Nine of these children completed their "Red Cross Safety Beginners' Water Test".

AGRICULTURAL ACTIVITIES

Agricultural instruction classes included 29 boys. In essence, training was directed towards giving the boys attending, the practical background of farm procedures and practices. Special attention was paid towards instructing the boys what must not be done and dangers to be avoided in relation to working with farm equipment.

During the summer months, the agricultural class followed the normal work pattern associated with summer work and during the fall were involved in harvesting procedures. The boys were taken to the Red Deer Hatchery and Farm Implement Shows to give them an opportunity to see aspects of agricultural activities not available at the School.

They were also instructed in preparing animals for agricultural shows and five purebred cows were entered in the Red Deer Show, entirely prepared by the trainees.

OCCUPATIONAL THERAPY

201 trainees attended the Occupational Therapy Department during the year, of which 53 were new members to classes. The average daily attendance was 110 children.

During the summer it was possible to enlarge the cooking classes and considerable proficiency was attained by 12 trainees who were able to prepare an entire meal without assistance. New classes in dressmaking were begun and many of the trainees made at least one garment for themselves. This was in conjunction with first visiting downtown to the dry goods shops

to choose a pattern and material. The trainees developed considerable proficiency in the use of sewing machines, both of the electrical and foot pedal variety. Two new sewing machines were purchased to enable larger groups to work simultaneously.

Handicrafts were also utilized by the department which included needlework, embroidery, basketry, rug-making, weaving, crocheting, knitting, toy making, raffia work, netting and knotting. At the end of July a number of articles were entered in the handicraft section of the Red Deer Fair and 14 prizes of first, second and third calibre were won, 11 in the adult and three in the junior classes.

VOCATIONAL TRAINING DEPARTMENT

It was possible to employ an Assistant Vocational Training Instructor with special training in carpentry and 48 boys received instruction in carpentry procedures. A new Planer with Motor was purchased during the year to achieve a higher standard of furniture making in which the trainees have become quite proficient. Additional practical training was given them at the Randall R. MacLean Cottages at Gull Lake, where they constructed a new septic tank.

All the prizes for wood turning at the Red Deer Fair were won by the trainees of the Training School. A large float entered in the Red Deer 75th Anniversary Commemoration Parade won an honorable mention.

Items made in vocational training included such things as nut bowls, lamps, tables, coffee tables, bird houses, end tables, hostess chairs, and a wide variety of garden furniture.

SHOEMAKING

The Shoemaker and some physically handicapped children continued to make all the necessary repairs on shoes for the Training School and the Deerhome Institution. It was possible through this service to give an incentive for activity to boys who might normally have had no other occupation.

EXTRA MURAL ACTIVITIES

During the year 123 children went home for Easter holidays, 235 went home for their summer holidays and 203 children went home for Christmas holidays.

The Teachers for Retarded Children in the Province of Alberta had their annual meeting at the Provincial Training School where the School demonstrated in teaching programs and workshop sessions effective methods in working with retarded children. Attending outside teachers were thus given the opportunity to view the wide horizons of teaching possible for retarded children.

The Parent School Organization augmented its membership and continued to be a useful and interested group devoted to the welfare of the trainees at the School.

A special TV program was held, in which members of the Training School staff presented the activities of the Nursing Staff

and Male Attendant Staff in relation to nursing retarded children and pointing out the interest and advantages of such a career.

SPECIAL TALKS AND PUBLIC RELATIONS

Senior staff participated in many meetings consisting of Home and School Associations, Service Clubs, Women's Institutes, in which talks on Mental Health, Mental Deficiency and "Choosing a Career", were involved. A total of 14 such talks and meetings was given.

NEW CONSTRUCTION

New construction consisted of a new Sense Training Building, giving four additional rooms which allowed further amplification of sense training activities, a 24-room addition to Male Staff Quarters, a Vocational Training and Occupational Therapy Building and necessary Ward renovation for the setting up of the Pilot Study for Emotionally Disturbed Children, Linden House.

STORES

The stores operation was improved by changing to a bin card system of perpetual inventory control. Also, the over-all stores inventory was increased by approximately 20% over the previous year. This made it possible to have items on hand at all times so that they were available when required; thus providing better service to the School.

More ready made items of clothing were added to the inventory; thus relieving the Linen Repair Room of some of their manufacturing work. The store facilities were quite adequate.

KITCHEN AND DINING ROOM

This department supplied well balanced diet to both trainees and staff members. Because the position of Dietitian was still vacant, the duties of this position have been carried out by the Chef and his Assistant.

Working conditions in the Kitchen were somewhat cramped due to the large increase of patients to the School. Arrangements were made for replacement of the old gas ranges and several steam kettles, which were beyond repair.

LAUNDRY AND LINEN REPAIR

The laundry was made generally more efficient by the complete renovation of all high pressure steam lines. A new set of steam presses was also installed. This improved the drying time of the tumblers, and enabled the mangle to be speeded up. Whereas last year it was necessary to send as much as 4,000 pounds of laundry to the Deerhome laundry daily, the greater laundry change-over reduced this by some 2,000 pounds per day. Facilities were made for Laundry Staff members to attend a technical school for "Wash Floor Operators".

The Linen Repair Room functioned satisfactorily and mended linens and as well personal trainee clothing. Some articles of

clothing were also manufactured, but less than last year, since it was found that many linen items could be purchased on a tender basis just as economically, if not more so, than buying bolts of cloth and having the clothing item manufactured locally.

Two of the older obsolete sewing machines were replaced with new tailor model machines.

FARM

The cereal crop acreage was not as great as last year due to relinquishing a large area of arable land to the Deerhome Institution. The grain crop was further diminished by extensive hail in July. Although the premature snow during the harvest season created difficulties in harvesting, the crop nearly all was harvested before the end of the year. Hay crops yielded fairly well on first cuttings. The second cut of hay crop was fairly light and could not be taken off in good condition due to unfavorable weather.

The milk yield was somewhat lower, due to the fact that some of the cows were considerably past their best milk production and could, with advantage, be culled.

The poultry flock was replaced with a special pedigree type of hybrids and the egg production was up to nearly 80% for this group of birds. The farm staff also provided all the necessary tractor and farm machinery work for the Deerhome Institution.

GARDEN AND GROUNDS

Hail caused some damage to the potato and vegetable crops, although the yield was in excess of what was anticipated. The harvested potato crop will provide the school with adequate potatoes until next year's crop becomes available.

Additional areas around new buildings were landscaped, partially by contract and partially by the School's garden staff.

An additional lean-to area at the Greenhouse was erected by the Vocational Training class in the spring.

Approximately half of the streets in the School were paved and a new parking area was paved immediately west of the Recreational Hall.

GARBAGE DISPOSAL

Garbage disposal was felt to be somewhat inefficient due to the fact that the dry garbage was collected, placed in the farm truck and driven to the City Dump, two or three times a day. However, the plans for building an incinerator on the school grounds made considerable progress and it was anticipated that this travelling time used in disposal of garbage would be eliminated shortly.

VISITORS

Visitors to the School consisted of the Honorable Dr. J. Donovan Ross, who visited on several occasions, the Director of the Division of Mental Health, Dr. Randall R. MacLean and the

Deputy and Assistant Deputy Ministers of Health. The School was also visited by medical students in their fourth year of Medicine from the University of Alberta, Guidance Clinic personnel and members of University staffs from various areas in Canada.

WARDS

General maintenance was carried out on all Wards and Buildings as required by the Service Departments under the direction of the Maintenance Foreman.

FIRE SERVICE

The fire brigade consisting of 23 men was available on a twenty-four hour duty system.

Fire fighting equipment was maintained and a Simese Coupling was added which enables water to be taken directly from the tank house for use within the farm area.

The School brigade participated in Fire Prevention Week with the City Fire Department during the month of October.

The services of the brigade were called upon by the Deerhome Institution on three occasions.

During the year inspections were carried out by the Fire Commission Staff and the City Fire Inspector, of all equipment.

APPRECIATION

The Medical Superintendent would like to express his deep appreciation to the Honorable Dr. J. Donovan Ross, Minister of Health, and Dr. Randall R. MacLean, Director, Division of Mental Health, for all the help and encouragement given to maintain the high standards of care extant at the School. He would also like to thank all the members of his staff who worked so assiduously in maintaining the well being of the trainees and devotion towards their work.

TABLE 1

MOVEMENT OF FEEBLEMINDED POPULATION

	M	F	T	M	F	T
Defectives on books of Institution as at 1st January, 1959				402	356	758
ADMISSIONS:						
1. First Admissions—Voluntary	48	21	69			
2. Re-admissions	8	7	15			
3. Transfers—1 from Deerhome		1	1			
2 from Deerhome for Surgery..	1	1	2			
Total number of admissions	57	30	87	57	30	87
Total number of Defectives on the books during 1959				459	386	845
SEPARATIONS:						
1. Discharges	11	16	27			
2. Transfers—33 F. to Deerhome						
40 M. to Deerhome	40	33	73			
3. Deaths	5	6	11			
Total number of separations	56	55	111	56	55	111
Defectives on books of the Institution at 31st December, 1959				403	331	734

TABLE 2
AGE OF RESIDENT POPULATION CLASSIFIED WITH REFERENCE TO MENTAL STATUS

AGE GROUP	IDIOT			IMBECILE			MORON			BORDERLINE			TOTALS		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	0-4	12	10	22	36	30	66	6	36	42	6	3	9	54	40	94
5-9	18	11	29	69	45	114	58	33	91	6	3	9	151	95	246
10-14	21	19	40	50	34	84	33	35	68	1	1	2	104	89	193
15-19	14	11	25	24	24	48	6	8	14	1	1	2	44	43	87
20-24	11	1	12	13	13	26	3	5	8	1	1	2	20	19	39
25-29	4	1	5	5	10	15	1	2	3	1	1	2	12	16	28
30-34	6	2	8	4	4	8	1	1	2	1	1	2	9	6	15
35-39	5	4	9	3	6	9	1	1	2	1	1	2	4	4	8
40-44	1	2	3	3	2	5	1	1	2	1	1	2	3	5	8
45-49	1	1	2	1	5	6	1	1	2	1	1	2	1	6	7
50-54	1	1	2	1	2	3	1	1	2	1	1	2	1	1	2
55-59	1	1	2	1	5	6	1	1	2	1	1	2	1	1	2
60-64	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
Totals	90	66	156	199	173	372	107	88	195	7	4	11	408	331	734

TABLE 3
MENTAL STATUS OF FIRST ADMISSIONS, READMISSIONS AND TRANSFERS

Mental Status	First Admissions			Readmissions			Transfers			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T
Idiot	10	5	15	.....	.....	.....	.....	.....	.....	10	5	15
Imbecile	21	13	34	4	2	6	1	2	3	26	17	43
Moron	16	3	19	4	5	9	.....	.....	.....	20	8	28
Borderline	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	1
Totals	48	21	69	8	7	15	1	2	3	57	30	87

TABLE 4
AGE GROUP OF FIRST ADMISSIONS, READMISSIONS AND TRANSFERS

Age Group	First Admissions			Readmissions			Transfers			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T
5-9	20	9	29	1	.....	1	.....	.....	.....	21	9	30
10-14	23	10	33	1	.....	1	.....	.....	.....	24	10	34
15-19	5	2	7	1	2	3	1	.....	1	7	4	11
20-24 .....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	1
25-29 .....	.....	.....	.....	5	2	7	.....	1	1	5	3	8
30-34 .....	.....	.....	.....	.....	1	1	.....	1	1	.....	2	2
35-39 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40-44 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
45-49 .....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	1
Totals	48	21	69	8	7	15	1	2	3	57	30	87

TABLE 5
CAUSES OF DEATH DURING 1959
ABRIDGED INTERNATIONAL CLASSIFICATION

CLASSIFICATION	Male	Female	Total
26. Arteriosclerotic and Degenerative Heart Disease	2	1	3
31. Pneumonia	2	1	3
41. Congenital Malformations .....	.....	1	1
46. All Other Diseases (Status Epilepticus)	1	3	4
Total	5	6	11

TABLE 6
DEATHS BY INTELLIGENCE LEVELS

CLASSIFICATION	Male	Female	Total
Idiot	1	2	3
Imbecile	1	3	4
Moron	3	1	4
Total	5	6	11

TABLE 7
DENTAL CARE

Examinations	1382
Extractions, Local Anaesthetics	134
Extractions, General Anaesthetics	88
Fillings—	
Ag	85
Porcelain	12
Dentures—	
Complete	1
Partial	2
Repairs	4
Gold Inlays	1
X-rays	20
Gingivectomies	1
Scalings	5
Impressions	6

DEERHOME, RED DEER

R. R. MACLEAN, M.D., *Cert. in Neurol. and Psychiatry*,
F.A.P.A., *Cert. M.H.A. (A.P.A.)*

MOVEMENT OF RESIDENTS

On 31st December, 1959, the patients at Deerhome numbered 675, of whom 238 were men and 437 were women. Thirty-three others were on leave-of-absence.

There were 381 patients admitted to Deerhome during the year of 1959. Of this number 71 were transfers from the Provincial Training School, Red Deer; 26 were from the Provincial Mental Institute, Edmonton; 236 were from the Provincial Mental Hospital, Ponoka; 21 were from the Provincial Auxiliary Mental Hospital, Claresholm; 23 were direct admissions and four were re-admissions.

A total of 192 women patients were transferred from the Provincial Mental Hospital, Ponoka, on a temporary basis.

Separations from Deerhome numbered 20 during the year. Of these ten were discharged, one was transferred to the Provincial Mental Institute, Edmonton, four to the Provincial Mental Hospital, Ponoka, and one to the Provincial Training School, Red Deer. There were four deaths.

ACCIDENTS AND ELOPEMENTS

During 1959, a number of patients received injuries through accidents. Many minor contusions and lacerations resulted, which required only first aid treatment. A number of epileptic patients sustained lacerations requiring suturing. As well as these there were eight fractures. These included four fractured femurs, two of which required pinning at the Red Deer Municipal Hospital, and two fractured ankles, one of which required reduction and the application of a cast at the latter hospital.

One patient eloped and was returned by the police.

GENERAL HEALTH

The general health of the patients was good. Medical care was provided by the Parsons Clinic, Red Deer, twice weekly, and in the interim supervision was carried out by a Registered Nurse. This arrangement was quite satisfactory. Beginning in April, 1959, a member of the Medical Staff of the Provincial Mental Hospital, Ponoka, visited regularly and interviewed and prescribed treatment for the psychotic patients. Several patients were given Electro Convulsive Therapy at the Provincial Training School, Red Deer. One female patient and one male patient were sterilized at the Provincial Training School, following presentation to the Eugenics Board.

Physical examinations, blood work and urinalyses were carried out on all admissions, and conditions discovered were appropriately treated.

All patients but three were X-rayed by the Mobile Chest Clinic in November and one person was found to have active tuberculosis. She was transferred to the Provincial Mental Institute, Edmonton, for treatment.

Dental Clinics were held quite regularly. Many fillings and treatments, as well as 101 extractions, were done. The dentist made a complete dental survey of the patient population during July.

The local ophthalmologist examined several patients who had received eye injuries. All were successfully treated.

OCCUPATIONAL THERAPY

A small occupational therapy department was opened in February for approximately 60 patients who were divided into small morning and afternoon classes. In July this group was increased to 80 patients. Starting with simple knitting and embroidery, the department expanded to include weaving, leather and copper work, basketry, rug-hooking and other crafts. In November a very successful sale of this handiwork was held.

Fifty-six male patients and 19 females worked in the laundry, kitchen and at outside work such as snow shovelling, field work and gardening. Approximately 69 men and 72 women patients assisted with the work on the wards.

Several women and men patients were permitted to do gainful work in the nearby City of Red Deer.

RELIGIOUS SERVICES

The Red Deer Ministerial Association continued to provide weekly Protestant Church Services during 1959, except during the months of July and August. These were attended by an average of 115 patients. The Roman Catholic priest was provided with a list of all Roman Catholic and Greek Catholic patients and visited a number of them. No regular Roman Catholic Service was held.

RECREATION

Walking parties were taken out every suitable day. Group and single special privileges were given to suitable patients—approximately 45 receiving “group privileges” and 73 receiving “single privileges”.

During the winter, weekly dances were held on Saturday afternoons, with music being provided by radio, records, or patients playing their own instruments. Four evening dances were held at suitable intervals, the music being provided by an orchestra. The skating rink was in frequent use for skating parties and casual skating. Selected male patients attended local hockey games.

Large parties of patients attended the Shriners' Circus and the Red Deer Fair.

Summer activities included ball games, wiener roasts and a sports' day, held on the hospital sports ground.

At Christmas small concerts, sing-songs and carol singing by City Choirs and Clubs entertained the patients. "Santa Claus" arrived early Christmas morning and distributed gifts. Wherever and whenever possible the entertainment was designed to include as many of the patients as possible.

Television sets, radios and record players provided many hours of entertainment.

BUILDINGS

Two new dormitories were opened and occupied. The construction of women staff quarters and the administration building was commenced. A service building for the Public Works Department was built and occupied, releasing considerable space in the Stores department. An incinerator was built and put into use.

GARDENS AND GROUNDS

Several areas around the completed buildings were landscaped. Considerable kitchen produce was grown in the gardens surrounding the Institution.

STAFF

In general the health of the staff was good. Some home visits were made in cases where there seemed to be an excessive amount of incidental illness. Chest X-rays were done on staff by the Mobile Clinic in November, and members were notified if follow-up work was necessary. No active tuberculosis was discovered.

The routine administration of T.A.B.T. vaccine and poliomyelitis vaccine was available to all staff members, and staphylococcus toxoid was given where recommended by a physician.

There was no difficulty in filling vacancies or in obtaining staff for new wards.

VISITORS

The Minister of Public Health and the Assistant Deputy Minister visited Deerhome during the year.

The Director of the Division of Mental Health visited regularly.

The annual visit was made by the Provincial Hospital Visiting Board.

TABLE 1
MOVEMENT OF POPULATION DURING 1959

	M	F	T	M	F	T
In Residence 31st December, 1958	175	160	335	175	160	335
ADMISSIONS:						
From P.M.H., Ponoka .....	...	236	236			
From P.T.S., Red Deer	39	32	71			
From P.M.I., Edmonton	20	6	26			
From Claresholm .....	...	21	21			
Direct	12	11	23			
Re-admitted	2	2	4	73	308	381
Returned from L.O.A.	103	99	202			
Returned from P.M.H. ....	...	1	1			
Returned from R.D.M.H.	7	4	11			
Returned from P.T.S.	3	1	4	113	105	218
	361	573	934	361	573	934
SEPARATIONS:						
Formal Discharges	4	5	10			
On L.O.A.	109	114	223			
Deaths .....	...	4	4			
To P.M.H. for Treatment or Surgery .....	...	5	5			
To Red Deer Municipal Hospital	7	4	11			
To P.T.S. Municipal Hospital	3	2	5			
To P.M.I. ....	...	1	1			
	123	136	259	123	136	259
Total in Residence 31st December, 1959				238	437	675

TABLE 2
ORIGINAL DIAGNOSIS ON ADMISSION TO MENTAL HOSPITAL

325.0 Idiocy	65
325.1 Imbecility	229
325.2 Moron	102
325.3 Borderline Intelligence	7
325.4 Mongolism	23
325.5 Mental Deficiency, other and unspecified types	2
309.2 Mental Deficiency with Psychosis:	
Idiot	1
Imbecile	26
Moron	29
Borderline	2
Other	5
	63
300.0 Schizophrenia, Simple type	6
300.1 Hebephrenic type	12
300.2 Catatonic type	95
Catatonic type on M.D. basis	23
300.3 Paranoid type	23
300.7 Other and unspecified	2
301.0 Manic Depressive, Manic and circular (inc. 1 on M.D. basis)....	13
301.1 Depressive	3
301.2 Other	1
302 Involutional Melancholia	2
303 Paranoia and Paranoid States	15
304 Senile Psychosis	1
305 Presenile Psychosis	1
306 Psychosis with Cerebral Arteriosclerosis	2
307 Alcoholic Psychosis	1
308.1 Psychosis with Convulsant Disorder	10
308.5 Psychosis with Huntington's Chorea	1
308.7 Traumatic Psychosis—Epilepsy	1
318.3 Psychoneurosis—Neurasthenic	1
020.1 Juvenile Neurosyphilis	1
025 General Paralysis of Insane (Syphilitic Meningoencephalitis)	3
*Total	708

*This total includes 33 patients who were on Leave-of-Absence from Deerhome on December 31st, 1959.

DEPARTMENT OF PUBLIC HEALTH

Table 3

CAUSES OF DEATH DURING 1959
ABRIDGED INTERNATIONAL CLASSIFICATION

DISEASE	Male	Female	Total
46. All other Diseases	1	1
22. Vascular Lesions Affecting Central Nervous System	2	2
26. Arteriosclerotic and Degenerative Heart Disease	1	1
Total	4	4

TABLE 4

CLASSIFICATION OF DEATHS ACCORDING TO ORIGINAL PSYCHIATRIC
DIAGNOSIS—1959

DISEASE	Male	Female	Total
Schizophrenic Disorders	1	1
Mental Deficiency	3	3
Total	4	4

THE EUGENICS BOARD

The Eugenics Board for the Province of Alberta held ten meetings during the year 1959. These meetings were held at the Provincial Mental Hospital, Ponoka, the Provincial Training School, Red Deer, and the Provincial Mental Institute, Edmonton. The dates of the meetings held during 1959 were as follows:

January 28th, 1959	-	The Provincial Mental Hospital, PONOKA
January 28th, 1959	-	The Provincial Training School, RED DEER
March 24th, 1959	- -	The Provincial Mental Institute, EDMONTON
March 25th, 1959	- -	The Provincial Mental Hospital, PONOKA
March 25th, 1959	- -	The Provincial Training School, RED DEER
May 22nd, 1959	- - -	The Provincial Mental Hospital, PONOKA
May 22nd, 1959	- - -	The Provincial Training School, RED DEER
September 1st, 1959	-	The Provincial Mental Hospital, PONOKA
October 27th, 1959	- -	The Provincial Mental Hospital, PONOKA
October 29th, 1959	- -	The Provincial Mental Institute, EDMONTON

The Board considered a total of 95 cases, one of which was deferred because it did not fall within the scope of The Sexual Sterilization Act. Of the 94 cases which were passed by the Board in accordance with The Sexual Sterilization Act (1955-C. 311, S.5), 32 were male and 62 female. Of this number, 31 were passed subject to their own consent.

Of the 94 cases passed by the Board during the year, 54 had first been examined at a Provincial Guidance Clinic, although some of these had been institutionalized prior to presentation. This group of 54 cases was made up of 23 males and 31 females.

OPERATIONS

Operations were performed on 90 cases during the year, 40 being male and 50 female. All of these operations were performed at the Provincial Mental Institute, Edmonton, the Provincial Mental Hospital, Ponoka, and the Provincial Training School, Red Deer.

The surgical operations mentioned above were performed by the surgeons of the Board, Dr. J. Ross Vant, of Edmonton, and Dr. R. M. Parsons, of Red Deer.

APPRECIATION

As in previous years, the Eugenics Board wishes to express thanks and sincere appreciation to the Director, Division of Mental Health, to the Medical Superintendents and their staffs, to the surgeons, and to the Guidance Clinics, for their cooperation in connection with the work of the Eugenics Board.

TABULAR SUMMARY

A tabular summary of the work of the Provincial Eugenics Board to December 31, 1959, is appended.

CASES PRESENTED AND PASSED

(To December 31, 1959)

Years	YEARLY TOTALS			CUMULATIVE TOTALS		
	Male	Female	Totals	Male	Female	Totals
1929-1933	87	201	288	87	201	288
1934-1938	557	438	995	644	639	1283
1939-1943	339	299	638	983	938	1921
1944-1948	237	311	548	1220	1249	2469
1949-1953	187	239	426	1407	1488	2895
1954	41	40	81	1448	1528	2976
1955	61	48	109	1509	1576	3085
1956	38	34	72	1547	1610	3157
1957	46	82	128	1593	1692	3285
1958	116	71	187	1709	1763	3472
1959	32	62	94	1741	1825	3566

OPERATIONS ONLY

(To December 31, 1959)

Years	YEARLY TOTALS			CUMULATIVE TOTALS		
	Male	Female	Totals	Male	Female	Totals
1929-1933	48	158	206	48	158	206
1934-1938	198	240	438	246	398	644
1939-1943	122	151	273	368	549	917
1944-1948	87	124	211	455	673	1128
1949-1953	84	162	246	539	835	1374
1954	37	25	62	576	860	1436
1955	45	25	70	621	885	1506
1956	22	24	46	643	909	1552
1957	49	33	82	692	942	1634
1958	54	53	107	746	995	1741
1959	40	50	90	786	1045	1831

NATIONAL HEALTH GRANTS

Since 1948 the Federal Government has made a series of Health Grants available to the provinces. These relate to various specific problems such as General Public Health, Venereal Disease Control, Hospital Construction, etc. Within these grants the province may prepare a project in which it is proposed that a new health service may be financed. If the project comes within the terms of the federal regulations, it is approved by the federal authorities and the money becomes available to reimburse the province for its expenditure.

In most of the grants the project covers the entire cost of the service as outlined in the project but it is required by the federal authorities, that their grant be matched in the Venereal Disease, Cancer Control, Laboratory and Radiological Services and Hospital Construction Grants, except for equipment and professional training supplied under these grants.

The following table shows the amount of these grants for 1959/60, the amount that was committed under the various projects, the amount actually expended and the percentage of the various grants that was expended.

NATIONAL HEALTH GRANTS
ALBERTA
1959-1960

Grant	Amount of Grant	Amount Committed	Amount Expended	Percentage of Grant Expended
Crippled Children	37,619.00	37,619.00	37,619.00	100%
Professional Training	37,619.00	37,566.17	36,530.44	97.1%
Hospital Construction	1,640,411.00	810,026.66	402,333.32	24.5%
Venereal Disease Control	37,619.00	37,619.00	37,619.00	100%
Mental Health	997,871.00	997,019.32	985,102.42	98.7%
Tuberculosis Control	255,243.00	255,243.00	254,225.76	99.6%
General Public Health	652,675.00	652,675.00	652,675.00	100%
Cancer Control	253,583.00	253,583.00	253,583.00	100%
Laboratory and Radiological Services..	67,325.00	62,991.91	56,335.02	83.6%
Medical Rehabilitation	73,137.00	33,662.45	32,269.70	44.1%
Child and Maternal Health	142,451.00	137,669.74	134,299.53	94.2%
TOTALS	\$4,195,553.00	\$3,315,675.25	\$2,882,592.19	68.7%

NOTE: The Hospital Construction Grant is an accumulative grant and new projects under planning will eventually use up all available funds.

BLOOD TRANSFUSION SERVICE

D. I. Buchanan, M.D., D.P.H., Edmonton

E. W. Nation, M.B., M.R.C.P., Calgary

In spite of increasing demands from our hospitals on this Service, 1959 proved to be a remarkably good year in which the donor response was such that well over 60,000 units of blood were collected by our hard-working teams.

We cannot over-estimate the very significant part taken by many volunteers in this achievement, whether as individuals, or as groups and committees working towards better clinics, as indicated by the following statistics.

TABLE 1
BOTTLES COLLECTED, 1959

Jan. 1 to Dec. 31 (inclusive)	Permanent and City Mobiles	Mobile Clinics		
Northern Alberta	16,100	13,437	=	29,537
Southern Alberta	14,683	17,211	=	31,894
TOTAL	30,783	30,648		61,431

Requests for fresh blood, taken specially for individual patients and often at hours separate from our planned clinics, continue to grow in number and in frequency. It is our opinion that all bottles should be silicone-coated, and we have not been impressed by the plastic packs currently available for blood collection. Apart from this, a close watch must still be kept on "weekly quotas" at clinics, to average about 700 donations per week for each of the two centres in Edmonton and Calgary.

BLOOD TRANSFUSIONS

The number of blood transfusions administered, and the number of patients receiving these transfusions are listed in Table 2.

TABLE 2
TRANSFUSIONS OF WHOLE BLOOD, 1959

Jan. 1 to Dec. 31 (inclusive)	Blood Transfusions Administered	Patients Transfused
Northern Alberta	21,729	9,422
Southern Alberta	15,973	7,114
TOTAL	37,702	16,536

(The statistics in Table 2 indicate the actual **usage** of blood, as compared to **demands**—thus, in Edmonton and the north 26,018½ bottles of blood were cross-matched and issued, plus another 3,073½ bottles of group O "bank blood" held at the hospitals for emergencies.)

PLASMA

Freshly frozen plasma continues to be much in demand for patients suffering from hemophilia, etc. Thus, 249 bottles of freshly frozen plasma were prepared in Edmonton and adminis-

tered to 47 patients. From Calgary, 335 pools, and from Edmonton, 239 pools of liquid plasma were shipped to the Connaught Laboratories during 1959 for fractionation.

Rh. Antenatal, and Other Blood Group Investigations

When most people think of the Red Cross, they most probably think of the donor and transfusion services only, and it is possible that the Rh investigation service and its considerable impact on antenatal and postnatal care is completely overlooked. Yet over 40,000 antenatal and postnatal blood samples were tested for major group, Rh type, and the sera screened, where indicated, for anti-Rh and other irregular antibodies in the Edmonton or Calgary laboratories during 1959, as shown in Table 3.

TABLE 3
Rh. AND OTHER INVESTIGATIONS, 1959

Jan. 1 to Dec. 31 (inclusive)	Antenatal Specimens and Others Investigated
Northern Alberta	24,763
Southern Alberta	16,046
TOTAL	40,809

In summary, it was found that in 1959 the voluntary donor response increased from 56, 872 in 1958 to 61,431 in terms of blood donations. During the same period, 16,536 patients received whole blood transfusions, and additional numbers received plasma or plasma fractions. Finally, over 40,000 patients' blood specimens were sent in for Rh or other investigations—again the greatest number received so far during any one year.

The Government of the Province of Alberta again provided a substantial grant to the Blood Transfusion Service for 1959, and we are most grateful for all the assistance given in maintaining the two depot buildings in good working order.

The "pilot project" that was started in Edmonton in 1957, in which a small number of student technicians are trained annually in the specific field of blood grouping and associated techniques, continues in force and in value.

We know of no situation in which the whole framework and substance of a vital service is so dependant upon the goodwill and understanding of the public, hospital groups, the Government, and volunteers alike. We feel sure that the B.T.S. will continue to earn this high regard.

PART II

ANNUAL REPORT

OF THE

HOSPITALS DIVISION

OF THE

**DEPARTMENT OF PUBLIC HEALTH
PROVINCE OF ALBERTA**

1959

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HOSPITALS DIVISION

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Introduction

The Alberta Hospitalization Plan was introduced in the Province on April 1, 1958, replacing the Provincial-Municipal Hospitalization Plan which dated back to July 1, 1950.

The present annual report is a factual analysis of the various aspects of Hospitalization and hospital experience in Alberta during 1959 under the Plan. Comparative analysis with previous years are made whenever comparable statistics were available.

The annual report is divided into 3 parts and an appendix. Part I describes the Alberta Hospitalization Plan and deals with its administration, coverage, benefits, and methods of financing. Part II provides general information on approved general hospitals. Part III provides financial information on approved general hospitals. The Appendix contains statistical tables by individual hospitals from which the 1959 hospitalization data in the body of the report were derived.

Part I. THE ALBERTA HOSPITALIZATION PLAN

1. ADMINISTRATIVE RESPONSIBILITY

The Hospitals Division of the Department of Public Health is responsible for administering the Alberta Hospitalization Plan as set out under The Hospitalization Benefits Act.

The duties and powers of the Hospitals Division extend to include the approval of location and construction of hospitals; the training of hospital personnel to the extent that training costs are treated as hospital costs; the determination, approval and maintenance of adequate standards of service rendered within a hospital; the provision of consulting services involving the operation of a hospital to the extent and at such times as it is considered necessary; the inspection and supervision of hospitals the paying of hospitals for insured services and the approval of rates determined; the approval of all hospitals; the administration and enforcement of the regulations made by the Lieutenant Governor-in-Council under The Hospitalization Benefits Act; the administration of the Agreement with the Government of Canada respecting contributions under the Hospital Insurance and Diagnostic Services Act; and the administration and enforcement of The Hospitalization Benefits Act, The Municipal Hospitals Act, The Maternity Hospitalization Act and The Private Hospitals Act.

The Hospitals Division maintains a close supervision of administration of hospitals. The Municipal Hospitals Act governs the election of hospital boards of municipal hospitals and the Division establishes the number of members comprising each board. The appointment of Secretary-Treasurers and Auditors must be approved by the Division. In 1959, a hospital accounting school was held to instruct secretary-treasurers and accountants in uniform hospital accounting.

2. COVERAGE

In-patient Services

Under The Alberta Hospitalization Plan all persons who are legally entitled to reside in Canada and who make their home and are ordinarily present in the Province of Alberta, together with their dependents, are entitled to insured services at any approved hospital of their choice.

Indians, on or off a reserve, are considered residents of the Province for hospitalization purposes and are eligible for hospital benefits under the Alberta Hospitalization Plan. Prior to July 1, 1958, the Federal Department of National Health and Welfare had assumed responsibility for the hospitalization costs of Treaty Indians hospitalized in the active treatment hospitals of Alberta.

A minority of Alberta residents are excluded from benefits under the Plan. These are residents who are entitled to receive hospital benefits from the Government of Canada or from the Workmen's Compensation Board, and residents who are no longer in need of hospital care.

A resident of Alberta moving to another Province participating in hospitalization insurance is covered under the Alberta Plan for the period it takes to become eligible for insured benefits in the new Province. The amount paid for hospital benefits in such a case will be commensurate to the cost of hospitalization, less authorized charges, in a hospital of equivalent size in Alberta.

Persons moving to Alberta from other Provinces which extend hospital benefits to their residents for a period after moving from the Province are not eligible for benefits under the Alberta Plan until the entitlement from the Province from which they have moved has expired.

Alberta residents who move their residence to a Province that has not entered into a hospitalization agreement with the Government of Canada, or move their residence to another country, are covered until they reach their new place of residence in Canada, or until they reach the point of exit from Canada. Persons moving to Alberta from Provinces which do not extend hospital benefits to their residents are automatically covered under the Alberta Plan the day they enter the Province.

The Alberta Hospitalization Plan provides hospital benefits to the residents of Alberta hospitalized outside the Province where treatment received is an emergency or referred case, or where the hospital in which the patient is hospitalized is more accessible than one of the approved hospitals of Alberta.

An emergency case means a person eligible for benefits under the Alberta Plan who, while temporarily away from Alberta, becomes acutely ill and needs active treatment hospital care, but because of his condition is incapable of returning to a hospital in Alberta. A referred case is a resident who has been referred to a hospital elsewhere than in Alberta by an Alberta doctor for treatment of a condition which has been certified by the College of Physicians and Surgeons of Alberta as being unavailable in this province.

"Temporarily away" refers to those residents of the Province who are absent from Alberta on holiday, visit, educational or business engagement for a period of not longer than twelve consecutive months and who intend to return to Alberta. The twelve month period does not apply to residents who leave Alberta for furthering their education and families of members of the Canadian Armed Forces who were residents of Alberta at the time of their enlistment.

Persons classified as tourists, transients, or visitors are excluded from all benefits.

Out-patient Services and Chronic Care

During 1959 out-patient hospital services were provided without charge to pensioners holding hospitalization entitlement card issued by the Department of Public Welfare.

Effective April 1, 1959, the Province of Alberta extended the interpretation of active treatment care to include chronic care. On the foregoing date 10 existing auxiliary hospitals, with a rated capacity of 665 beds, were approved for operation under the Plan. Due to the shortage of beds in this particular area, the Provincial Government entered into contracts with the existing nursing homes, which had been approved by the municipalities, for the accommodation of chronic patients. Also a number of beds in the general hospitals were used for the accommodation of the chronically ill. These are temporary measures and they will be discontinued as soon as sufficient chronic beds are built.

A preliminary survey of the needs for chronic care in Alberta, conducted in 1958, indicated that approximately 3,000 beds would be required.

Contract and Federal Hospitals

There are two hospitals in Alberta which fall under the category of Contract Hospitals: Beulah Home at Edmonton and St. Martin's Hospital at Desmarais. In 1959, there were 6 Federal Hospitals in Alberta, of which 4 were Indian hospitals.

Alberta residents who are hospitalized in these hospitals are covered under the Alberta Plan. Provincial payments to these hospitals are made on a per day basis.

3. BENEFITS

Insured Services

There are no limitations on the length of stay for which the patient is eligible for insured services, provided that the patient requires hospital care. There are also no age restrictions and no excluded conditions or waiting periods due to pre-existing conditions.

Insured services means the level of services for which payment will be made by the Province and to which a resident is entitled under The Hospitalization Benefits Act without charge

other than the payment of the authorized charges. The insured services include:

- (a) Bed accommodation and meals at standard ward level.
- (b) Necessary nursing service.
- (c) Laboratory, radiology and other diagnostic procedures together with the necessary interpretations.
- (d) Drugs, biological and related preparations when administered in a hospital and are necessary for the proper treatment of the patients.
- (e) Use of operating room, case room and anaesthetic facilities including necessary equipment and supplies.
- (f) Routine surgical supplies.
- (g) Use of radiotherapy and physiotherapy facilities where available.
- (h) Services rendered by persons who receive remuneration from the hospital; and
- (i) Such other services as are specified in an agreement.

Exclusions

The Alberta Plan does not provide private or semi-private ward accommodation. If the patient requests such accommodation, he will pay the additional charges made by the hospital for this class of accommodation over and above the charge for standard ward accommodation.

Also excluded are drugs, biologicals and related preparations which are intended for use after discharge from hospital or which are not required for the proper treatment of the patient under the standard ward in-patient care.

Doctors' fees and out-patient services to other than pensioners are excluded. Ambulance services are also excluded, except where ambulance service is used for transferring patients from one hospital to another for treatment which is not available in the transferring hospital.

Necessary nursing service does not include private nursing service; however, such a service may be included when medically required.

4. FINANCING HOSPITALIZATION

The Alberta Hospitalization Plan represents an adjustment in sharing costs. The individual patient or his agent, the Municipality, the Provincial Government, and the Federal Government all share in the financing of Hospitalization in Alberta.

Payments by Patients — Co-insurance

The patient's direct share of the cost of hospitalization is fixed and is based on the rough approximation of the additional cost incurred by the hospital as a result of having the patient hospitalized.

An eligible in-patient who is admitted to an approved hospital or a federal hospital is charged a daily fee, known as a co-insurancy payment, at a rate depending in amount on the

size of the hospital determined by its rated bed capacity. A non-eligible in-patient is charged at a flat rate based on the size of the hospital determined by the rated bed capacity of the hospital at the same level of services as is given to the eligible in-patient.

The daily rates charged to in-patients in approved hospitals are shown in Table 1.

TABLE 1
DAILY RATES CHARGED TO IN-PATIENTS RESIDENTS AT A STANDARD
WARD LEVEL

Type of Hospital	Eligible Patients		Non-eligible Patients	
	Adults and Children	Newborn	Adults and Children	Newborn
General Hospitals:				
1 - 29 Beds	\$1.50	\$1.00	\$11.00	\$3.00
30 - 89 Beds	\$1.60	\$1.00	\$11.50	\$3.00
90 - 179 Beds	\$1.80	\$1.00	\$13.00	\$3.00
180 Beds and Over	\$2.00	\$1.00	\$15.00	\$3.00
Auxiliary Hospitals	\$1.50	....	\$ 7.50	....

After 30 days of hospitalization a newborn patient is classified as a child and is thereafter charged the rates applicable to Adults and Children.

Payments by Municipalities

The municipalities contribute to the operating costs of hospitalization a set annual amount equal to a levy of 4 mills based on an equalized assessment. In 1959, this amounted to \$5,386,221.78.

In addition, the municipalities as well as the owners of the municipal and civic and voluntary hospitals are required to cover any unapproved operating costs as determined by the Director of the Hospitals Division in the case of each approved hospital for which they are responsible. The excess, unapproved costs of the approved general hospitals in 1959 amounted to \$768,629.28 of which the municipalities absorbed \$576,728.13.

Payments by the Province

(1) Operating Cost

The patients and the municipalities, as outlined above, absorb a fixed share of the approved operating costs of hospitalization. The Province accepts the residual share of the approved operating cost of hospitalization.

The Province pays an approved hospital a basic monthly payment representing an estimate of one-twelfth of the annual residual approved operating costs of that approved hospital, less the amounts which are charged by the approved hospital to non-eligible patients and charges to eligible patients for items not covered under the hospitalization plan.

Each hospital is dealt with as a separate unit with the costs of providing insured services for the previous calendar year representing the basic standard for payment for the current year. Adjustments are made to the basic monthly payment where the individual approved hospital can justify the increased costs as

being reasonable in light of changes in economic conditions and for type of services rendered. The basic monthly rate may be reduced if, upon investigation, it is found that the costs incurred by the approved hospital are unreasonable even though they are below the maximum amount set.

Under the Alberta Plan, the Department of Public Health absorbs the co-insurance charges for resident patients who come under the category of poliomyelitis, social welfare, arthritis, cancer (for a diagnostic period of up to seven days), and maternity and newborn patients for a period of up to twelve days.

For the benefit of its residents hospitalized in active treatment hospitals outside Alberta or in the active treatment Federal Hospitals within Alberta the Province pays the maximum rates for standard ward services shown in Table 2.

TABLE 2
MAXIMUM RATES PER PATIENT DAY PAYABLE BY THE PROVINCE TO HOSPITALS
OUTSIDE ALBERTA AND FEDERAL HOSPITALS WITHIN ALBERTA

Size of Hospital	Adults and Children	Newborn
1 - 29 beds	\$ 9.50	\$2.00
30 - 89 beds	\$ 9.90	\$2.00
90 - 179 beds	\$11.20	\$2.00
180 beds and over	\$13.00	\$2.00

The co-insurance payable by the above patients is equivalent to co-insurance payments charged to residents hospitalized in the approved hospitals of Alberta.

Where the actual charges made by a hospital reduced by the co-insurance rates payable by the patient are less than Alberta's maximum rates, then the actual charges made by the hospital less the co-insurance are paid. Where the actual charges are more than Alberta's maximum rates, then the excess charges are paid by the patient.

Under the Alberta Hospitalization Plan, the individual hospital's basic payment is adjusted for unpaid accounts receivable. If after six months, the account is still unpaid and the hospital has followed a given collection procedure, the Department of Public Health will pay 50% of the amount outstanding.

(2) Principal and Interest

The Province of Alberta makes annual repayment of principal and interest on debentures and loans due after January 1, 1959, as a result of approved construction or major renovation of approved hospitals, excepting Lloydminster where the costs are shared with Saskatchewan. The cost of the major equipment is shared by the Federal Government, while the cost of furniture and minor equipment is paid by The Province of Alberta.

The normal total reimbursement for equipment in any calendar year is set at \$100.00 per rated bed including bassinets at the rate of 3 bassinets equalling 1 bed.

The cost of unapproved equipment and/or excess costs of approved equipment is met by the owners of the hospital.

Payments by the Federal Government

The Federal Government's contribution is the aggregate in the year of 25% of the per capita cost of in-patient services in Canada and 25% of the per capita cost of in-patient services in the province less the amount of authorized charges, multiplied by the average for the year of the number of insured persons in the province.

Generally speaking, the federal contribution amounts to approximately half of the provincial costs across the country, although in individual provinces it may exceed or fall short of half the costs. In Alberta the portion of hospital costs which is paid directly by the patient is not matched by the Federal Government.

PART II. GENERAL INFORMATION

1. Hospitals Operating in Alberta

The statistical data presented in this section of the annual report have been collected from monthly return of in-patients and annual general schedules completed by each approved hospital.

In 1959, there were 120 hospitals operating in Alberta with a rated capacity of 9118 beds. Not included in the above count are mental hospitals, tuberculosis sanatoria, private hospitals and nursing homes. Of the 120 hospitals, 101 (84.2%) were Approved General Hospitals with 82.4% of the total bed capacity.

Table 3 shows the number of hospitals, rated bed capacity and days of care of hospitals operating in Alberta by type for the years 1957 - 1959. The hospital and bed counts are as at December 31. (See also Map on page 8).

TABLE 3

DISTRIBUTION OF HOSPITALS OPERATING IN ALBERTA, THEIR RATED CAPACITY, 1957-1959 AND DAYS OF CARE, 1959, BY TYPE OF HOSPITAL
(Excluding Domiciliary Beds and Days)

TYPE OF HOSPITAL	Hospitals			Rated Capacity			Days of Care, 1959	
	1957	1958	1959	1957	1958	1959	Adults and Children	Newborn
	NUMBER							
Approved General	101	101	101	7066	7441	7512	2,209,961	268,756
Approved Auxiliary (Chronic)	10	10	10	665	665	665	272,770*	.....
Contract .....	.....	2	2	.....	20	20	2,890	1,134
Federal	6	6	7	911	911	921	125,904	4,261
Total	117	119	120	8642	9037	9118	2,611,525	274,151
	PER CENT							
Approved General	86.3	84.9	84.2	81.8	82.3	82.4	84.6	98.0
Approved Auxiliary (Chronic)	8.5	8.4	8.3	7.7	7.4	7.3	10.4	.....
Contract .....	.....	1.7	1.7	.....	.2	.2	.1	.4
Federal	5.1	5.0	5.8	10.5	10.1	10.1	4.8	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Estimate



The Municipal Hospital Districts of Leduc and Wetaskiwin were created in 1959, thereby increasing the total number of MHD's to 78. As of December 31, 1959, there were 59 MHD's operating their own hospitals, 10 had no hospitals and the rest were served by voluntary hospitals.

Bow Island Municipal Hospital with 20 beds and 8 bassinets began operating February 1, 1959. Mercoal Municipal Hospital with 6 beds closed down in June 1959.

Table 5 shows the distribution of general hospitals, their rated bed capacity and days of care by type of ownership as at December 31. (See also Map on page 8).

3. Rated Bed Capacity and Beds Set Up

The rated bed capacity of a hospital represents the number of beds that a hospital is designed to accommodate on the basis of established standards of floor space area and approved by the Minister. Number of beds set up shows the number of beds actually set up for the accommodation of in-patients as at a specified date.

Alberta's hospital experience over the past ten years, 1950 - 1959, shows that the number of beds actually set up for use at December 31 has always exceeded the rated bed capacity of the general hospitals. At December 31, 1959, there were 408 more beds and cribs and 36 more bassinets set up for use than the rated bed capacities of the hospitals. However, the ratio of beds set-up to bed capacity showed a marked and continuous decrease from 1950 until 1957 when it began to increase again.

Due to the fluctuation in the number of patients under care daily in the general hospitals, it is inevitable that some hospitals would find themselves overcrowded during certain months of the year. The study of individual hospitals shows that although 70 hospitals have reported more beds set up at December 31 than their rated capacity (see Table 31), only 9 hospitals had an occupancy of 100.0% or more of rated bed capacity and 39 hospitals had 80.0% occupancy or higher (see Tables 9 and 33).

TABLE 6
RATED BED AND BASSINET CAPACITY AND BEDS AND BASSINET SET UP IN
GENERAL HOSPITALS, 1950-1959

Years at December 31	Rated Bed and Bassinets Capacity			Beds and Bassinets Set Up			Beds and Cribs					Bed Ratio*
	Beds and Cribs	Bassinets	Total	Beds and Cribs	Bassinets	Total	Difference		Rated Increase over the Previous Year			
							Actual	Percent	Number	Percent	1950 = 100%	
1950	4992	945	5937	5982	1107	7089	990	19.8	308	6.6	100.0	1.20
1951	5521	998	6519	6239	1132	7371	718	13.0	529	10.6	110.6	1.13
1952	5752	1022	6774	6159	1165	7324	407	7.1	231	4.2	115.2	1.07
1953	6371	1083	7454	6810	1242	8052	439	6.9	619	10.8	127.6	1.07
1954	6546	1144	7690	6910	1283	8193	364	5.6	175	2.7	131.1	1.06
1955	6866	1314	8180	7142	1371	8513	276	4.0	320	4.9	137.5	1.04
1956	6939	1396	8335	7096	1339	8435	157	2.3	73	1.1	139.0	1.02
1957	7046	1409	8455	7270	1406	8676	204	2.9	127	1.8	141.5	1.03
1958	7441	1447	8888	7686	1464	9150	245	3.3	375	5.3	149.1	1.03
1959	7512	1471	8983	7920	1535	9455	408	5.4	71	1.0	150.5	1.05

*Beds set up to rated bed capacity.

Table 6 shows the rated bed and bassinet capacity and beds set up and the increases in rated bed capacity over the past 10 years.

Of the 7920 beds and cribs set up as at December 31, 1959, 4860 (61.4%) were medical and surgical beds. There were 290 more medical and surgical beds set up than the rated capacity in that category of beds; this increase accounts for 71.1% of the total difference between the rated capacity and beds set up in all categories of beds in general hospitals in 1959.

Table 7 gives a breakdown of the bed capacity of general hospitals and beds set up by category of bed and size of hospital as at December 31, 1959.

TABLE 7
DISTRIBUTION OF BED CAPACITY AND BEDS SET UP BY TYPE OF BED AND SIZE OF HOSPITAL, AS AT DECEMBER 31, 1959

	Number of Hospitals		Total Number of Beds	Per Cent of Total	Size of Hospital by Rated Capacity			
	With Unit	Without Unit			1 - 29	30 - 89	90 - 179	180 and Over
					Number of Beds			
Rated Bed Capacity:								
Medicine and Surgery	100	1	4570	60.8	507	1261	338	2464
Obstetrics	99	2	1202	16.0	155	406	87	554
Orthopaedic	11	90	399	5.3	7	19	138	235
Paediatrics	86	15	1022	13.6	104	286	58	574
Psychiatric	2	99	85	1.1	.....	.....	.....	85
Isolation	39	62	127	1.7	21	53	2	51
Other	6	95	107	1.4	1	3	.....	103
TOTAL .....	.....	.....	7512	100.0	795	2028	623	4066
Beds Set Up:								
Medicine and Surgery	100	1	4860	61.4	613	1427	370	2450
Obstetrics	99	2	1220	15.4	178	399	90	553
Orthopaedic	11	90	404	5.1	7	24	138	235
Paediatrics	93	8	1115	14.1	149	360	60	546
Psychiatric	2	99	85	1.1	.....	.....	.....	85
Isolation	40	61	121	1.5	20	48	2	51
Other	8	93	115	1.4	4	3	.....	108
TOTAL .....	.....	.....	7920	100.0	971	2261	660	4028

In Alberta as at December 31, 1959, there were 6.1 rated general beds (or 6.4 beds set up) for every 1,000 population. If the 921 rated beds of the Federal Hospitals, the 20 beds of the Contract Hospitals, and the 665 chronic beds were included, the ratio of rated beds per 1,000 population would increase to 7.3.

Compared to 1958, the increase in rated bed capacity of Alberta general hospitals showed a slight decrease in relation to population growth and the increase in hospital cases. This is indicated in the decrease of rated beds per 1,000 population from 6.2 in 1958 to 6.1 in 1959 and the increase of patients per bed from 32.7 in 1958 to 33.4 in 1959.

Table 8 shows the ratios of beds per 1,000 population and their percentage occupancy for the past 10 years, 1950 - 1959.

TABLE 8
ACTIVE TREATMENT BEDS PER 1,000 POPULATION, PATIENTS PER BED PER YEAR,
AND OCCUPANCY, 1950-1959

Year	Census or Inter-Censal Estimate of Alberta Population	Rated Bed Capacity per 1,000 Population		Bed Complement per 1,000 Population		Patients per Bed Per Year		Occupancy Based on Rated Capacity
		Beds and Cribs	Total	Beds and Cribs	Total	Rated Capacity	Bed Complement	
1950	895,000	5.6	6.6	6.7	7.9	32.6	27.2	80.8
1951	939,501*	5.9	6.9	6.6	7.8	30.9	27.3	77.9
1952	970,000	5.9	7.0	6.3	7.6	32.3	30.2	80.3
1953	1,002,000	6.3	7.4	6.8	8.0	31.2	29.2	74.4
1954	1,039,000	6.3	7.4	6.7	7.9	31.6	30.0	76.4
1955	1,066,000	6.4	7.7	6.7	8.0	31.3	30.0	75.4
1956	1,123,116*	6.2	7.4	6.3	7.5	31.9	31.2	75.3
1957	1,160,000	6.1	7.3	6.3	7.5	33.0	32.1	77.5
1958	1,201,000	6.2	7.4	6.4	7.6	32.7	31.8	77.7
1959	1,243,000	6.0	7.2	6.4	7.6	33.4	31.8	81.0

*Federal census of Alberta. The inter-censal estimates are by the Dominion Bureau of Statistics. The population figures include Indians and members of the Armed Forces.

The percentage utilization of general active treatment beds and cribs increased from 77.7% in 1958 to 81.0% in 1959. The 1959 occupancy figure was the highest since 1950 (80.8%) when the hospitalization plan began operating in Alberta.

The increase in the occupancy of general hospital beds and cribs could be partly attributable to the utilization of these beds for chronic care, especially in small hospitals with low occupancies. This is indicated by the fact that the number of hospitals with less than 60.0% occupancy decreased by 11 hospitals, from 27 in 1958 to 16 in 1959.

The number of hospitals with 90.0% or more occupancy has decreased from 18 hospitals in 1958 to 13 in 1959.

More than one-half (53) of the general hospitals in 1959 had an occupancy of 70.0% to 89.9%. In 1958, there were only 36 hospitals in the same occupancy group.

TABLE 9
PERCENTAGE OCCUPANCY OF BEDS AND CRIBS OF GENERAL HOSPITALS
BY BED SIZE, 1958 and 1959

Percentage Occupancy	1958	1959	Size of Hospital by Bed Capacity 1959			
			1 - 29	30 - 89	90 - 179	180 and Over
20.0 - 29.9	1	---	---	---	---	---
30.0 - 39.9	4	1	1	---	---	---
40.0 - 49.9	4	2	1	1	---	---
50.0 - 59.9	18	13	6	6	---	1
60.0 - 69.9	20	18	6	10	2	---
70.0 - 79.9	15	27	15	11	1	---
80.0 - 89.9	21	26	7	9	3	7
90.0 - 99.9	9	4	2	1	---	1
100.0 - 109.9	4	3	2	1	---	---
110.0 - 119.9	3	2	2	---	---	---
120.0 - 129.9	2	3	1	2	---	---
130.0 - 139.9	---	1	---	1	---	---

4. Construction of Hospitals

During 1959, a total of 119 general hospital beds, 35 bassinets and a nurses' residence with 59 beds were constructed.

Table 10 shows the new hospital construction completed in 1959.

TABLE 10
NEW HOSPITAL CONSTRUCTION COMPLETED IN 1959

Hospitals	Beds	Bassinets
Bassano	30	7
Bow Island	20	8
Cardston	40	14
Carmangay	14	3
Hanna	11	3
Magrath	4	.....
Nurses' Residence, Vegreville	59	.....
TOTAL	178	35

The Hospitals Division approved in 1959 the construction of some 889 hospital beds, of which 491 were active treatment and 398 chronic. Some of the beds constituted additions to already existing hospitals; others were construction of new hospitals.

5. Movement of Patients

There were 252,521 adult and children patients in the Approved general hospitals of Alberta in 1959. These patients spent 2,209,961 days in hospital. Compared with 1958, there were 7,666 (3.1%) more adult and children patients under hospital care who spent 125,839 (6.0%) more days in hospital.

TABLE 11
SUMMARY OF MOVEMENT OF PATIENTS AND VOLUME OF HOSPITAL CARE IN
GENERAL HOSPITALS AND THEIR RELATED LENGTH OF STAY, 1950-1959
(Including D.V.A. Division of the University Hospital)

Year	PATIENTS			DAYS		
	Admissions	Total Under Care	Separations	During Year	For Separated Patients	Aver. Length of Stay
ADULTS AND CHILDREN						
1950	159,401	162,841	159,345	1,468,312	1,452,639	9.1
1951	167,063	170,517	166,685	1,558,524	1,535,473	9.2
1952	182,185	186,025	182,002	1,614,151	1,655,642	9.1
1953	194,768	198,847	194,668	1,731,621	1,715,805	8.8
1954	202,841	207,023	202,728	1,825,710	1,811,266	8.9
1955	209,670	214,563	209,610	1,885,626	1,868,928	8.9
1956	216,960	221,507	217,060	1,919,699	1,925,254	8.9
1957	223,972	233,418	228,714	1,988,897	1,985,218	8.7
1958	240,150	244,855	239,573	2,084,122	2,069,454	8.6
1959	247,248	252,521	247,177	2,209,961	2,189,370	8.9
NEWBORN						
1950	24,084	24,612	24,205	215,799	215,240	8.9
1951	25,523	26,025	25,508	219,896	219,833	8.6
1952	27,650	28,164	27,631	231,292	231,327	8.4
1953	30,076	30,620	30,033	247,087	246,158	8.2
1954	32,397	32,984	32,403	258,739	259,313	8.0
1955	33,002	33,680	33,043	259,599	261,957	7.9
1956	33,585	34,223	33,631	258,902	259,256	7.7
1957	34,372	34,965	34,335	260,968	260,791	7.6
1958	35,504	36,125	35,472	263,150	262,719	7.4
1959	36,749	37,402	36,746	268,756	268,225	7.3

The number of newborn admissions to the Approved General Hospitals of Alberta was 36,749 in 1959, an increase of 1,245 (3.5%) over the newborn admissions in 1958. The total number of newborns under hospital care in 1959 amounted to 37,402, and they received 268,756 days of care. This is 1,277 (3.5%) more newborn patients and 5,606 (2.1%) more newborn days than in 1958. It should be noted that after 30 days of hospitalization a newborn is considered a child and is "discharged" as a newborn and "re-admitted as a child."

Table 11 is a historical summary of movement of patients and volume of hospital care in general hospitals in the past ten years.

2,084,257 (94.3%) of the total adult and children in-patient days in 1959 were covered under the Alberta Plan; 25,803 (1.2%) of the days were covered by the Federal Government; 61,822 (2.8%) were covered by the Workmen's Compensation Board; 37,400 (1.7%) were non-resident in-patient days; and the rest, 679 days were the days of non-active resident in-patients.

Of the total 1959 newborn days, 265,124 (98.6%) were covered under the Alberta Plan and 3,632 (1.4%) were days of non-resident newborns.

In 1959, the Department of Public Health paid the co-insurance charges for 29.4% of the adults and children resident days and 92.5% of the newborn resident days. The breakdown of the Provincial co-insurance days is shown in Table 12.

TABLE 12
BREAKDOWN OF CO-INSURANCE DAYS PAID BY THE PROVINCE BY CATEGORY
OF BENEFIT AND BED SIZE OF HOSPITAL, 1959

Category	Total	Amount	Size of Hospital by Rated Bed Capacity			
			1 - 29	30 - 89	90 - 179	180 and Over
Maternity	249,746	\$ 458,036.50	25,195	63,435	16,314	144,802
Pension	320,264	570,841.30	43,059	105,137	29,397	142,671
Cancer	17,840	35,400.30	84	467	251	17,038
Arthritis	1,196	2,250.20	.....	.....	709	487
Polio	23,037	44,616.80	.....	74	7,138	15,825
Total A. & C.	612,083	1,111,145.10	68,338	169,113	53,809	320,823
Newborn	245,341	245,341.00	23,755	60,928	15,566	145,092
TOTAL	857,424	\$1,356,486.10	92,093	230,041	69,375	465,915

During the past ten years, 1950 - 1959, the increase in the population of Alberta amounted to 38.9%, while the increases in hospital cases and hospital days were 55.1% and 50.5% respectively during the same period.

Although in 1959 the percentage yearly increase of hospital admissions was the lowest since 1950, the percentage yearly increase of days of hospital care was the highest since 1953.

Table 13 shows the percentage increase in adults and children cases and days in general hospitals during the past ten years.

TABLE 13

PERCENTAGE INCREASES IN ADULTS AND CHILDREN CASES AND DAYS IN GENERAL HOSPITALS IN RELATION TO POPULATION, 1950-1959

Year	Percentage Yearly Increase						As Per Cent of 1950					
	Population	Admissions	Patients Under Care	Separations	Days of Patients Under Care	Days of Separated Patients	Population	Admissions	Patients Under Care	Separations	Days of Patients Under Care	Days of Separated Patients
1950	2.8	2.3	2.4	2.4	2.2	1.6	100.0	100.0	100.0	100.0	100.0	100.0
1951	5.0	4.8	4.7	4.6	6.1	5.7	105.0	104.8	104.7	104.6	106.1	105.7
1952	3.2	9.1	9.1	9.2	3.6	7.8	108.4	114.3	114.2	114.2	109.9	114.0
1953	3.3	6.9	6.9	7.0	7.3	3.6	112.0	122.2	122.1	122.2	117.9	118.1
1954	3.7	4.1	4.1	4.1	5.4	5.6	116.1	127.3	127.1	127.2	124.3	124.7
1955	2.6	3.4	3.6	3.4	3.3	3.2	119.1	131.5	131.8	131.5	128.4	128.7
1956	5.4	3.5	3.2	3.6	1.8	3.0	125.5	136.1	136.0	136.2	130.7	132.5
1957	3.3	5.5	5.4	5.4	3.6	3.1	129.6	143.6	143.3	143.5	135.5	136.7
1958	3.5	4.9	4.9	4.7	4.8	4.2	134.2	150.7	150.4	150.3	141.9	142.5
1959	3.5	3.0	3.1	3.2	6.0	5.8	138.9	155.1	155.1	155.1	150.5	150.7

Table 14 shows hospitalization rates per 1,000 population for the years 1950 - 1959. The admission rate of hospital cases per 1,000 population dropped slightly from 200 in 1958 to 199 in 1959. The 1959 figure is the second highest since 1950. The number of hospital days per 1,000 population rose sharply from 1,735 in 1958 to 1,778 in 1959.

TABLE 14

HOSPITALIZATION CASES, ADMISSIONS, SEPARATIONS AND THEIR RELATED DAYS OF CARE IN GENERAL HOSPITALS PER 1,000 POPULATION, 1950-1959

Year	Census or Inter-Censal Estimate of Alberta Population	CASES PER 1,000 POPULATION			DAYS PER 1,000 POPULATION	
		Admissions	Patients Under Care	Separations	During Year	For Separated Case
1950	895,000	178	182	178	1640	1623
1951	939,501*	178	181	177	1659	1634
1952	970,000	188	192	188	1664	1707
1953	1,002,000	194	198	194	1728	1712
1954	1,039,000	195	199	195	1757	1743
1955	1,066,000	197	201	197	1769	1753
1956	1,123,116*	193	197	193	1709	1714
1957	1,160,000	197	201	197	1715	1711
1958	1,201,000	200	204	199	1735	1723
1959	1,243,000	199	203	199	1778	1761

*Federal census of Alberta. The inter-censal estimates are by the Dominion Bureau of Statistics. The Population figures include Indians and members of the Armed Forces.

6. Length of Stay

Although there are no limitations on the length of stay for which the patient is eligible for benefits, the co-insurance payment per patient day required of eligible patients (see Table 1, page 9) tends to control the length of stay of the patient.

In 1959, however, the average length of stay for adults and children patients has increased to 8.9 from 8.6 in 1958, and for newborn patients the average length of stay continued its steady decline from 8.9 in 1950 to 7.3 in 1959 (See Table 11). In considering the average length of stay of newborn patients it must be

remembered that after 30 days of hospitalization newborn patients are automatically "discharged" and "readmitted" as child patients.

The increase in the average length of stay of adult and children patients could be partly attributable to the fact that in 1959 general hospitals with low occupancies (especially small hospitals) were asked to use part of their facilities for the care of chronic patients. (See also page 5).

As is shown in Table 15, less than one-half (47.9%) of the adults and children patients separated in 1959 have spent 5 days or less in the general hospitals of Alberta, and they absorbed 16.1% of the separated days. Comparable figures for 1958 are 48.0% and 16.4% respectively.

TABLE 15
PERCENTAGE DISTRIBUTION OF SEPARATED PATIENTS BY LENGTH OF STAY IN DAYS AND SIZE OF HOSPITAL, 1958 AND 1959

Length of Stay in Days	CASES							DAYS						
	Adults and Children, 1958	Adults and Children by Size of Hospital, 1959					Newborn, 1959	Adults and Children, 1958	Adults and Children by Size of Hospital, 1959					Newborn, 1959
		Total	1 - 29	30 - 89	90 - 179	180 and Over			Total	1 - 29	30 - 89	90 - 179	180 and Over	
1	8.4	8.6	13.5	10.8	11.2	5.5	1.1	1.0	1.0	2.0	1.4	1.4	.5	.1
2	12.4	12.1	14.1	12.1	19.4	10.4	.2	2.9	2.8	4.2	3.2	4.8	2.0	.1
3	9.9	9.4	12.0	10.6	10.4	7.8	.8	3.4	3.2	5.4	4.2	3.9	2.3	.3
4	8.6	8.7	10.0	9.5	7.8	8.0	7.5	4.0	4.0	6.0	5.1	3.9	3.1	4.1
5	8.7	9.0	8.6	9.0	7.5	9.4	17.7	5.0	5.1	6.4	6.0	4.7	4.6	12.1
6	8.7	8.9	7.9	8.5	7.9	9.6	24.3	6.1	6.1	7.1	6.8	5.9	5.6	20.0
7	8.7	8.5	7.4	8.9	7.0	8.8	22.3	7.0	6.8	7.7	8.3	6.1	6.0	21.4
8	6.4	6.1	5.7	6.4	6.0	6.0	10.7	5.9	5.5	6.8	6.8	6.0	4.7	11.8
9	4.5	4.4	4.2	4.7	4.2	4.3	4.4	4.7	4.5	5.6	5.6	4.7	3.8	5.4
10	3.5	3.4	3.2	3.3	3.0	3.5	2.4	4.0	3.8	4.8	4.4	3.7	3.4	3.3
11 - 14	8.1	8.0	6.2	7.1	6.0	9.5	3.6	11.6	11.2	11.6	9.1	11.4	6.0	6.0
15 - 19	4.7	4.8	3.0	3.8	3.4	6.1	2.0	9.2	9.1	7.4	8.4	7.1	9.9	4.7
20 - 29	3.8	4.1	2.3	2.9	3.1	5.5	1.9	10.5	11.0	8.1	9.0	9.0	12.6	6.0
30 - 59	2.7	2.9	1.4	1.9	2.0	4.1	1.2	12.2	13.1	8.4	10.1	10.0	15.7	4.7
60 and Over .....	.9	1.0	.5	.6	1.3	1.3	.....	12.5	12.8	8.8	8.9	20.0	14.4	.....
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Long stay cases, patients who were hospitalized for 30 days or more, amounted to 3.9% and absorbed 25.9% of the separated days. Comparable figures for 1958 were 3.6% and 24.6% respectively.

The percentage distribution of separated patients and days by length of stay for 1959 is graphically presented in Diagram II.

7. Cases and Days by Age and Sex

The analysis of the average stay by age groups reveals that patients 45 years of age and over have stayed on the average longer in hospital in 1959 than they did in 1958 or 1957. The average stay of patients in the younger age groups has on the whole declined in the same period.

Table 16 shows that in the various groups between the ages of 10 to 74 the average stay of male patients was higher than the average stay of female patients. Diagram III represents Table 16 in graphic form.

TABLE 16
AVERAGE STAY OF SEPARATED ADULT AND CHILDREN PATIENTS BY AGE
GROUPS, 1957-1959, AND SEX, 1959

Age Groups	1957	1958	1959	By Sex, 1959	
				Male	Female
Less than 1	8.5	8.4	8.8	8.7	8.9
1 - 4	6.1	5.9	5.8	5.8	5.9
5 - 9	5.6	5.4	5.3	5.3	5.3
10 - 19	6.6	6.5	6.3	6.4	6.2
20 - 29	6.7	6.6	6.6	7.7	6.4
30 - 39	7.4	7.3	7.6	8.5	7.3
40 - 44	8.3	8.3	8.2	9.0	7.8
45 - 49	9.0	9.0	9.2	9.5	9.0
50 - 54	9.5	9.9	10.6	11.1	10.2
55 - 59	10.9	11.0	11.6	12.0	11.2
60 - 64	11.8	12.6	12.8	13.2	12.3
65 - 69	13.2	13.6	13.9	14.4	13.1
70 - 74	13.9	14.8	15.2	15.4	15.1
75 and Over	16.4	17.1	17.6	17.5	17.9
No answer	8.9	10.4	14.1	17.8	10.8

More than one-third (34.2%) of the adult and children patients were between the ages of 20 - 39 and they utilized 27.4% of the facilities of the Alberta general hospitals. The female patients made up about three-quarters of these cases. This was mainly due to the fact that most maternity cases fall in that age group.

A comparison of the utilization of Alberta general hospital services by age group in 1959 to that of 1958 reveals that the proportion of patients between the ages of 0 - 9 has increased from 18.8% in 1958 to 19.1% in 1959, and the utilization of hospital services by this age group also increased from 13.5% in 1958 to 13.7% in 1959. For patients 70 years of age or over, the proportion of their cases increased from 10.2% in 1958 to 10.5% in 1959 and their hospital days also increased from 19.2% in 1958 to 19.9% in 1959.

TABLE 17
PERCENTAGE DISTRIBUTION OF SEPARATED ADULTS AND CHILDREN PATIENTS
AND DAYS BY AGE GROUPS, 1958 and 1959, AND SEX, 1959

AGE GROUPS IN YEARS	CASES				DAYS			
	1958	1958	By Sex, 1959		1959	1959	By Sex, 1959	
			Male	Female			Male	Female
Less than 1	3.9	4.2	2.4	1.8	3.8	4.2	2.4	1.8
1 - 4	7.7	7.8	4.4	3.4	5.2	5.2	2.9	2.3
5 - 9	7.2	7.1	3.8	3.3	4.5	4.3	2.3	2.0
10 - 19	10.5	10.6	4.2	6.4	8.0	7.6	3.1	4.5
20 - 29	20.3	20.1	4.0	16.1	15.7	15.2	3.5	11.7
30 - 39	14.8	14.1	3.8	10.3	12.5	12.2	3.7	8.5
40 - 44	5.0	5.2	1.8	3.4	4.8	4.8	1.9	2.9
45 - 49	4.5	4.5	1.9	2.6	4.7	4.7	2.1	2.6
50 - 54	4.3	4.2	1.9	2.3	4.9	5.0	2.4	2.6
55 - 59	3.8	4.0	2.0	2.0	4.9	5.3	2.8	2.5
60 - 64	3.6	3.6	1.9	1.7	5.3	5.3	2.8	2.5
65 - 69	4.0	3.8	2.1	1.7	6.3	6.0	3.5	2.5
70 - 74	4.1	4.2	2.3	1.9	7.1	7.3	4.1	3.2
75 and Over	6.1	6.3	3.5	2.8	12.1	12.6	7.0	5.6
N. A. ....	.2	.2	.1	.1	.2	.4	.2	.2
Total	100.0	100.0	40.4	59.6	100.0	100.0	44.7	55.3

In 1959, more than a quarter (25.9%) of the general hospitals facilities were utilized by patients 65 years of age or over; the comparable figure for 1958 was 25.5%.

Table 17 shows the percentage distribution of separated adult and children patients and their related days by age group for 1958 and 1959, and sex for 1959. Diagrams IV and V represent the data for 1959 in graphic form.

8. Cases and Days by Marital Status

Hospitalization rates per 1,000 population by marital status, sex and age for 1959 is given in Table 18. Separated and Common-Law are included with "Married" status and Widowed and Divorced with the "Other" status.

A larger proportion of the single men in the various age groups went to hospital and on the average stayed longer than the married men. The rate of hospitalization for divorced or widowed men was still higher than that of the single men.

For married women the hospitalization rate was higher than for unmarried women, except in the 45 - 64 age group. The rates for married women is considerably influenced, of course, by maternity cases, the majority of whom fall in the 15 - 44 age groups.

TABLE 18
HOSPITALIZATION RATES OF SEPARATED PATIENTS PER 1,000 POPULATION
BY MARITAL STATUS, SEX, AND AGE, 1959

AGE GROUP	Total			Single			Married			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
SEPARATED CASES PER 1,000 POPULATION												
0 - 14	140	150	131	140	150	131	...	...	...	...	...	...
15 - 24	224	106	346	123	107	145	510	102	683	343	250	359
25 - 44	201	103	304	123	117	136	215	99	325	150	129	156
45 - 64	197	171	229	214	176	334	194	169	225	205	186	211
65 and Over	390	385	396	332	344	268	368	363	377	447	493	423
DAYS OF SEPARATED CASES PER 1,000 POPULATION												
0 - 14	882	939	823	882	939	823	...	...	...	...	...	...
15 - 24	1431	788	2098	840	813	878	3104	645	4150	2196	1719	2273
25 - 44	1497	856	2170	1242	1168	1419	1541	770	2264	1500	1800	1411
45 - 64	2161	1961	2404	2668	2552	3040	2057	1835	2332	2593	2602	2589
65 & Over	6209	6184	6242	6662	6934	5278	5200	5242	5123	7872	8787	7400
AVERAGE LENGTH OF STAY												
0 - 14	6.3	6.3	6.3	6.3	6.3	6.3	...	...	...	...	...	...
15 - 24	6.4	7.4	6.1	6.8	7.6	6.0	6.1	6.3	6.1	6.4	6.9	6.3
25 - 44	7.4	8.3	7.1	10.1	10.0	10.4	7.2	7.8	7.0	10.0	13.9	9.0
45 - 64	11.0	11.5	10.5	12.5	14.5	9.1	10.6	10.8	10.4	12.6	14.0	12.3
65 and Over	15.9	16.0	15.8	20.1	20.1	19.7	14.1	14.4	13.6	17.6	17.8	17.5

9. Care of Social Service Recipients

There were 20,389 social service recipients separated from hospitals in 1958, most of whom (79.6%) were Old Age Pensioners. They had stayed in hospital for a total of 315,155 days, or an average of 15.5 days each.

The average number of social service recipients eligible for hospitalization increased by 3,672 (9.1%) in 1959 over 1958, while the number hospitalized and their hospital days increased by 1,116 (5.8%) and 24,647 (8.5%) respectively.

Table 19 shows hospital care in approved general hospitals of social service recipients together with rates for separated cases and days for each category.

TABLE 19
HOSPITAL CARE OF SOCIAL SERVICE RECIPIENTS, 1959

	1959	Old Age	Mothers' Allowance	Blind Pension	Widows' Allowance	Pension Disability
Average Eligible:						
Number	44,052	30,894	7,145	727	826	4,460
% of Total	100.0	70.1	16.2	1.7	1.9	10.1
Separated Patients						
Number	20,389	16,240	1,277	370	301	2,201
% of Total	100.0	79.6	6.3	1.8	1.5	10.8
Per 100 Eligible	46.3	52.6	17.9	50.9	36.4	49.3
Days of Separated Patients:						
Number	315,155	260,774	9,624	6,136	4,166	34,455
% of Total	100.0	82.7	3.1	1.9	1.3	10.9
Per 100 Eligible	715.4	844.1	134.7	844.0	504.4	772.5

In 1959 the average length of stay of social service recipients has increased to 15.5 days from 15.1 days in 1958. Old Age and Mothers' Allowance Groups have stayed longer in 1959 than they did in 1958, 1957 or 1956. The average stay of Blind Pensioners has increased sharply from 13.9 days in 1958 to 16.6 days in 1959, but it was less than their average stay in 1956.

Table 20 represents the average length of stay of separated social service recipient patients for the years 1956 - 1959.

TABLE 20
AVERAGE STAY OF SOCIAL SERVICE RECIPIENT PATIENTS 1956-1959

Type of Benefit	1956	1957	1958	1959	Size of Hospital by Bed Capacity, 1959			
					1-29	30-89	90-179	180 and Over
Old Age	15.4	14.9	15.8	16.1	12.4	13.9	14.1	20.9
Mothers' Allowance	6.9	7.0	7.4	7.5	4.8	6.4	8.4	9.6
Blind Pension	17.1	15.9	13.9	16.6	16.1	13.1	17.3	20.7
Widows' Allowance	12.5	14.2	13.0	13.8	7.9	12.1	8.4	18.7
Disability Pension .....	....	....	14.2	15.7	10.0	10.2	18.1	24.5
Entire Group	14.4	14.9	15.1	15.5	11.7	13.0	14.2	20.5

10. Out-of-Province Hospitalization

In 1958, there were 1,464 adults and children patients who received Out-of-Province benefits for 12,273 days of hospitalization, an average of 8.4 days per patient. Of these 131 (8.9%) were hospitalized outside Canada for 1,058 (8.6%) days.

The number of newborns who received Out-of-Province benefits in 1959 amounted to 185 patients, spending 1,103 days in hospital. Of these 6 (3.2%) patients and 25 (2.3%) days were outside Canada.

The total cost to the Province of Out-of-Province hospitalization in 1959 amounted to \$135,332.69 for adults and children patients and \$2,008.50 for newborn patients. Of the total cost, \$12,314.17 and \$50.00 covered the cost of hospitalization outside Canada for adult and children patients and newborns respectively.

Average cost for adult and children patients hospitalized outside Alberta was \$11.03 per day in 1959. The average cost for those hospitalized in Other Canadian Provinces was below the average at \$10.97 and for those hospitalized outside Canada was above the average at \$11.64.

11. Personnel and Paid Hours of Work

This section presents data on persons employed by approved general hospitals on a full or part-time basis for all categories of personnel. Total hours of work includes paid holidays and other paid leave, and in the case of student nurses duty and classroom hours, even if not paid.

As at December 31, 1959 there were 11,747 employees at the approved general hospitals, comprising of 11,088 full-time and 659 part-time. This is an increase of 365 (3.4%) full-time and 196 (42.3%) part-time personnel over the same period in 1958. Based on full-time employment (total employee hours divided by 2,080 hours) there were 11,501 persons employed in 1959, or 1,210 (10.5%) more than in 1958.

TABLE 21
NUMBER OF FULL-TIME PERSONNEL IN GENERAL HOSPITALS AS AT
DECEMBER 31, 1959 BY CATEGORY OF PERSONNEL AND SIZE OF HOSPITAL

Category of Full-Time Personnel	Number Employed
Medical Staff:	
Medical Superintendent	6
Radiologist	10
Pathologist	10
Residents and Interns	129
Other Medical Staff	10
Other Professional Personnel:	
Dietitian	46
Medical Record Librarian	40
Laboratory Technician	167
Radiology Technician	99
Combined Laboratory and Radiology	18
Physiotherapist	46
Occupational Therapist	5
Pharmacist	25
Psychologist	1
Medical Social Worker	3
Other Social Worker	3
Other Professional	69
Directors and Supervisors of Nursing	372
Nursing Staff	5,909
Other Personnel:	
Administration	568
Dietary	1,058
Laundry	440
Linen Service	97
Housekeeping	991
Physical Plant	348
Other	618
TOTAL	11,088

Table 21 gives a breakdown of the number of full-time employees in general hospitals as at December 31, 1959 by category of personnel. A further breakdown of the Directors and Supervisors of Nursing and Nursing Staff by Hospital is given in table 39 in the Appendix.

For every 100 beds and cribs in approved general hospitals, there were 147.6 full-time employees in 1959, of which 34.2 were graduate nurses, 21.6 were student nurses, 12.2 were qualified nursing aides, and 15.7 were made up of nursing aide trainees (1.3), orderlies (3.6), and other nursing staff (10.8).

Total hours of work in approved general hospitals in 1959 amounted to 23,921,843 as compared to 21,405,062 in 1958, an increase of 2,516,781 (10.5%).

For every patient day including newborn there were 9.7 hours of work in 1959 as compared to 9.1 in 1958.

Adult and children patients received a total of 9,376,224 hours of direct nursing care, of which 37.3% were from graduate nurses, 19.2% from student nurses, 5.3% from orderlies, 35.5% from other nursing staff, and 2.7% from other than nursing staff. On the average, every adult and child in-patient received 4.7 hours of direct nursing care daily.

Direct nursing care for newborns amounted to 718,128 hours in 1959, or an average of 2.7 hours per newborn everyday.

The greater portion (43.5%) of the total hours worked by hospital employees in 1959 was spent on direct care of patients, including out-patient and emergency units. Slightly more than one-third (33.7%) of the hours were spent on general services.

TABLE 22
DISTRIBUTION OF HOURS OF WORK BY DEPARTMENT AND CATEGORY
OF STAFF, 1959

Department	Total	Graduate Nurses	Student Nurses	Orderlies	Other Nursing Staff	Other Staff
Undistributed	19,156	2,382	.....	.....	.....	16,774
Nursing Administration	514,359	443,423	.....	2,080	2,004	66,852
Direct Care:						
Adults and Children	9,376,224	3,500,132	1,796,834	497,854	3,328,130	253,274
Newborn	718,128	396,676	80,641	2,025	236,800	1,986
Emergency	260,598	131,616	73,844	12,136	31,137	11,865
Out-Patient	41,021	8,894	7,293	.....	1,330	23,504
Special Services:						
Operating Room	914,972	420,473	210,965	47,878	168,210	127,446
Central Supply	399,633	68,183	42,168	2,088	73,162	214,032
Pharmacy	144,467	20,236	.....	.....	1,034	123,197
Delivery Room	458,722	277,338	93,871	.....	43,676	43,837
Laboratory	741,265	23,054	149	2,076	7,794	708,192
Radiology	433,220	23,302	18,168	2,076	5,147	384,527
Physiotherapy	167,200	194	8,080	2,080	136	156,710
Other	38,321	664	.....	.....	.....	37,657
Supplementary Services:						
Medical Records	272,938	.....	7,745	.....	.....	265,193
Nursing Education	1,045,344	257,098	634,635	.....	.....	153,611
Medical Education	182,588	.....	.....	.....	23,060	159,528
Social Services	35,436	2,064	.....	.....	.....	33,372
Other	18,728	.....	.....	.....	.....	18,728
General Services:						
Administration	1,414,990	15,372	.....	.....	.....	1,399,618
Dietary	2,521,916	104	62,464	.....	.....	2,459,348
Laundry	983,958	90	.....	.....	.....	983,868
Linen Service	212,068	.....	.....	.....	5,268	206,800
Housekeeping	1,982,578	28	.....	.....	617	1,981,933
Physical Plant	951,529	.....	.....	.....	.....	951,529
Other	72,484	2,084	.....	.....	.....	70,400
TOTAL	23,921,843	5,601,152	3,029,112	570,293	3,867,505	10,853,781

The distribution of the total hours of work by category of staff and department in 1959 were as shown in Table 22.

Diagram VI and Diagram VII are graphic presentations of the data in Table 22.

12. Departmental Service Statistics

Within the terms of Hospital Regulations set by the Department of Public Health, the level of services within individual hospitals has been established according to the wishes of the community it services, the policy of the owners of the hospital, and the ability of the hospital to obtain the funds necessary to provide services. Apart from the expected differences in the type of services rendered in the large hospitals with highly specialized departments and the small hospital, there is a difference in the level of services in hospitals of comparable size.

(1) Radiology Services

During 1959, there were 229 X-ray and beam therapy units in the approved general hospitals of Alberta, an increase of 20 units over 1958. Slightly more than one-half (116) were of the stationary diagnostic type; mobile or portable diagnostic machines accounted for 78 (34.1%) of the total; and the remaining 35 machines were miniature type.

There were also 4 superficial therapy and 3 deep therapy X-ray machines, all in the city hospitals.

Of the total number of patients admitted to general hospitals in 1959, 35,905 (14.5%) had their chest routinely X-rayed on admission. There were 483,929 films taken, including spoiled films, of which 444,875 (91.9%) were standard films and 39,054 (8.1%) were miniature films, for a total of 246,975 examinations, or about 2.0 films taken per examination.

(2) Laboratory Services

88 out of the 101 general hospitals have indicated urinalysis examinations as done routinely on admission; haemoglobin and serology examinations are done routinely by 41 and 14 hospitals respectively. Some 21 hospitals have also indicated other examinations done routinely on admission, such as W.B.C., T.B. chest, C.B.C., blood smear, hematocrit, etc.

The volume of laboratory work performed in general hospitals for the hospitals' patients in 1959 amounted to 4,498,596 units, of which 194,418 units (4.3%) were for out-patients.

The unit used in measuring the volume of laboratory work represents ten minutes of time, with approximately seven minutes for technical aspects and three for stenographic, glass-washing, and other preparatory services. Interpretive, diagnostic, consultative, teaching, and research functions are specifically excluded.

As indicated in Table 23, a larger proportion of the hospital's laboratory work load is referred out for reading in the bigger hospitals than in the smaller ones. In the 1 - 29 bed hospitals, 5.1% of the laboratory work is referred out for reading, while the proportion increases to 8.3% in the 30 - 89 bed hospitals, 9.3% in the 90 - 179 bed hospitals and 12.6% in the 180 and over bed hospitals.

TABLE 23
VOLUME OF LABORATORY WORK IN UNITS PERFORMED IN HOSPITAL OR
REFERRED OUT BY SIZE OF HOSPITAL, 1959

ITEM	Total	Size of Hospital by Bed Capacity, 1959			
		1-29	30-89	90-179	180 and Over
Total Work Done in Hospital:					
In-Patients	4,304,178	131,209	518,531	187,176	3,467,262
Out-Patients	194,418	7,968	24,600	9,782	152,068
Referred in	54,359	8	1,023	529	52,799
Total Work Referred Out:					
In-Patients	589,628	7,015	44,567	17,835	520,211
Out-Patients	10,765	521	4,661	2,397	3,186
Total Units:					
In-Patients	4,893,806	138,224	563,098	205,011	3,987,473
Out-Patients	205,183	8,489	29,261	12,179	155,254
Units per in-patient days	2.2	.6	1.0	1.2	3.2
Units per in-patient	19.4	4.2	7.5	9.9	32.1

(3) Surgical Services

There were 101,916 operations carried out in the general hospitals of Alberta, of which 91,750 (90.0%) were on in-patients and 10,166 (10.0%) on out-patients. These figures do not include operations carried out in the emergency unit of the hospital.

On the average, it took slightly more than three-quarters of an hour to perform an operation. Not included in the operating time are the hours spent preparing the patient, clean-up time, "stand-by time", or time spent moving the patient to or from the operating room.

During 1959, about 2 in every 10,000 patients operated on died during the operation, except in the 90 - 179 bed size hospitals where no deaths during operation were reported. Post-operative deaths within 10 full days following the operation amounted to 382 in 1959 or 3.7 in every 1,000 operations. Total post-operative deaths amounted to 456 in 1959, or 4.3 per 1,000 operations.

Table 24 provides data on surgical services in Alberta general hospitals during 1959.

TABLE 24
SURGICAL SERVICES IN GENERAL HOSPITALS BY SIZE OF HOSPITAL, 1959

	Total	Size of Hospital by Bed Capacity			
		1-29	30-89	90-179	180 and Over
Number of Operations	101 916	8,832	23,322	8,465	61,297
In-patient	91,750	6,990	18,443	8,360	57,957
Out-patient	10,166	1,842	4,879	105	3,340
Total Elapsed Time (Hours)	79,197	6,023	13,522	3,908	55,744
Deaths During or After Operations	456	14	62	17	363
During Operation	20	2	5	.....	13
Under 48 Hours	157	7	15	7	128
48 Hours to 10 Days	225	5	16	10	194
Post Operative Infection	517	49	44	28	396
Rates:					
Hours per Operation .....	.78	.68	.58	.46	.91
Operative Deaths (per 1,000 Operations) .....	.2	.2	.2	.....	.2
Total Post Operative Deaths (Per 1,000 Operations)	4.3	1.4	2.4	2.0	5.7
Deaths Within 10 Days After Operation (Per 1,000 Operations)	3.7	1.4	1.3	2.0	5.3

(4) Obstetrical Services

In 1959 there were 36,528 deliveries in the general hospitals of Alberta of which 893 or 24.4 of every 1,000 deliveries were Caesarean sections. A delivery might include multiple live births or stillbirths and therefore total number of deliveries do not coincide with the total number of births. Total number of births in 1959 amounted to 36,897 of which 398 were stillbirths.

During the year, 55.6 in every 1,000 births were premature and 10.0 in every 1,000 births were premature deaths.

Table 25 provides data and rates on obstetrical services in Alberta general hospitals during 1959.

TABLE 25
OBSTETRICAL SERVICES IN GENERAL HOSPITALS BY SIZE OF HOSPITAL, 1959

	Total	Size of Hospital by Rated Capacity			
		1-29	30-89	90-179	180 and Over
Total Deliveries	36,528	3,499	8,651	2,316	22,112
Caesarean Sections	893	57	143	59	634
Maternal Deaths	6	1	3	.....	2
Stillbirths	398	38	99	29	232
Live Births	36,499	3,435	8,584	2,318	22,162
Premature Births	2,053	119	289	85	1,557
Premature Deaths	370	32	97	13	228
Neonatal Deaths	552	53	132	31	336
Newborns with Staphylococcal Skin Infection	186	13	23	10	140
Rates:					
Caesarean Sections (Per 1,000 Deliveries)	24.4	16.3	16.5	25.5	28.7
Stillbirths (Per 1,000 Births)	10.8	10.9	11.4	12.4	10.4
Premature Births (Per 1,000 Births)	55.6	34.3	33.3	37.5	69.5
Premature Deaths (Per 1,000 Births)	10.0	9.2	11.2	5.5	10.2
Neonatal Deaths (Per 1,000 Births)	15.0	15.3	15.2	13.2	15.2
Newborns with Staphylococcal Skin Infection (Per 1,000 Live Births)	5.1	3.8	2.7	4.3	6.3

PART III FINANCIAL INFORMATION

The statistical data presented in this section of the annual report have been collected from auditors' 1959 Financial Statements submitted by each approved hospital. Contract, Federal and Lloydminster Hospitals are excluded throughout this section, auxiliary hospitals are included in some tables and are so indicated.

The year 1955 represents the first year that standardized accounting procedures were effective through most of the approved hospitals, hence comparisons with years prior to that date are somewhat arbitrary.

1. Expenditure

The total cost of operating the general hospitals in 1959 amounted to \$38,679,152 including depreciation and interest. Compared to 1958, gross expenditures increased by 3,203,825 or 8.3%. The increase in 1958 over 1957 was \$3,275,658.00 or 10.2%.

Gross expenditure per hospital rated bed, crib, and bassinet capacity averaged \$4,330 in 1959 as compared to \$4,013 in 1958. The average gross expenditure per hospital bed, crib and bassinet set up as at December 31, was 4,113 in 1959 and 3,898 in 1958.

Average cost per adult, child and newborn patient of operating the Alberta approved general hospitals was \$15.70 in 1959; the lowest cost per patient day was in the 30 - 89 bed size hospitals (\$12.13) and the highest cost per patient day was in the 180 beds and over size hospitals (\$17.77).

Percentage distribution and expenditures per patient day are shown on Table 26.

TABLE 26
GROSS EXPENDITURE PER ADULT, CHILD AND NEWBORN PATIENT DAY AND
PERCENTAGE DISTRIBUTION OF GROSS EXPENDITURE,
BY DEPARTMENT, 1959

DEPARTMENT	TOTAL		SIZE OF HOSPITAL BY BED CAPACITY							
	Per Patient Day	% of Total	1 - 29		30 - 89		90 - 179		180 & Over	
			Per Patient Day	% of Total	Per Patient Day	% of Total	Per Patient Day	% of Total	Per Patient Day	% of Total
Nursing Administration .....	.31	2.0	.29	2.2	.29	2.4	.29	2.0	.33	1.9
Direct Care of Patients	4.85	30.9	4.37	33.4	4.05	33.4	5.13	34.4	5.24	29.5
Operating Room .....	.74	4.7	.32	2.4	.44	3.6	.73	4.9	.94	5.3
Central Supply Room .....	.37	2.4	.18	1.4	.19	1.6	.32	2.1	.49	2.7
Pharmacy .....	.30	1.9	.33	2.5	.30	2.5	.12	.8	.33	1.8
Delivery Room .....	.27	1.7	.16	1.3	.22	1.8	.14	.9	.32	1.8
Laboratory .....	.55	3.5	.20	1.5	.24	2.0	.30	2.0	.77	4.4
Radiology .....	.48	3.1	.36	2.7	.43	3.6	.56	3.7	.51	2.9
Physiotherapy .....	.05	.3	*	**	.01	.1	.09	.6	.07	.4
Other Special Services .....	.14	.9	.06	.5	*	*	.09	.6	.21	1.2
Medical Records and Library .....	.15	1.0	.05	.4	.09	.7	.18	1.2	.20	1.1
Nursing Education .....	.57	3.6	.....	.....	.03	2	.10	.6	.96	5.4
Medical Education .....	.15	1.0	.....	.....	*	**	*	**	.26	1.5
Social Service .....	.01	*	.....	.....	*	**	.04	.2	"	"
Other Supplemental Services .....	.03	.2	.....	.....	.....	.....	.08	.5	.04	.2
Administration	1.42	9.1	1.27	9.7	1.20	9.9	1.39	9.3	1.54	8.7
Dietary	2.45	15.6	2.46	18.8	2.12	17.5	2.29	15.4	2.60	14.7
Laundry .....	.46	2.9	.52	4.0	.42	3.4	.44	3.0	.47	2.7
Linens Service .....	.20	1.3	.20	1.5	.18	1.4	.21	1.4	.20	1.1
Housekeeping .....	.87	5.5	.70	5.3	.63	5.2	.91	6.1	1.00	5.6
Operation of Physical Plant .....	.80	5.1	1.01	7.7	.84	6.9	.98	6.6	.72	4.0
Maintenance of Physical Plant .....	.51	3.3	.45	3.4	.43	3.5	.53	3.6	.56	3.1
Undisturbed as to Departments ..	.03	.2	.15	1.2	.04	.3	.....	.....	.....	**
TOTAL	15.70	100.0	13.08	100.0	12.13	100.0	14.89	100.0	17.77	100.0

*Less than 0.005

**Less than 0.05%

Direct care of patients absorbed 30.9% of the total gross expenditures and amounted to \$4.85 per patient day. Expenditure on dietary and food was 15.6% of the total and on administration (including nursing administration) it was 11.0% of the total.

Increases in the total gross expenditures of the general hospitals in 1959 added 47 cents to the average operating cost per adult, child and newborn patient day. Expenditures on salaries and wages in 1959 amounted to 26,280,439 or 68.0% of the total gross expenditures and averaged \$10.66 per adult, child and newborn patient day or \$1.08 more than in 1958.

Table 27 shows percentage increases since 1950 in total gross expenditures and expenditure on salaries and wages and expenditure per adult, child and newborn patient day. Figure VI represents per patient day gross expenditures since 1950.

TABLE 27
INCREASES IN GROSS EXPENDITURES AND EXPENDITURES PER ADULT, CHILD
AND NEWBORN PATIENT DAY, 1950-1959

Year	Total Gross Expenditure				Salaries and Wages				
	Amount	% Yearly Increase	% of 1950	Per Patient Day	Amount	% Yearly Increase	% of 1950	Per Patient Day	% of Total Expenditures
1950	13,266,925	.....	100.0	7.87	6,462,998	.....	100.0	3.84	48.7
1951	15,060,818	13.5	113.5	8.46	7,486,069	15.8	115.8	4.21	49.7
1952	17,188,076	14.1	129.6	9.31	9,032,252	20.7	139.8	4.89	52.5
1953	20,946,569	21.9	157.9	10.59	11,431,916	26.6	176.9	5.78	54.6
1954	24,015,942	14.7	181.0	11.52	13,778,991	20.5	213.2	6.61	57.4
1955	26,070,752	8.6	196.5	12.15	14,985,622	8.8	231.9	6.99	57.5
1956	28,684,797	10.0	216.2	13.17	16,986,490	13.4	262.8	7.80	59.2
1957	32,261,054	12.5	243.2	14.34	19,906,876	17.2	308.0	8.85	61.7
1958	35,475,327	10.0	267.4	15.21	22,356,146	12.3	345.9	9.58	63.0
1959	38,679,152	8.9	291.2	15.70	26,330,439	17.6	406.6	10.66	68.0

2. Earnings

Total gross earnings of general hospitals in 1959 from services to patients amounted to \$8,435,017 of which \$7,252,810 (86.0%) was from services to in-patients and \$1,182,207 (14.0%) was from services to out-patients.

Gross earnings from patient co-insurance was a little more than \$2.5 million or more than one-third of the gross earnings from services to in-patients. The Province absorbed \$1,342,181 in co-insurance payments on behalf of maternity and newborn, pensioners, cancer, arthritis, and polio patients. During 1959, the patients paid more than \$1.5 million as differential charges for preferred accommodation requested by them.

About half-a-million dollars was earned from radiology services to out-patients and another quarter of a million dollars was earned from the emergency Unit.

Figure VII and Table 28 show the distribution of gross earnings of Alberta general hospitals from services to in-patients and out-patients during 1959.

3. Value and Depreciation of Plant Assets

The net book value of the plant assets of the approved general hospitals as at December 31, 1959 amounted to \$69,438,283; of this total \$61,257,247 was the net book value of buildings, improvements and permanent fixtures at cost, and \$8,181,036 was the net book value of furniture and equipment at cost.

Summary analysis of value and depreciation of plant assets during 1959 is given in Table 29.

TABLE 28
 PERCENTAGE DISTRIBUTION OF GROSS EARNINGS FROM SERVICES TO
 IN-PATIENTS AND OUT-PATIENTS

ITEM	Total	Size of Hospital by Bed Capacity			
		1 - 29	3 - 89	90 - 179	180 and Over
In-patients:					
Provincial Co-Insurance:					
Adults and Children	13.0	19.2	19.5	20.1	10.5
Newborn	2.9	4.3	4.3	3.2	2.4
Patient Co-Insurance					
Adults and Children	30.1	38.3	38.5	38.2	26.9
Newborn .....	.3	.4	.3	.1	.2
Federal Government	5.0	.6	1.1	.3	6.6
Workmen's Compensation Board	10.2	9.2	10.6	7.5	10.4
Non-Residents	6.1	7.6	3.9	4.8	6.5
Other Non-eligibles .....	.1	.1	.1	.4	.1
Differential Charges	17.8	2.4	7.1	8.0	22.3
Non-benefit Drugs .....	.1	.3	.2	.1	.1
Ambulance Service .....	.1			1.7	....
Other Additional Services .....	.4	.1	.5	.1	.3
Total in-patients	86.0	82.7	86.2	84.5	86.3
Out-patients:					
Emergency Unit	2.8	.5		.7	3.7
Operating Room .....	.7	2.3	1.8	.7	.3
Central Supply Room .....	.6	2.0	1.0	1.1	.3
Pharmacy	1.1	1.9	1.1	.3	1.0
Laboratory	1.6	.9	1.1	1.9	1.7
Radiology	5.9	8.7	8.5	8.3	4.9
Physiotherapy	1.0	.1	.2	1.7	1.3
Other .....	.5	1.0	.2	.7	.5
Total out-patients	14.0	17.4	13.8	15.5	13.7
GRAND TOTAL	100.0	100.0	100.0	100.0	100.0

*Less than 0.05%

TABLE 29
 ANALYSIS OF VALUE AND DEPRECIATION OF PLANT ASSETS, 1959

	Buildings and Building Service Equipment	Major and Other Equipment
Value of Plant Assets:		
Balances at January 1, 1959	66,018,056	11,385,747
Assets Added in 1959	5,337,119	1,337,363
Subtotal	71,355,175	12,723,110
Less: Assets Retired in 1959	50,106	133,886
Balances at December 31, 1959	71,305,069	12,589,224
Depreciation of Plant Assets:		
Balances at January 1, 1959	8,791,554	3,810,317
Depreciation Provided During 1959	1,277,437	654,014
Subtotal	10,068,991	4,464,331
Less: Accumulated Depreciation on Assets retired	21,169	56,143
Balances at December 31, 1959	10,047,822	4,408,188
Net Book Value at December 31, 1959	61,257,247	8,181,036

TABLE 30

BREAKDOWN OF PROVINCIAL EXPENDITURES ON HOSPITALIZATION SERVICES AND HOSPITAL EQUIPMENT AND CONSTRUCTION, 1959

Type of Payment	Amount
General Hospitals:	
Co-Insurance	1,356,486
Basic Monthly*	27,262,742
Bad Debts	196,324
Out-Patients	22,007
Debt Retirement and Interest	2,231,853
Equipment*	716,120
Equipment	61,528
Renovation	125,373
University Out-Patient Clinic	24,752
Auxiliary Hospitals:	
Basic Monthly*	811,368
Equipment*	11,792
Debt Retirement and Interest	40,112
D.V.A. Chronic	226,728
Federal (D.V.A.) Hospitals*	529,912
Federal (Indian) Hospitals*	545,977
Contract Hospitals*	15,382
Out-of-Province*	137,341
Red Cross*	102,328
Provincial Laboratory*	419,553
Nursing Homes	794,462
Home Confinement	10,080
TOTAL	35,642,220

*Costs shareable by the Federal government

4. Summary Breakdown of Provincial Expenditure

Total expenditure by the Province for various aspects of the hospitalization program during the calendar year 1959 amounted to more than \$35.64 million. This figure excludes expenditures on mental, tuberculosis and cancer hospitalization.

The costs shareable by the federal government exceeded \$30.55 million and the non-shareable costs were \$5.09 million. The federal contribution to the Province of Alberta in 1959 was approximately \$14.5 million or 47% of the total shareable cost.

Table 30 gives a breakdown of provincial expenditures on hospitalization services and hospital equipment and construction, 1959.

DIAGRAM I

INCREASES IN PATIENTS AND DAYS OF APPROVED GENERAL HOSPITALS IN RELATION TO POPULATION 1950-1959

(EXCLUDING NEWBORN)

PER CENT

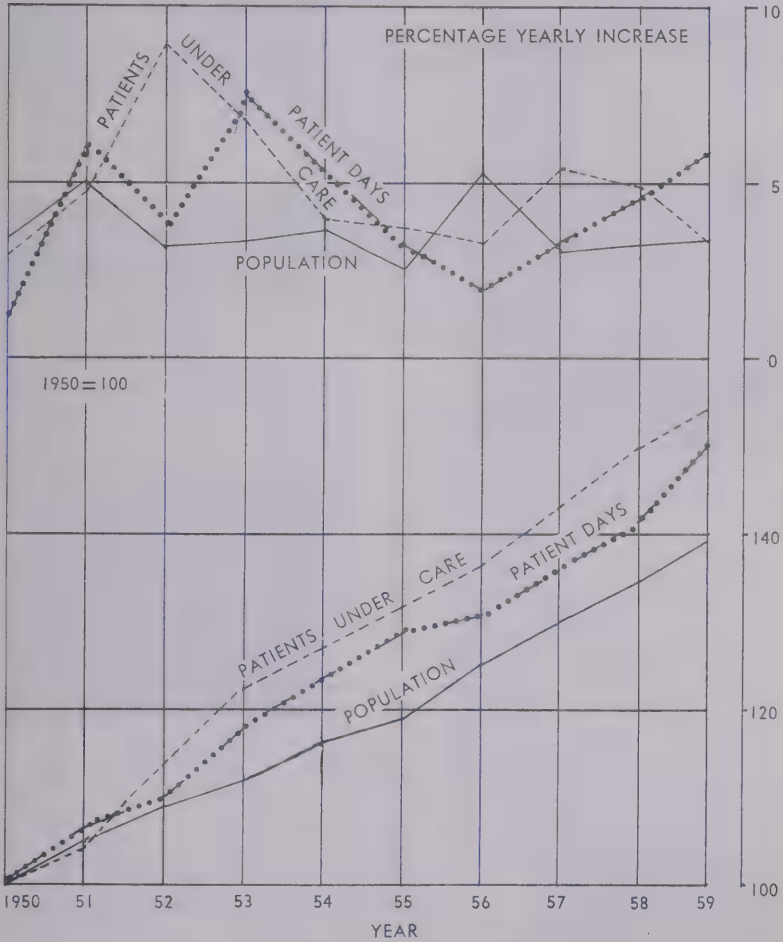


DIAGRAM II

PERCENTAGE DISTRIBUTION OF SEPARATED CASES AND PATIENT DAYS BY LENGTH OF STAY, 1959

(EXCLUDING NEWBORN, AND D.V.A. DIVISION OF THE UNIVERSITY HOSPITAL)

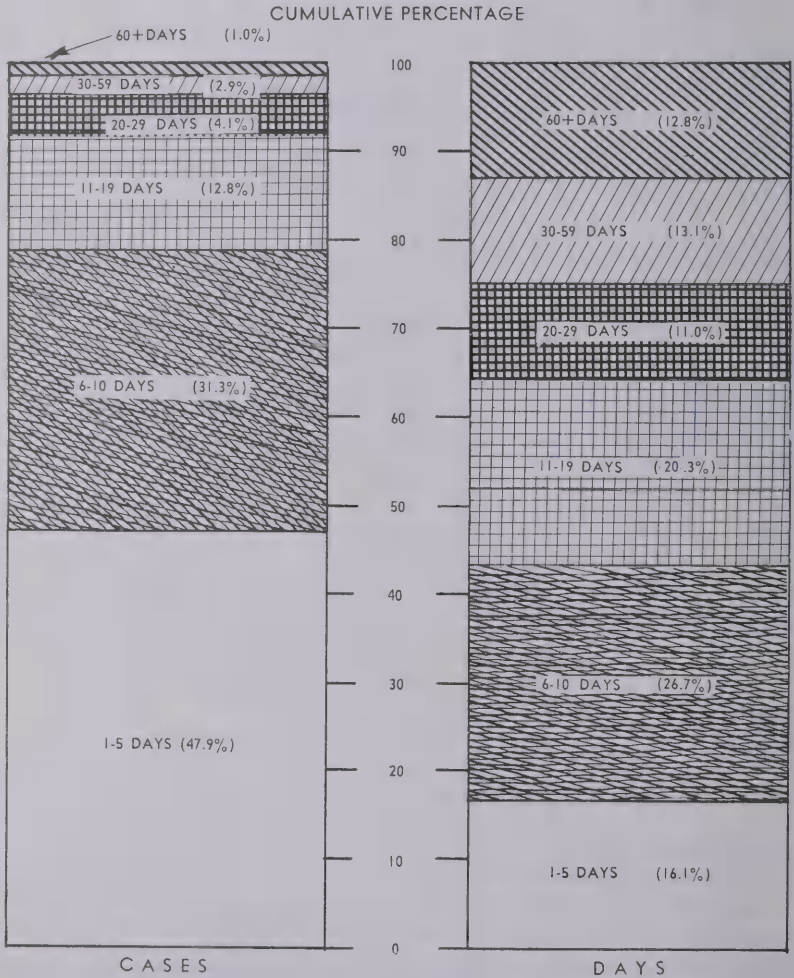


DIAGRAM III
**AVERAGE STAY OF SEPARATED PATIENTS
BY AGE GROUPS, 1957 - 1959**
(EXCLUDING NEWBORN)

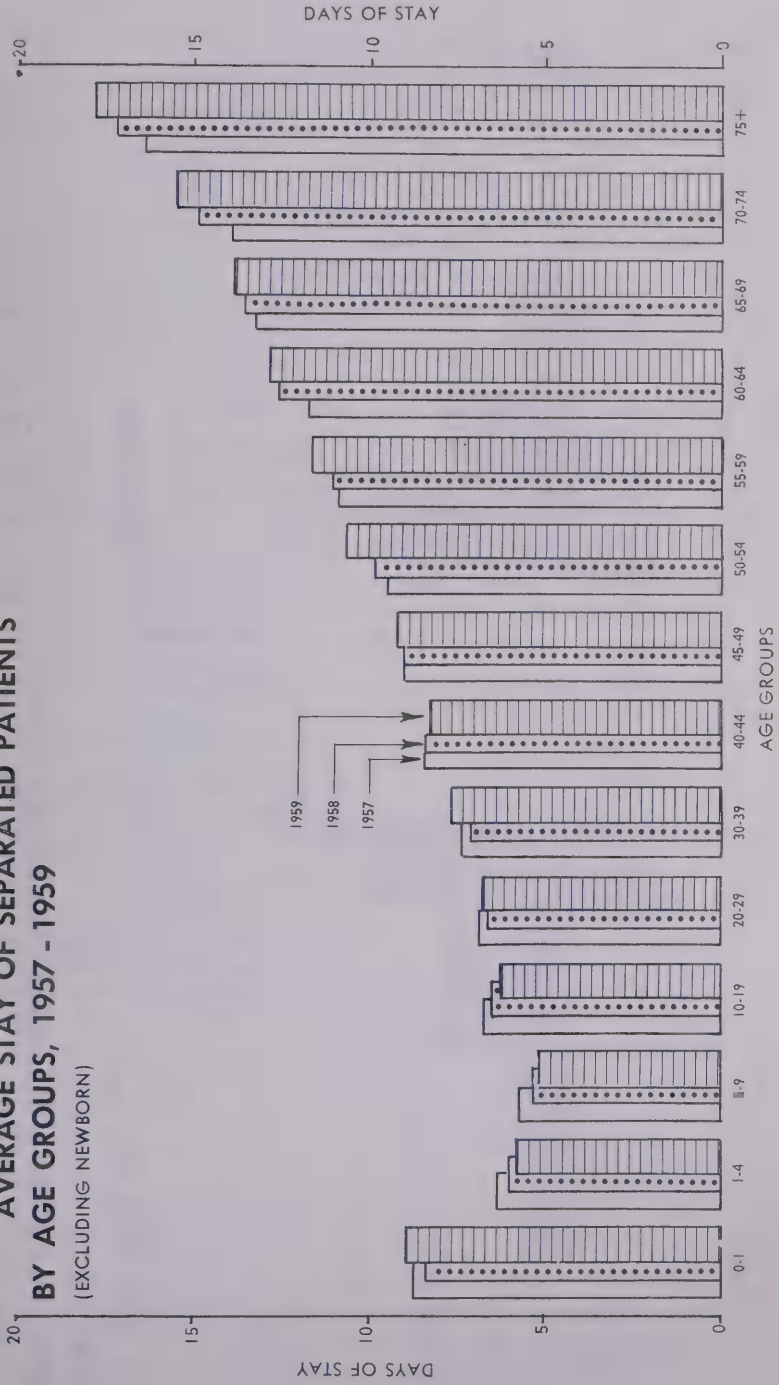


DIAGRAM IV
PERCENTAGE DISTRIBUTION OF ADULTS AND CHILDREN SEPARATED CASES AND DAYS BY AGE GROUP, 1959
 (EXCLUDING D.V.A. DIVISION OF THE UNIVERSITY HOSPITAL)

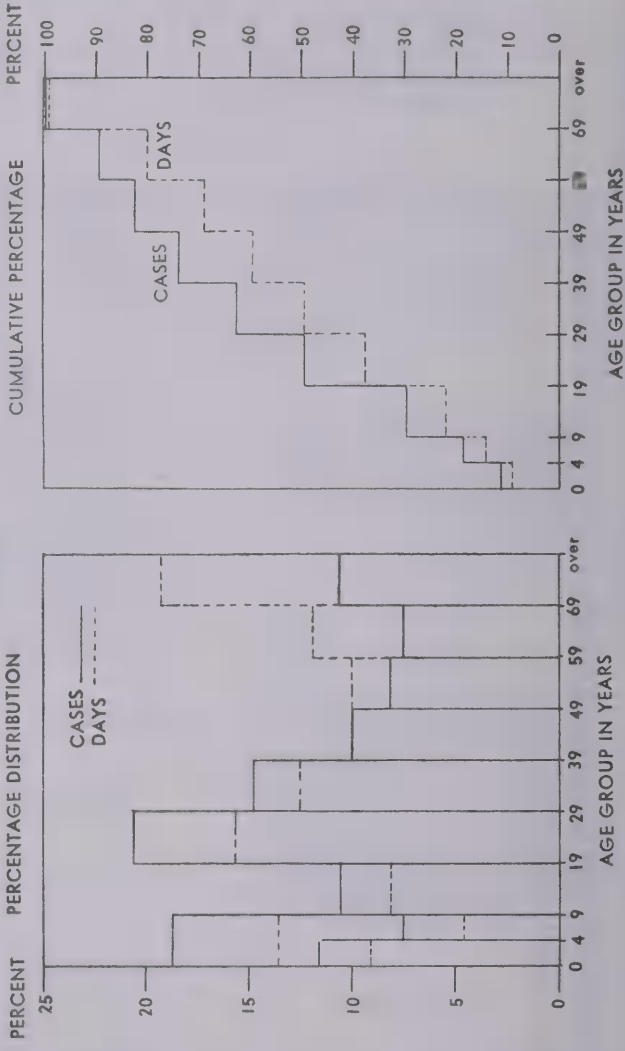


DIAGRAM V

**PERCENTAGE DISTRIBUTION OF SEPARATED CASES
AND DAYS
BY AGE AND SEX, 1959**

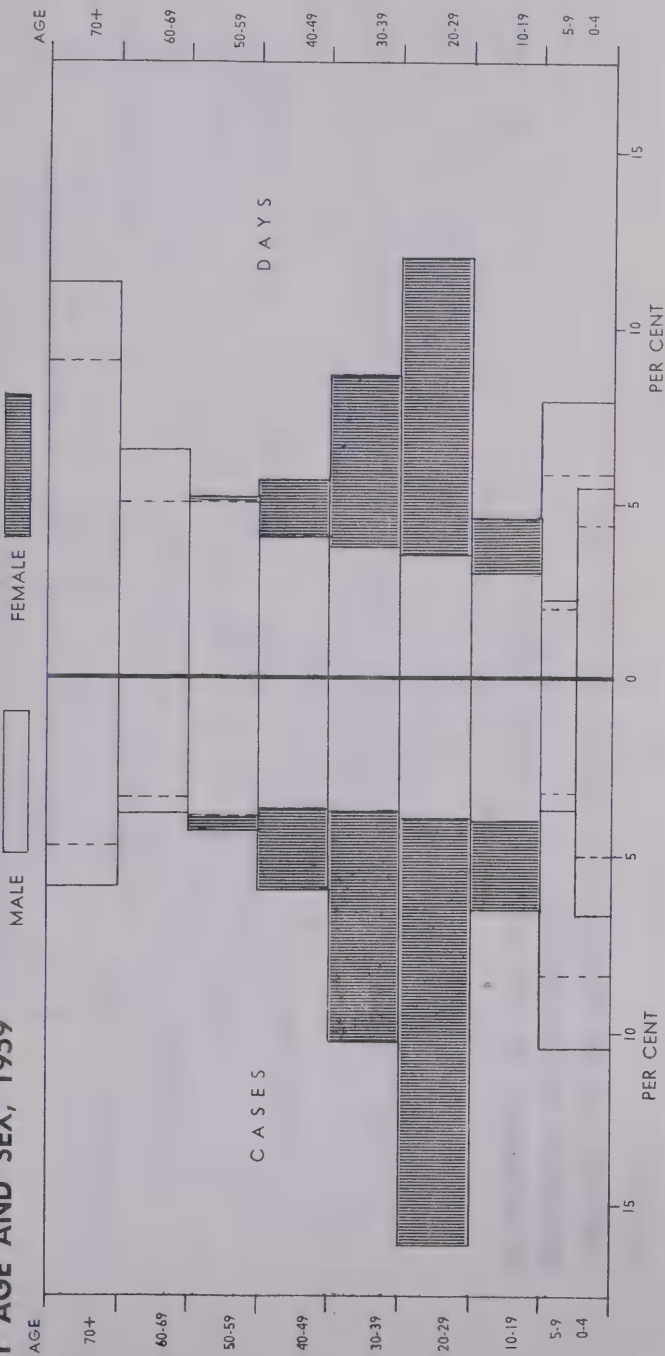


DIAGRAM VI
**PERCENTAGE DISTRIBUTION OF HOURS WORKED IN
 DIFFERENT DEPARTMENTS
 BY MEMBERS OF THE HOSPITAL STAFF, 1959**

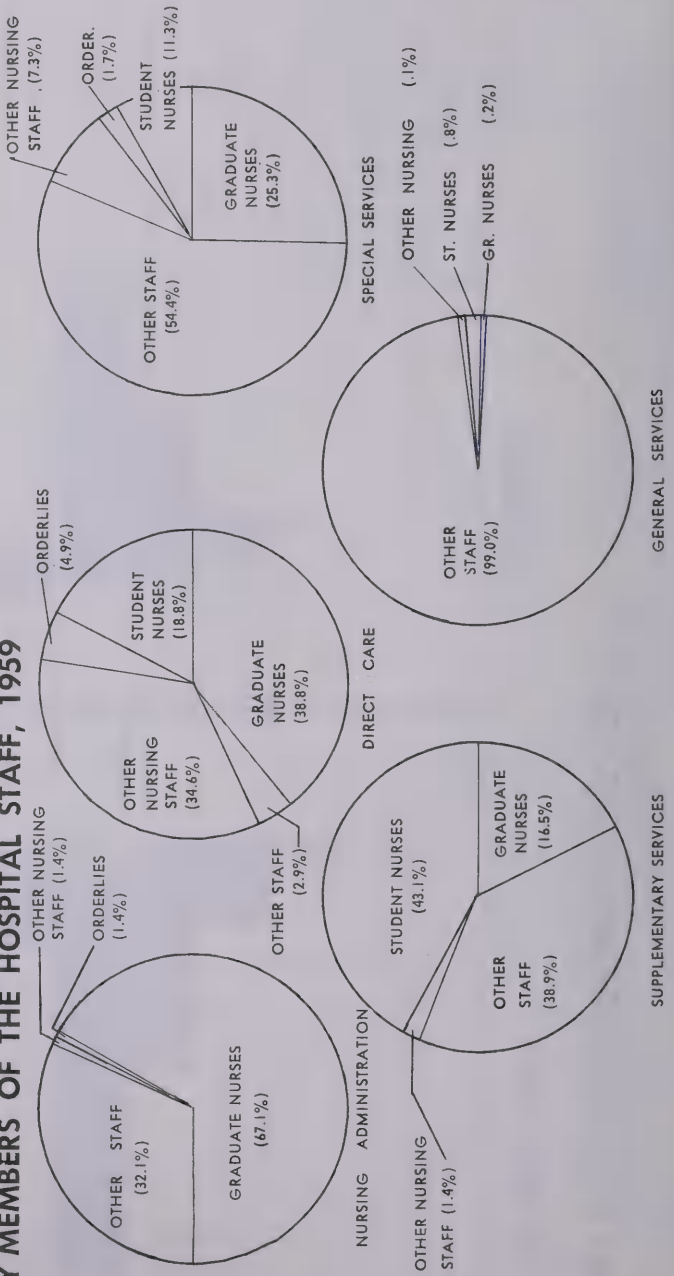


DIAGRAM VII
**PERCENTAGE DISTRIBUTION OF HOSPITAL STAFF HOURS
 AMONG DIFFERENT DEPARTMENTS, 1959**

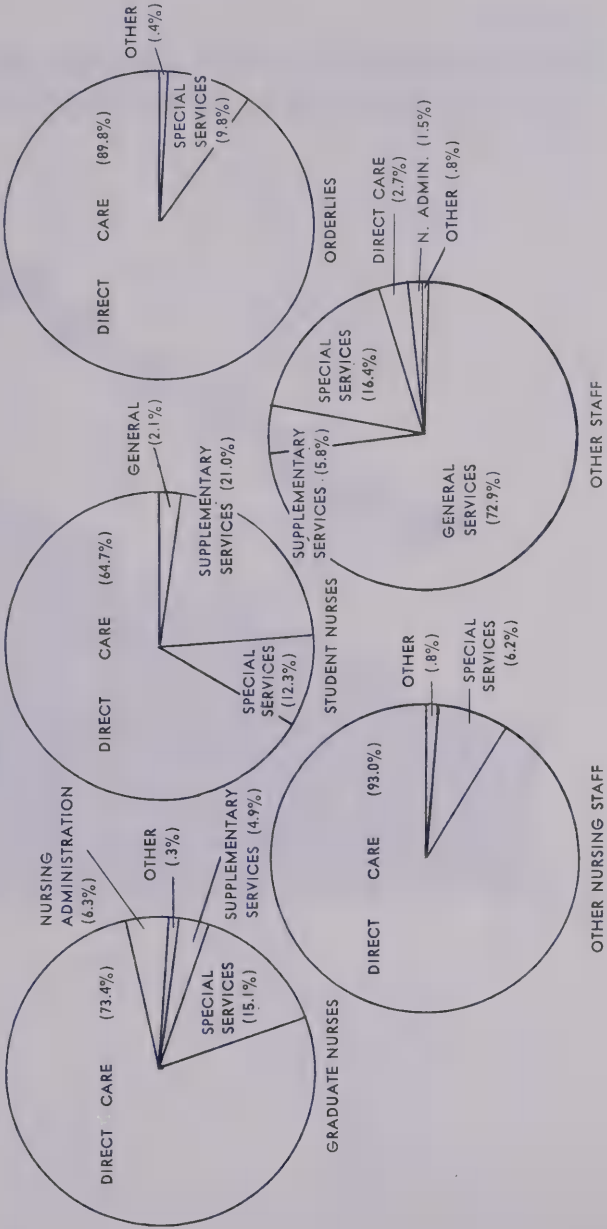


DIAGRAM VIII

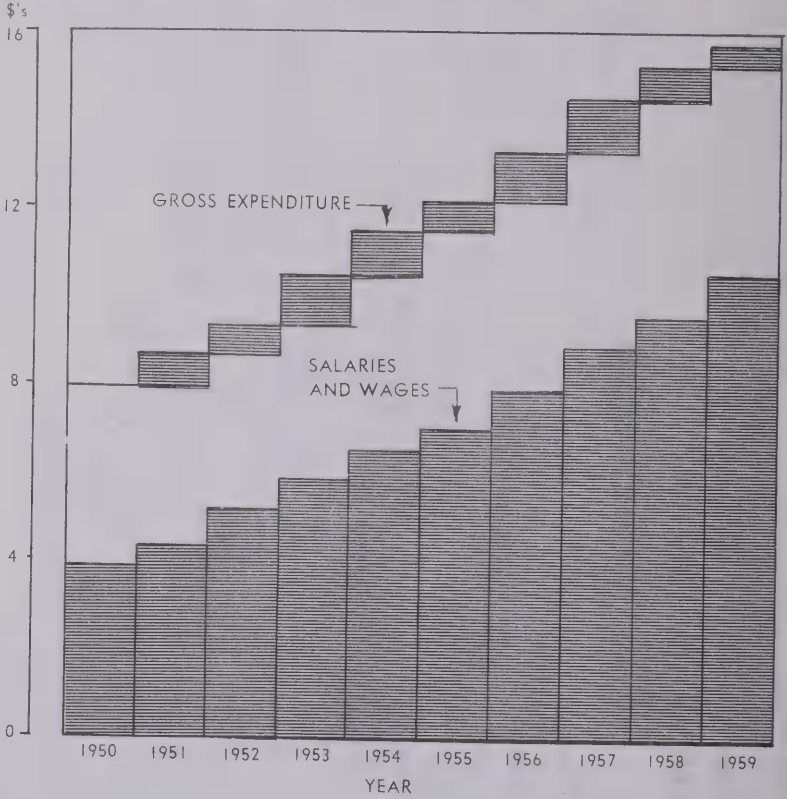
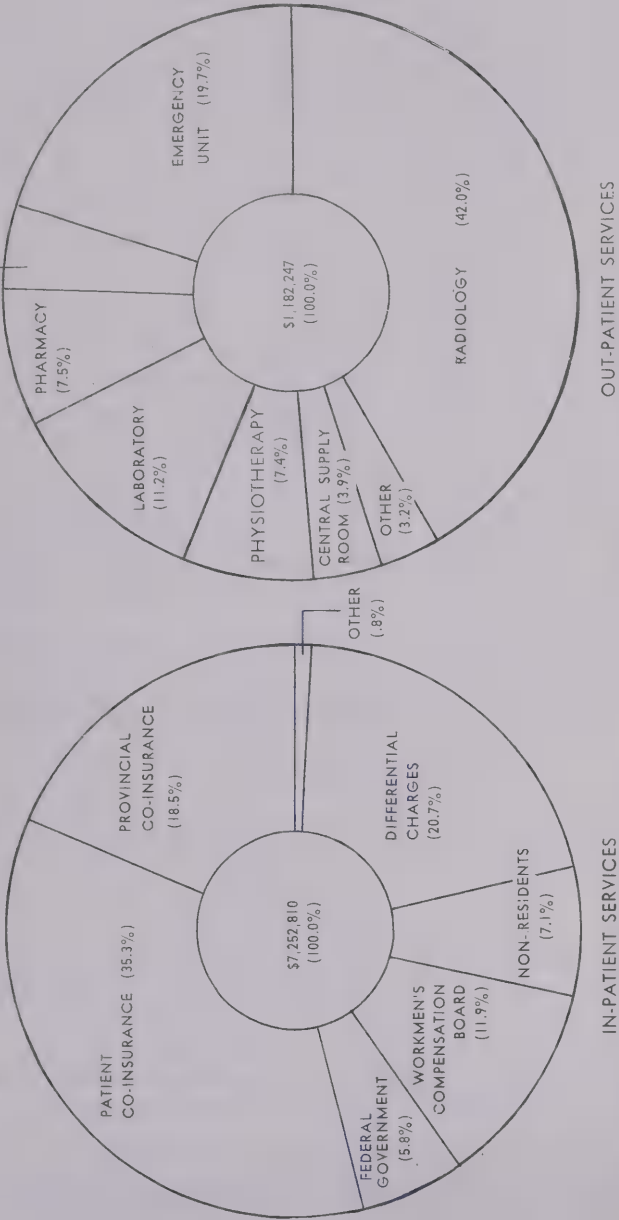
**GROSS EXPENDITURES AND SALARIES AND WAGES
PER ADULT, CHILD, AND NEWBORN PATIENT DAY,
1950 - 1959**

DIAGRAM IX
**DISTRIBUTION OF GROSS EARNINGS FROM SERVICES
 TO IN-PATIENTS AND OUT-PATIENTS, 1959**



RATED BED CAPACITY AND BEDS SET UP AT DECEMBER 31
BY SIZE OF HOSPITAL AND TYPE OF BED, 1959

Hospital	Rated Bed Capacity										Beds Set up at Midnight December 31										Total beds & Cribs	Basic-beds for Newborn
	Type of Bed										Type of Bed											
	Medicine & Surgery	Obstetrics (Maternity)	Orthopedic	Pediatrics (Children)	Psychiatric	Isolation	Other	Total	Basic-beds for Newborn	Medicine & Surgery	Obstetrics (Maternity)	Orthopedic	Pediatrics (Children)	Psychiatric	Isolation	Other	Total					
90 - 179 Beds																						
Calgary Children's	-	-	123	-	-	-	123	-	-	-	123	-	-	-	-	-	123	-	-			
Guarose	67	20	-	9	-	2	98	22	70	20	-	9	-	2	-	-	101	22	101			
Grumwiler	30	24	10	10	-	-	94	20	57	24	10	10	-	-	-	-	101	21	101			
Lacombe	92	12	-	12	-	-	108	16	86	17	-	14	-	-	-	-	117	20	117			
Leabok	69	10	-	12	-	-	91	10	57	10	-	12	-	-	-	-	109	10	109			
Red Deer	70	19	-	15	-	-	104	30	70	19	-	15	-	-	-	-	104	30	104			
TOTAL	338	87	138	58	-	2	623	98	370	90	139	60	-	2	-	-	660	103	660			
180 Beds & Over																						
Calgary General	476	93	46	34	20	17	736	110	476	93	46	34	20	17	9	-	745	110	745			
Calgary Holy Cross	189	57	46	50	-	-	342	54	192	57	46	50	-	-	-	-	345	54	345			
Edmonton General	273	47	-	51	-	-	371	69	273	47	-	51	-	-	-	-	371	69	371			
Edmonton Mitericordia	239	51	-	50	-	-	342	60	239	50	-	50	-	-	-	-	341	60	341			
Edmonton Royal Alex	289	134	46	115	-	34	656	155	289	134	46	115	-	34	36	-	654	155	654			
Edmonton University	583	60	97	139	65	61	1095	75	593	60	97	111	65	-	57	-	973	73	973			
Lethbridge Municipal	122	42	-	24	-	-	192	45	122	42	-	24	-	-	4	-	199	45	199			
Lethbridge St. Michael's	121	30	-	30	-	-	181	18	129	30	-	30	-	-	-	-	189	18	189			
Medicine Hat	172	40	-	31	-	-	243	37	146	40	-	31	-	-	-	-	217	37	217			
TOTAL	2,664	554	235	574	85	51	4,066	636	2,450	553	235	546	95	51	103	-	4,028	655	4,028			
GRAND TOTAL	4,570	1,202	399	1,022	85	127	7,912	1,471	4,860	1,220	404	1,115	85	121	115	-	7,920	1,535	7,920			

* Situated in Saskatchewan but partly owned by Alberta.
The actual rated capacity is 85 beds and 12 bassinets.

ANNUAL REPORT, 1959

MOVEMENT OF PATIENTS - APPROVED GENERAL HOSPITALS, 1959

Hospital	Rated Capacity		In at Beginning of Year			Admissions			Total Under Care			Discharges			Deaths			Total Separations			In at End of the Year			Skill-Births
	Beds & Cribs	Bassi-nees	Adults & Newborn Children	Total	Adults & Children	Adults & Newborn Children	Total	Adults & Newborn Children	Total	Adults & Newborn Children	Total	Adults & Newborn Children	Total	Adults & Newborn Children	Total	Adults & Newborn Children	Total	Adults & Newborn Children	Total	Adults & Newborn Children	Total			
90 - 179 Beds																								
Calgary Children's	128		42	42	2164	2164	2206	2145	---	2145	2	2	2147	---	2147	59	59	---	2147	59	59	---	59	
Calgary Holy Cross	98	20	86	12	3934	4347	4020	3883	415	4278	79	2	3962	437	4379	58	8	4379	4379	58	8	4379	3	
Calgary General	342	54	237	31	2683	13659	11266	10760	2561	13827	278	46	324	11093	2536	258	45	13524	2536	258	45	13524	26	
Edmonton General	371	69	320	33	353	13750	2115	16165	14070	16518	15337	2362	19599	213	29	244	13752	2391	16165	318	57	375	33	
Edmonton Misericordia	342	60	286	40	326	11778	2158	14136	12264	2198	14662	11804	2116	13920	220	40	260	12024	2156	10180	240	42	282	18
Edmonton Royal Alex	654	155	552	119	671	22982	5611	28593	23534	5770	29264	22285	5560	28145	461	67	528	23046	5627	28673	488	103	591	56
Edmonton University	1095	75	709	39	748	20195	2036	22221	20904	2075	22979	19775	2006	21581	568	33	601	20143	2099	22182	761	36	797	33
Lethbridge Municipal	192	38	116	17	163	5331	937	6770	5777	956	6933	5715	933	6648	115	8	122	5830	941	6771	147	15	162	6
Medicine Hat	151	31	116	14	146	4866	673	4193	3813	477	7080	5984	845	6739	173	13	191	4662	687	4662	133	10	143	6
Medicine Hat	243	37	126	16	142	6077	861	6938	6203	477	7080	5984	845	6739	173	13	191	6067	963	6939	136	14	150	6
TOTAL	4066	636	3084	376	3460	121065	22155	143220	124149	22531	146649	118315	21798	140117	2784	330	3420	121139	22134	143237	2916	397	3443	232
GRAND TOTAL	7512	1171	5263	653	5916	247248	37749	283997	253531	37402	249923	242636	36494	278830	4541	552	5093	247177	38746	289923	5344	656	6000	398

* Closed in June 1959
 ** Situated in Saskatchewan but partly owned by Alberta.
 The actual rated capacity is 65 beds and 12 bassinets.

DIVISION OF HOSPITAL AND MEDICAL SERVICES

TABLE 33: — DISTRIBUTION OF PATIENT DAYS DURING THE YEAR, BY TYPE OF ACCOMMODATION CHANGED, AVERAGE SIX AND COURTESY, 1975

Hospital	Based Capacity as at December 31,		Patient Days During Year					Patient Days of Separated		Adults & Children Separations	Average Stay of Adults and Children Separations	Occupancy Based on Adult and Child Capacity
	Beds & Cots	Bassi-nets	Adults & Children			Newborn	Adults & Children	Newborn				
			Standard	SeMI-Private	Private				Total			
1 - 29 Beds												
Beaverledge	20	9	5339	---	---	5339	677	5249	679	797	6.6	73.1
Bentley	16	7	3116	12	12	3155	274	3123	274	514	6.1	54.2
Berown	13	2	3257	---	---	3257	466	3777	466	436	8.0	51.6
Birmingham H.H.P.	25	4	3974	37	37	4048	493	3748	493	568	6.6	77.8
Box Island	20	8	3982	107	---	4092	495	3718	495	568	6.5	65.9
Camrose	12	4	2971	2	8	2981	310	2691	318	492	6.1	68.1
Carmanly	14	3	3095	---	---	3095	152	2840	166	375	5.6	60.6
Caster	25	8	6702	218	1622	7912	676	7692	675	1371	5.6	86.7
Ceres	17	3	2543	---	---	2543	205	2337	205	257	7.8	77.4
Cochdale	13	5	3445	---	44	3497	681	2814	699	778	6.5	115.0
Cold Lake	23	8	7321	---	---	7321	1565	5756	1566	1316	5.5	74.3
Consort	22	8	4080	---	---	4080	441	3536	428	672	5.0	50.8
Coronation	18	3	4282	15	15	4297	426	4336	426	519	3.4	65.4
Daysland	22	5	7917	---	244	8161	680	8110	666	1006	7.8	101.6
Devon	7	4	2898	---	---	2898	183	2904	193	635	4.6	113.4
Drayton Valley	20	8	7208	---	---	7208	1409	7029	1399	1690	4.2	98.7
Eckville	29	5	6177	---	---	6177	423	6132	423	932	6.6	53.4
Elmhurst	16	6	2663	---	---	2663	349	2425	344	250	9.7	45.6
Empress	23	4	2074	637	26	2734	551	2171	570	294	9.2	32.6
Glendon	9	7	2298	---	---	2298	182	2297	182	455	4.9	78.7
Hastley	20	6	5848	10	10	5903	448	5438	448	630	8.9	80.9
Hythe	10	4	2789	---	---	2789	236	2688	235	366	8.1	76.6
Innisfail	29	8	10557	---	---	10557	1056	10499	1072	1681	7.1	99.7
Islay	13	4	2755	---	---	2755	120	2676	118	260	10.3	58.1
Jasper	26	8	5424	6	90	5520	1434	5505	1452	748	7.4	58.2
Killam	27	6	7098	64	193	7255	879	7282	874	1386	5.5	76.5
Lambton	22	8	4804	281	246	5331	417	4891	417	649	5.4	78.3
Manitou	16	8	4895	---	---	4895	707	4194	705	965	5.1	85.5
Manville	15	4	3825	---	---	3825	465	3973	433	629	9.3	69.9
Mayerthorpe	20	8	6114	---	---	6114	778	6282	776	1144	5.4	83.8
*Mercol	(6)	---	1337	---	---	1337	111	1231	116	166	11.6	---
McNabury	11	4	4129	461	201	4791	534	4281	534	782	6.5	62.5
Norham	10	2	3082	---	---	3082	234	2848	234	291	7.2	70.7
Nyran	20	8	5796	---	---	5796	314	5715	309	800	7.4	72.4
Oyen	17	5	5986	---	---	5986	677	5061	686	525	9.8	82.0
Provost	26	6	6819	---	---	6819	862	7044	875	913	8.7	71.0
Rady	14	6	4001	---	---	4001	548	3931	561	680	6.8	78.3
Raymond	18	5	5526	---	376	5902	588	5314	595	893	6.6	89.9
Rocky Mountain	13	5	3825	---	---	3825	498	3327	498	1487	6.2	100.0
Shenley Lake	15	5	4148	---	102	4250	595	4332	532	636	6.5	77.6
Three Hills	25	10	6785	---	---	6785	1216	6748	1148	1408	8.0	74.6
Turner Valley	22	6	6599	---	6	6605	270	6221	254	543	11.5	42.3
Wilna	14	3	3828	---	---	3828	758	3828	758	532	7.3	74.9
Willingdon	13	3	4966	---	115	5081	502	5080	508	919	6.2	107.1
TOTAL	795	232	215241	1706	3614	220561	29524	217931	25675	32532	6.7	76.2

DIVISION OF HOSPITAL AND MEDICAL SERVICES

DISTRIBUTION OF PATIENT DAYS DURING THE YEAR, BY TYPE OF ACCOMMODATION CHARGED
AVERAGE STAY AND OCCUPANCY, 1959

Hospital	Rated Capacity as at December 31.		Patient Days During Year						Patient Days of Separated Patients During Year			Average Stay of Adults and Children Separations	Occupancy Based on Rated Bed Capacity	
	Beds Cots	Basal- nets	Adults & Children			Total	Newborn	Adults & Children	Newborn	Adults & Children Separations				
			Standard Ward	Semi-Private	Private									
90 - 179 Beds														
Calgary Children's	128	--	20446	--	--	20446	--	29089	--	29089	2147	13.5	66.2	
Canoco	98	22	22193	3315	3466	28564	3116	2372	3171	2582	2382	7.2	81.0	
Drumheller	94	20	22528	--	2157	22528	2157	2127	2171	2127	4219	17.5	96.7	
Grande Prairie	103	16	31386	--	248	31634	3950	30827	3393	30827	4219	7.3	96.7	
Lamont	91	10	14914	4782	4472	24168	1050	20845	1052	20845	2865	7.3	72.8	
Red Deer	104	30	27335	4079	1240	32704	5980	32577	5925	32577	5028	6.5	86.2	
TOTAL	623	98	144882	12176	9426	170454	16553	165930	16517	165930	20531	8.0	75.9	
180 Beds & Over														
Calgary General	736	110	177565	46949	7359	231843	30519	231611	30516	231611	23931	9.8	96.4	
Calgary Holy Cross	342	54	79231	14739	11286	105106	17125	103523	16973	11008	11008	9.4	84.5	
Edmonton General	371	69	92734	25247	10847	126656	17534	126629	17377	13752	13752	9.2	93.4	
Edmonton Hespericordia	42	60	10855	32453	5125	43633	18159	11020	18121	12024	12024	9.2	88.7	
Edmonton Royal Alex	694	155	171741	28944	10912	212687	43649	210104	43595	23046	23046	9.1	88.8	
Edmonton University	1095	75	253522	47155	10628	311305	16968	305604	16961	19422	19422	15.7**	81.9	
Lethbridge Municipal	192	58	46913	9748	3791	60452	7540	60238	7550	5930	5930	10.3	86.3	
Lethbridge St. Michael's	18	18	30678	19023	5582	55283	3789	57840	3754	5402	5402	10.7	83.7	
Medicine Hat	243	37	47079	2176	3175	52430	6019	51666	6050	6967	6967	8.5	59.1	
TOTAL	4566	636	972298	223162	68274	1265734	161291	1260235	160957	1260235	120392	10.5	85.3	
GRAND TOTAL	7512	1471	1842422	262375	102364	2209961	264756	2199970	269225	2199970	246456	8.9	81.0	

* Closed in June 1959

** Includes Polio patients.

TABLE 34: - DISTRIBUTION OF PATIENT DAYS BY RESIDENTIALITY OF PAYMENT
1959

Hospital	Adults and Children: Days						Temporary Days		
	Provincial Plan	Federal Government	Workmen's Compensation Board	Non-Residents	Non-Active	Total	Insured	Un-Insured	Total
1 - 29 Beds									
Beverly	1789	2	87	463	-	5339	580	37	677
Burley	3105	-	50	8	-	3165	274	-	274
Berry	3853	-	77	1	26	3957	466	-	466
Bonnyville K.H.P.	3605	-	51	9	-	3665	526	7	533
Box Island	4022	4	26	40	-	4092	495	-	495
Canmore	2785	-	110	56	-	2991	302	8	310
Carmanagay	3081	3	3	8	-	3122	325	-	325
Castor	7775	1	97	19	-	7992	676	-	676
Chapleau	2511	-	1	-	-	2513	205	-	205
Coaldale	5299	6	9	145	-	5459	647	11	661
Cold Lake	6410	58	263	590	-	7321	1387	178	1555
Consort	3768	-	87	25	-	4090	435	6	441
Coronation	4250	-	17	30	-	4297	426	-	426
Daysland	3028	-	70	55	-	3173	318	8	326
Devon	2898	-	63	27	-	2988	183	-	183
Drayton Valley	6718	8	403	79	-	7208	1380	20	1400
Edenvalley	6101	2	72	423	-	6177	423	-	423
Elmore	2628	-	33	2	-	2663	349	-	349
Empress	2436	-	123	175	-	2734	503	43	551
Glendon	2286	-	10	2	-	2298	182	-	182
Hardisty	5779	-	86	38	-	5903	660	8	668
Helmuth	2543	-	13	203	-	2759	229	5	234
Innisfail	10258	7	231	61	-	10557	1036	-	1036
Islay	2742	-	-	9	4	2755	120	-	120
Jasper	4451	13	486	570	-	5520	1328	106	1434
Killam	7084	-	26	25	-	7135	879	-	879
Kearath	6877	-	11	26	-	6914	620	3	623
Marathon	6477	-	118	495	-	6990	707	3	710
Medicine Hat	3818	-	3	4	-	3825	465	-	465
Meyershorpe	5308	10	743	53	-	6114	778	-	778
Mercoal	1252	8	77	-	-	1337	111	-	111
McMurray	4447	12	289	43	-	4791	521	-	521
Mundare	4598	-	7	7	-	4612	474	-	474
Neyman	2717	-	26	3	-	2746	314	-	314
Oyen	4311	7	54	114	-	4526	557	20	577
Provost	6591	-	98	170	-	6859	818	24	842
Radway	3993	-	7	1	-	4001	548	-	548
Raymond	5302	-	82	18	-	5502	581	7	588
Rimbey	8804	3	128	11	-	8946	1053	-	1053
Smoky Lake	4245	-	5	-	-	4250	372	-	372
Three Hills	6533	-	85	163	4	6785	1148	68	1216
Turner Valley	6162	2	223	218	-	6605	270	-	270
Willes	3410	-	11	6	1	3428	754	-	754
Willington	5046	-	14	31	-	5091	495	7	502
TOTAL	212347	150	4509	3570	35	220541	34998	626	35624

DISTRIBUTION OF PATIENT DAYS BY RESPONSIBILITY OF PAYMENT
1959

Hospital	Adults and Children Days						Newborn Days		Total
	Provincial Plan	Federal Government	Workmen's Compensation Board	Non-Residents	Non-Active	Total	Insured	Un-Insured	
30 - 89 Beds									
Atabasca	10262	10	336	26	-	10673	1485	-	1485
Banff	9776	31	979	771	54	11631	789	24	1822
Barrhead	17743	54	1066	99	-	18942	1763	10	1773
Bassano	5841	-	390	27	-	6258	692	-	692
Blairmore	16951	-	843	220	-	18014	541	9	650
Bonnyville St. Louis	10756	-	92	182	1	11021	936	-	936
Bonnyville	15476	-	372	870	-	16718	1760	6	17660
Calgary Grace	8914	-	200	249	-	9311	720	23	7950
Carleton Place	7374	-	153	153	30	7557	978	23	1071
Clareholm	8414	208	180	145	-	8947	761	20	781
Didsbury	9594	31	42	41	2	9710	993	-	993
Edmonton	6216	24	62	1215	-	1815	1311	7	1818
Elk Point	16453	1	37	37	-	16521	1465	-	1466
Fairview	11407	7	550	153	-	12117	1546	-	1546
Ft. McLeod	9540	-	44	237	-	9821	1014	-	1014
Ft. Vermillion	7451	-	84	6	-	7571	956	-	956
Galahad	10463	-	66	27	-	10556	706	-	706
Grande Prairie	1313	1	130	97	-	1539	1579	-	1586
High Prairie	19822	11	530	92	-	20455	1827	7	1996
High River	14555	-	185	248	2	14990	1644	19	1663
Lacombe	14121	-	144	63	-	14362	2023	-	2023
Le Lac	17930	4	454	93	1	17548	1553	7	1560
Le Lac Biche	13328	-	78	24	-	13431	1610	-	1610
Lloydminster	16688	39	348	44	3	17095	1700	-	1705
Mapleman	10998	9	178	35	-	11243	1414	16	1430
Peace River	15930	199	589	119	-	16837	1837	-	1837
Pincher Creek	12055	9	251	127	-	12442	1466	22	1488
Ponoka	11976	23	264	68	-	12311	1406	13	1419
Rocky Mt. House	7659	-	467	184	-	8250	1067	5	1072
Spirit River	13942	77	253	84	-	14361	915	12	927
Stettler	16352	-	558	89	-	16998	1835	16	1851
St. Paul	16932	7	108	40	-	17087	2352	1	2353
Taber	18019	68	202	128	-	18417	2520	4	2524
Torville	10374	2	149	55	-	10580	801	-	801
Trocha	9599	7	37	11	-	9654	440	-	440
Two Hills	7051	-	108	23	-	7182	643	-	643
Vernonville	21983	92	277	62	-	22312	1346	-	1346
Vernonville	9226	17	72	36	-	9351	1331	8	1389
Viking	7700	28	154	11	-	7893	1060	-	1060
Vulcan	8469	-	58	29	-	8556	1050	-	1050
Wainwright	13004	249	217	180	-	13660	1639	14	1653
Westlock	22015	35	519	160	5	23139	2046	7	2101
Wetaskiwin	15591	19	292	102	-	16084	2289	12	2301
TOTAL	534725	1262	12140	4637	98	553212	64983	715	65298

1959

Hospital	Adults and Children Days						Medi-ern Days		
	Provincial Plan	Federal Government	Workmen's Compensation Board	Non-Residents	Non-Active	Total	Insured	Un-Insured	Total
90 - 179 Beds									
Calgary Children's	26092	-	---	514	-	30446	---	---	---
Calgary Holy Cross	23850	5	295	124	-	23974	3401	---	3416
Dumfries	21805	-	626	97	-	22528	2134	23	2157
Grande Prairie	20964	40	953	436	241	31674	3973	47	3950
Lamont	23519	-	151	498	-	24168	1083	7	1050
Red Deer	31680	55	709	260	-	32704	5970	80	5980
TOTAL	165450	100	2734	1929	241	170454	16381	172	16553
180 BEDS & OVER									
Calgary General	219633	5	7758	4447	-	231843	30201	314	30519
Calgary Holy Cross	99226	-	2928	2952	-	105106	16945	180	17125
Edmonton General	121544	5	2685	2134	278	126696	17203	111	17314
Edmonton Misericordia	106995	9	2397	1392	20	109813	17008	112	17120
Edmonton Royal Alex.	193471	6	8549	4634	7	212067	43023	625	43648
Edmonton University	262956	24201	15133	8965	-	311305	16544	324	16868
Lethbridge Municipal	58993	29	753	677	-	60452	7450	90	7540
Lethbridge St. Nic.	54044	13	753	472	-	55242	3798	---	3780
Medicine Hat	49863	23	1133	1711	-	52430	5711	378	6019
TOTAL	1171735	24291	42139	27264	395	1265774	157162	2119	161281
GRAND TOTAL	2046287	25993	61822	37400	679	2209961	265124	3632	269756

TABLE 35: - DISTRIBUTION OF SEPARATED CASES AND DAYS
AND THEIR RELATED LENGTH OF STAY
BY SIZE OF HOSPITAL, 1958 & 1959

Length of Stay in Days	Cases							Days						
	1958 Adults & Children	Adults & Children by Bed Size of Hospitals, 1959					New-born 1959	1958 Adults & Children	Adults & Children by Bed Size of Hospital, 1959					New-born 1959
		Total	1 - 29	30-89	90-179	180 plus			Total	1 - 29	30-89	90-179	180 plus	
1	20010	21180	4381	7930	2258	6611	393	20010	21180	4381	7930	2258	6611	393
2	29606	29820	4578	8860	3934	12448	86	59212	59640	9156	17720	7868	24896	172
3	23583	23131	3903	7757	2100	9371	287	70749	69393	11709	23271	6300	23113	861
4	20493	21368	3263	6952	1583	9570	2749	81972	85472	13052	27808	6332	38280	10996
5	20696	22201	2800	6982	1518	11301	6487	103480	111005	14000	32910	7590	56505	32435
6	20777	21839	2575	6207	1595	11462	8934	124662	131034	15450	37242	9570	68772	53604
7	20641	20893	2411	6537	1419	10526	8186	144487	146251	16877	45759	9933	73682	57302
8	15199	14996	1854	4691	1222	7229	3941	121592	119968	14832	37528	9776	57832	31528
9	10735	10831	1360	3439	848	5184	1611	96615	97479	12240	30951	7632	46656	14499
10	8218	8230	1042	2388	599	4201	887	82180	82300	10420	23880	5990	42010	8870
11 - 14	19391	19776	2002	5194	1205	11375	1330	237725	242890	24347	63483	14780	140280	16187
15 - 19	11225	11780	976	2781	689	7334	747	187607	196593	16224	46331	11476	122562	12549
20 - 29	9107	10050	747	2092	619	6592	683	215196	237443	17582	49359	14696	155806	16104
30 - 59	6301	7144	461	1403	404	4876	423	249112	284091	18304	55647	16214	193924	12723
60 & Over	2145	2497	179	478	258	1582	---	255982	277886	19257	48555	32513	177561	---
TOTAL	238127	245736	32532	73291	20251	119662	36744	2050581	2162625	217831	548374	162930	1233490	268223

TABLE 36: SEPARATED ADULTS & CHILDREN CASES AND DAYS
BY AGE GROUP AND SEX, 1958 - 1959

Age Group in Years	Cases				Days			
	1958	1959	By Sex, 1959		1958	1959	By Sex, 1959	
			Male	Female			Male	Female
Less than 1	9223	10333	6014	4319	77346	90655	52353	38302
1 - 4	18311	19267	10754	8513	197190	112661	62703	49958
5 - 9	17174	17469	9340	8129	92201	92453	49173	43280
10 - 19	25038	25995	10390	15605	163954	163395	66834	96561
20 - 29	48399	49451	9849	39602	321623	328501	76267	252234
30 - 39	35256	34757	9389	25368	257164	263817	79894	183953
40 - 44	11921	12706	4434	8272	99362	104402	40067	64335
45 - 49	10801	11083	4699	6384	97052	102414	44844	57570
50 - 54	10112	10261	4776	5485	100492	109039	52984	56055
55 - 59	9119	9806	4956	4850	100760	113871	59625	54246
60 - 64	8571	8948	4634	4314	108214	114361	61358	53003
65 - 69	9512	9342	5176	4166	129358	129494	74754	54740
70 - 74	9798	10315	5771	4544	144704	157162	88695	68467
75 & Over	14407	15426	8698	6728	247020	272298	151795	120413
N. A.	485	577	278	299	5041	8162	4746	3216
Total	238127	245736	99158	146578	2050581	2162625	966292	1196333

TABLE 27(a): ADULTS AND CHILDREN SEPARATED CASES AND DAYS
By Month, Sex and Age, 1959
(a) Patients Days of Separation

Age in Years	Length of Stay in Days									
	Total	1	2	3	4 - 9	10 - 19	20 - 29	30 - 59	60 & Over	
Both Sexes										
0 - 9	295769	4897	22482	17475	105341	64153	25178	26541	28702	
10 - 19	163395	3156	8428	9507	75130	30572	10555	12270	15777	
20 - 29	328501	4302	8776	12174	131614	60650	15955	13786	22734	
30 - 44	368269	6185	9602	13721	146637	97742	33054	36427	25871	
45 - 64	439685	2978	6844	10460	94148	131031	65430	76956	53738	
65 - 74	236656	921	2032	3513	43114	75601	47365	60579	52771	
75 & Over No Age	272208	620	1358	2265	32106	63549	40999	5801	74950	
	8162	61	118	168	1419	1115	907	1151	3343	
TOTAL	2162625	21130	59640	69393	691209	521783	237443	284091	277886	
Males										
0 - 9	164229	2727	12306	9552	59408	36192	14478	14742	16824	
10 - 19	66834	1579	3846	4044	23410	13673	5062	6347	8173	
20 - 29	78287	1456	2674	3762	23167	13144	6230	7571	13583	
30 - 44	118961	3466	9251	14476	33712	13163	13163	15811	16285	
45 - 64	218811	1622	3176	4896	44474	48908	33600	41875	30560	
65 - 74	163449	616	1186	1983	23973	41341	26232	35822	32236	
75 & Over No Age	151795	367	830	1344	17650	34564	23134	33984	37745	
	4946	33	48	96	543	614	543	695	2374	
TOTAL	966292	10066	27280	29853	226347	231977	123442	156527	157780	
Females										
0 - 9	131540	2170	10176	7923	45933	27961	10700	11789	13878	
10 - 19	96561	1577	4582	5465	49720	14899	4793	5923	7604	
20 - 29	252234	2846	6142	8412	163447	41376	8865	6495	9151	
30 - 44	248288	2519	6348	9255	114895	66178	18891	20616	9686	
45 - 64	220974	1356	3668	5864	45674	72123	31330	33091	23178	
65 - 74	123207	365	846	1530	19841	34265	21133	24097	20515	
75 & Over No Age	120413	253	528	921	14476	28988	17525	24317	36205	
	3116	28	70	72	876	501	264	436	969	
TOTAL	1196533	11114	32360	39540	464852	286786	114001	127564	120106	

TABLE 37(b): ADULT AND CHILDREN SEPARATED CASES AND DAYS
BY LENGTH OF STAY, SEX AND AGE, 1959
(b) Separated Cases

Age in Years	Length of Stay in Days									
	Total	1	2	3	4 - 9	10 - 19	20 - 29	30 - 59	60 & Over	
Both Sexes										
0 - 9	47069	48977	11241	5825	18139	4976	1770	664	257	
10 - 19	25995	3156	4214	3169	12136	2021	448	304	147	
20 - 29	49451	4302	4388	4058	30709	4842	644	352	156	
30 - 44	47453	1385	4801	4577	23756	7631	1373	916	224	
45 - 64	40998	2978	4122	3420	12134	9588	1596	1396	769	
65 - 74	19657	981	1016	1171	6729	5546	1998	1325	491	
75 & Over	15426	620	679	755	5008	4521	1747	1458	663	
No Age	577	61	59	56	232	81	34	29	25	
TOTAL	245736	21180	29820	23131	112128	39786	10050	7144	2697	
Males										
0 - 9	26108	2727	6153	3184	10159	2816	616	367	136	
10 - 19	13390	1579	1923	1348	3989	1366	245	157	83	
20 - 29	9849	1486	1317	1254	3982	1393	255	135	99	
30 - 44	13823	1666	1627	1492	5543	2406	562	401	126	
45 - 64	19665	1622	1588	1532	7149	4399	1443	1054	398	
65 - 74	10947	616	593	661	3766	3020	1104	900	287	
75 & Over	8698	367	415	448	2752	2526	979	847	364	
No Age	278	33	24	32	87	44	23	19	17	
TOTAL	99158	10066	13640	9951	37277	17670	5207	3927	1420	
Females										
0 - 9	20861	2103	5088	2641	8050	2160	454	297	121	
10 - 19	12605	1577	2291	1621	8146	1355	203	147	64	
20 - 29	39602	2846	3071	2804	26827	3449	379	169	57	
30 - 44	33640	2519	3174	3095	13213	5225	811	515	98	
45 - 64	21333	1356	1834	1988	8070	5369	1353	842	221	
65 - 74	9710	365	423	510	3163	2526	894	625	204	
75 & Over	6728	253	264	307	2256	1995	738	611	304	
No Age	299	28	33	24	145	37	11	11	8	
TOTAL	146578	11114	16130	13180	74951	22116	4843	3217	1077	

TABLE 38: DISCHARGED PATIENTS & DAYS BY MARITAL STATUS, SEX AND AGE 1959

Age in Years	Total			Single			Married*			Other**		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Separated Cases During 1959											
0 - 14	57922	31654	26268	57922	31654	26268	---	---	---	---	---	---
15 - 24	40475	9769	30706	14600	892	13708	22996	1434	22562	79	8	71
25 - 44	71581	18747	52834	6329	4262	2067	64449	14527	60122	903	158	645
45 - 64	40098	19065	21033	4255	1585	2670	34403	15604	16799	3440	791	2649
65 & Over	35083	19645	15438	3029	2629	400	19091	12132	6959	12963	4834	8079
No Age	577	278	299	181	87	94	280	153	127	116	38	78
TOTAL	245726	99158	146578	88116	49629	38487	140219	43650	96569	17401	5879	11522
Days of Separated Cases Since Admission												
0 - 14	364096	198590	165506	364096	198590	165506	---	---	---	---	---	---
15 - 24	258718	72695	186223	112242	63386	48956	146971	9954	137917	555	55	450
25 - 44	533100	156206	376894	64435	42618	21817	460997	111390	349547	828	2198	9530
45 - 64	136846	218811	220874	53098	36687	17411	343073	169077	173996	43514	11047	32467
65 & Over	54862	31924	22940	60815	59925	7890	269780	173306	94474	228269	87013	141256
No Age	8162	4946	3216	2383	1460	923	4556	3097	1459	1223	389	834
TOTAL	2166625	966292	1196333	656669	397666	259003	1224417	467924	756493	281539	100702	180837
Estimated Population												
0 - 14	412632	211472	201160	412632	211472	201160	---	---	---	---	---	---
15 - 24	180762	92007	88755	133478	77936	55542	47054	14039	33015	230	32	198
25 - 44	596161	172711	423450	51855	36490	15365	299453	144739	154414	5353	1221	4132
45 - 64	202437	111557	90880	19800	15146	4710	166953	92192	74601	16784	4245	12559
65 & Over	90028	50577	39031	9428	7653	1495	51884	33442	13442	28996	9902	19094
TOTAL	1243000	648463	594537	626793	348691	278102	564844	284372	280472	51363	15400	35963

* Includes Separated and Common-Law
 ** Includes Divorced and Widowed

NUMBER OF FULL-TIME NURSING STAFF EMPLOYED IN GENERAL HOSPITAL
AS AT DECEMBER 31, 1959

Hospital	Directors and Supervisors												Graduate Nurses				Nursing Aides		Other Nursing	Total		
	Bed Capacity	Admini- stration	Educa- tion	Opera- ting Room	Recovery Room	Obste- trics	Facia- trices	Phy- sicia- ry	Out- Patient & Emer- gency	Other	Total	Head Nurses		General Duty	Other Graduate	Student Nurses	Quali- fied	Trainee			Orderlies	
												Head Nurses	Graduate									
90 - 179 Beds																						
Calgary Children's Centre	128	1	1	1	-	-	-	-	1	2	6	3	24	4	-	-	27	3	4	-	71	
Drumheller	94	1	-	2	1	-	-	-	5	9	3	-	22	-	-	15	6	3	20	69		
Grande Prairie	108	2	1	1	-	-	-	-	3	3	6	6	31	-	-	16	-	3	12	49		
Lacombe	91	4	2	1	1	-	-	-	1	9	9	2	15	1	37	20	3	1	1	75		
Red Deer	104	2	-	-	-	-	-	-	-	2	2	6	40	-	-	30	-	1	-	79		
TOTAL	623	10	3	5	-	3	-	-	1	10	32	17	153	5	37	109	12	15	33	443		
180 Beds & Over																						
Calgary General	795	12	1	1	-	3	-	-	1	1	17	24	283	54	284	129	-	39	69	909		
Calgary Holy Cross	371	6	2	1	-	1	-	-	1	4	22	38	124	12	177	66	-	17	-	436		
Edmonton General	342	5	1	1	-	2	-	-	1	7	16	16	107	13	81	38	-	11	65	375		
Edmonton Royal Alex	654	6	18	1	-	5	-	-	1	7	32	40	133	-	231	108	-	42	40	626		
Edmonton University	1005	13	19	2	-	2	-	-	2	42	67	178	-	-	342	82	18	136	946			
Lehrbridge Municipal	192	5	7	3	1	2	-	-	2	3	24	12	52	1	86	22	-	11	17	225		
Lehrbridge St. Michael's	331	3	2	1	-	1	-	-	-	7	5	5	38	13	71	8	-	6	32	180		
Medicine Hat	243	4	9	1	-	1	-	-	-	2	17	10	59	-	61	21	-	9	51	228		
TOTAL	4066	56	73	13	1	18	5	-	7	21	194	247	1078	93	1543	494	13	234	498	4399		
GRAND TOTAL	7470	143	80	42	4	37	7	-	11	43	372	314	1779	106	1619	914	96	269	312	6281		

DISTRIBUTION OF ACCUMULATED HOURS OF WORK OF ALL HOSPITAL PERSONNEL ON SUPPLEMENTAL SERVICES, GENERAL SERVICES, AND OTHER DEPARTMENTS DURING 1959

Hospital	Supplemental Services						General Service Departments						Physical Plant	Total	Total Hours of all Departments	
	Medical Records	Nursing Education	Medical Education	Social Service	Other	Administration	Dietary	Laundry	Linen	House-keeping	Physical Plant					Other
											Operation	Maintenance				
90 - 179 Beds																
Calgary Children's	5664	2064	--	3664	6095	22230	28867	16960	2100	21923	10621	4116	--	194929	205778	
Camrose	4160	--	--	--	--	17877	21867	12988	2088	29460	4923	6246	--	91510	205370	
Drumheller	4621	--	--	--	--	8777	22192	12631	2083	29670	5280	12175	--	96600	203850	
Edmonton	4621	--	--	--	--	12631	30056	163184	4694	3000	3000	4936	--	111978	287596	
Grande Prairie	5322	5759	--	--	--	15950	35207	7500	2084	21705	7742	8493	--	109662	233774	
Red Deer	5424	--	--	--	--	34216	22574	15696	5424	25256	13560	2712	--	124832	309072	
TOTAL	27185	7823	--	3664	6095	115993	156339	78859	18395	157995	44923	34700	--	618911	1626362	
180 Beds & Over																
Calgary General	27568	11157	29120	3244	--	138411	272609	103124	16640	262480	13352	16664	3100	1029173	2915008	
Calgary Holy Cross	17714	137545	4448	--	--	8930	146838	32315	12053	22649	11784	30426	--	625613	1422286	
Edmonton General	17250	21670	4990	20728	--	86398	138858	46504	12043	20269	12434	33652	--	705819	1489178	
Edmonton Baptist	17250	21670	4990	20728	--	86398	138858	46504	12043	20269	12434	33652	--	570866	1432634	
Edmonton Royal Alex	34560	117840	70110	--	2409	156075	202246	82123	15019	263013	28170	106803	--	1078403	2651163	
Edmonton University	48567	172558	10859	4144	10224	186156	319365	109075	25552	119863	--	164102	66490	1265955	3609178	
Lethbridge Municipal	10440	45456	--	--	--	43027	89744	28144	10442	68464	17736	9552	--	321305	821668	
Lethbridge St. Hse.	9696	53225	--	--	--	42613	73171	30973	4283	51921	9870	10984	--	235316	640841	
Medicine Hat	6457	54513	--	--	--	27417	61876	24387	5967	53335	9868	13249	--	294429	699459	
TOTAL	193391	1000701	112588	27566	12633	854704	1468270	502131	110959	1150798	102414	441932	69590	6117277	15763711	
GRAND TOTAL	272928	1204544	182938	35436	18728	1416990	2521916	983998	212063	1982573	335764	615765	72134	9694557	23221843	

DIVISION OF HOSPITAL AND MEDICAL SERVICES

TABLE 42: - DISTRIBUTION OF TOTAL EXPENDITURE ON SALARIES & WAGES
 MEDICAL & SURGICAL SUPPLIES, DRUGS, AND OTHER
 EXPENSE BY HOSPITAL, 1959

Hospital	Total	Gross Salaries & Wages	Medical & Surgical Supplies	Drugs	Other
1 - 29 Beds					
Beaverlodge	75476	44834	2431	5851	22361
Bentley	54901	35021	2107	2879	14895
Berwyn	64924	43445	1831	2196	17452
Bonnyville K.H.P.	54163	36109	2057	3498	12499
Bow Island	66698	42424	3462	2466	18346
Cammore	43110	29110	4987	—	9012
Carmangay	63691	47895	1152	753	13891
Castor	112844	69538	2964	3325	37017
Cereal	55477	34161	1750	5179	14387
Coaldale	61601	35816	4584	2834	18366
Cold Lake	97734	63088	2531	7222	24894
Consort	62411	39985	2629	4330	15467
Coronation	61461	35999	2824	6616	16022
Daysland	88973	51334	1944	8338	27371
Devon	54781	36078	1659	2800	14245
Drayton Valley	116596	74268	5694	6657	29977
Eckville	80271	51940	1373	3141	23817
Elnora	49516	31754	1038	2249	14474
Empress	53646	33974	2110	2538	15024
Glendon	46189	29023	833	1900	14432
Hardisty	76908	50774	2266	3322	20546
Hythe	43262	26583	1196	970	14513
Innisfail	148638	88102	10367	12943	37276
Islay	41513	27253	366	1650	12244
Jasper	84175	53517	2675	3972	24011
Killam	107442	68505	3070	7006	28862
Magrath	76036	44864	2234	6630	22308
Manning	62019	36436	2151	1361	22071
Mannville	51525	31824	1585	2342	15774
Mayerthorpe	98135	63425	3044	4076	27591
McMurray	82522	48923	1192	1799	30669
Mundare	58219	40623	496	1203	15897
Myrnam	92458	57325	3463	3911	27759
Oyen	80299	46127	2915	8788	22469
Provost	121986	74137	5224	5587	37038
Radway	71967	47821	1377	2445	20323
Raymond	67369	39212	3266	5730	19162
Rimbej	121160	70863	1762	10999	35436
Smoky Lake	54989	35384	1872	2214	15519
Three Hills	99238	65579	4363	3761	25534
Turner Valley	98897	57818	3924	6742	30413
Valma	54564	38357	974	1886	13347
Willingdon	63880	45092	635	2072	16081
TOTAL	3221744	2024340	113397	175221	909758

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 DISTRIBUTION OF TOTAL EXPENDITURE ON SALARIES & WAGES
 MEDICAL & SURGICAL SUPPLIES, DRUGS, AND OTHER
 EXPENSE BY HOSPITAL, 1959.

Hospital	Total	Gross Salaries & Wages	Medical & Surgical Supplies	Drugs	Other
30 - 89 Beds					
Athabasca	133599	78336	5961	10271	39031
Banff	202683	137943	5468	5919	53354
Barrhead	180467	114061	6516	10175	49715
Bassano	96732	57898	3174	6971	28689
Blainmore	186195	120014	2649	13799	49732
Bonnyville St. Louis	148389	95886	3392	10071	39039
Brooks	253953	156573	11913	14787	70680
Calgary Grace	232270	166237	12008	7290	46734
Cardston	130494	77708	6044	9386	37355
Clareholm	151845	103306	12273	—	36266
Didsbury	163386	100466	4824	13085	45010
Edson	108186	73976	2360	5307	25543
Elk Point	217365	135819	4660	13418	63469
Fairview	162977	95445	8185	9452	49895
Ft. McLeod	150502	90983	6824	9956	42738
Ft. Vermillion	92775	52627	1671	8607	29870
Galahad	125581	76056	1911	8444	39170
Hanna	215854	142215	4432	10116	59361
High Prairie	201032	135033	5865	12638	47497
High River	236303	154548	7734	10737	63285
Lacombe	216026	135099	8723	10831	61372
Lac La Biche	172854	106071	2432	14278	50073
McLennan	209019	131219	3757	7206	60917
Olds	160862	97679	6451	10404	46327
Peace River	227290	133285	12133	15473	66598
Pincher Creek	184607	115675	5937	8284	54710
Ponoka	170436	113520	6181	9114	41621
Rocky Mt. House	93555	61498	1406	2995	27657
Spirit River	175670	113875	2770	8223	50802
Stettler	231255	160584	6955	11717	51998
St. Paul	209008	150163	3881	11907	43057
Taber	286416	187110	659	345	98302
Tofield	120415	68653	8966	7132	35664
Trochu	76184	48600	594	3939	23051
Two Hills	99923	68357	3181	3113	25272
Vegreville	314035	200661	9629	23270	80474
Vermilion	140490	91230	2459	6753	40048
Viking	145276	93318	6512	7180	38266
Vulcan	107968	63587	2681	4913	36787
Wainwright	192519	108909	5833	14447	63330
Westlock	209445	138595	5502	14763	50585
Wetaskiwin	186778	123607	7582	10639	44951
TOTAL	7320619	4682345	231788	397385	2009095

DIVISION OF HOSPITAL AND MEDICAL SERVICES

DISTRIBUTION OF TOTAL EXPENDITURE ON SALARIES & WAGES
MEDICAL & SURGICAL SUPPLIES, DRUGS, AND OTHER
EXPENSE BY HOSPITAL, 1959

Hospital	Total	Gross Salaries & Wages	Medical & Surgical Supplies	Drugs	Other
90 - 179 Beds					
Calgary Children's	499250	390759	13840	10561	84090
Camrose	489316	343192	16891	34298	94935
Drumheller	367965	243246	13503	13658	97187
Grande Prairie	510678	314969	12564	31234	152111
Lamont	348431	246039	12320	10068	110055
Red Deer	568800	401607	20348	30881	115964
TOTAL	2784090	1909782	89266	130700	654342
180 Beds & Over					
Calgary General	5109194	3685521	319401	190807	913466
Calgary Holy Cross	2266160	1646710	104247	107047	409157
Edmonton General	2401237	1743262	95839	110310	451826
Edmonton Misericordia	2211988	1612058	78720	115347	405864
Edmonton Royal Alex	4140442	2804730	186419	257888	894405
Edmonton University	5875969	3897864	330754	274903	1372449
Lethbridge St. Michael's	1289303	863985	57700	69924	297694
Lethbridge St. Mic.	975731	672347	36325	52482	214577
Medicine Hat	1082705	787495	43729	50769	200712
TOTAL	25352729	17713972	1253134	1229477	5156150
GRAND TOTAL	38679152	26330439	1687585	1932783	8728345

EXPENDITURES ON NURSING ADMINISTRATION, DIRECT CARE NURSING UNITS AND SPECIAL SERVICES, 1959

Hospital	Undistrib-uted as Departments	Direct Care: Nursing Units				Special Services							Other	Total				
		Nursing Administration & Education	Adults & Children	Newborn Nursery	Emergency Unit	Out-Patient Department	Total	Operating Room	Central Supply Room	Pharmacy	Delivery Room	Laboratory			Radiology	Physio-therapy		
90 - 179 Beds																		
Calgary Children's	14,886	15,9708				2,924	16,2631	3,8561										
Camrose	11	1,79112	7,200				1,86512	2,7855										
Edmonton	4,681	6,937	3,977				1,81812	1,77512										
Grande Prairie	1,7821	1,56476	8,931				1,77580	1,8945										
Lacombe	7,928	7,3776	3,804				7,7580	11,261										
Red Deer	91,20	20,7733	6,425	9,226			22,2484	3,0083	4	5,567								
TOTAL	54,450	903,017	31,645	21,183	2,924	95,8767	1,36,897	59,650	21,711	254,14	5,526	104,088	1,73,88	164,31	4,36,774			
180 Beds & Over																		
Calgary General	34,981	1,354,764	1,544,25	824,26			1,591,635	251,339	20,7057									
Calgary Holy Cross	16,551	5,93817	5,3064	3,6463			6,83574	1,33,300	25,231									
Edmonton General	6,681	6,90819	2,2348	1,9401			7,32568	1,37,732	83,117									
Edmonton Misericordia	1,3904	5,79052	7,9806	4,0962			6,99819	11,74,18	37,132									
Edmonton Royal Alex	6,6412	10,47189	14,7173	6,9449			12,56831	20,0280	14,3812									
Edmonton University	2,27859	1,334,805	74,384	3,2935	2,8319	14,70444	15,5881	3,22,977	15,5881									
Lebanon Hospital	3,2071	2,53212	2,536	1,342			2,60840	5,2868	8,951									
Lebanon St. Michael's	3,9498	3,58281	2,5364	10,886			3,94531	5,3130	1,3225									
TOTAL	204,2	4,692,75	6,554,941	3,070,10	2,831,9	74,801,61	134,11,96	6,966,91	4,67,305	4,624,90	110,344,3	7,307,29	1,064,30	3,027,68	521,1057			
GRAND TOTAL	6,530	7,708,71	8,640,395	3,427,00	3,810,1	11,956,539	1,81,93,88	914,941	7,50,676	6,611,179	1,353,359	11,89,036	1,307,56	3,344,72	714,980,1			

DIVISION OF HOSPITAL AND MEDICAL SERVICES

TABLE 441 - EXPENDITURES OF SUPPLEMENTAL SERVICES AND GENERAL SERVICE DEPARTMENTS, 1959

Hospital	Supplemental Services						General Service Departments					Physical Plant		Total Expenditure on all Departments & Services	
	Medical Records	Nursing Education	Medical Education	Social Service	Other	Total	Administration	Dietary	Laundry	Linen Service	House-keeping	Operation	Maintenance		Total
1 - 29 Beds															
Beverlyledge															
Bentley															
Berwyn															
Bonnyville, K.H.P.															
Box Island		15													
Caunoe	161					161									
Carmanway															
Cedar	3712					3712									
Ceresal	730					730									
Coaldale															
Cold Lake	1213					1213									
Consort															
Coronation															
Daysland	426					426									
Devon															
Drayton Valley															
Elmore	3					3									
Elmore															
Empress	31					31									
Glendon															
Hardisty	67					67									
Hythe															
Inverfall															
Inverfall															
Jasper															
Killam	1079					1079									
Killarath															
Manning															
Marathon															
McArthur															
Mundare	774					774									
Murray	1705					1705									
Nyman															
Oyen															
Pivot	1760					1760									
Rabway	284					284									
Raymond															
Rimby															
Smoky Lake	306					306									
Three Hills	133					133									
Turner Valley															
Vilna															
Willingdon	891					891									
Willingdon															
TOTAL	13292					13292	604662	128459	43188	171695	268180	109914	1425220	3221741	

DIVISION OF HOSPITAL AND MEDICAL SERVICES

EXPENDITURES ON SUPPLEMENTAL SERVICES AND GENERAL SERVICE DEPARTMENTS, 1959

Hospital	Supplemental Services						General Service Departments						Physical Plant		Total Expenditure on all Departments & Services
	Medical Records	Nursing Education	Medical Education	Social Service	Other	Total	Administration	Dietary	Laundry	Linen Service	House-keeping	Physical Plant		Total	
												Operation	Maintenance		
90 - 179 Beds															
Calgary Children's	4899	4423	---	6587	14052	29951	52453	59779	17949	4676	28411	32927	8627	233551	499250
Camrose	4932	---	---	---	---	4932	32702	58600	13655	6932	31897	24888	1076	177259	497216
Chumley	3736	---	---	---	---	3736	26230	64503	11659	4793	24236	21615	21615	177259	497216
Grande Prairie	7250	---	---	---	---	7250	48742	84166	13044	5622	36047	31420	17873	236935	510678
Lacombe	7253	13452	482	---	---	21187	38018	68266	10069	8192	19728	25746	24115	194136	348481
Red Deer	5313	---	---	---	---	5313	61973	93879	16687	8442	29439	33363	7087	250871	568800
TOTAL	32943	17875	482	6547	14052	71939	260119	428193	83113	38646	170298	142939	99269	1262161	2794090
180 Beds & Over															
Calgary General	46074	203006	20041	4395	---	273516	432143	794708	159671	69315	325281	127173	169212	2077643	5109194
Calgary Holy Cross	23134	176552	17163	---	---	216849	205360	310959	66207	35456	148639	71397	91162	2286160	618149
Edmonton	20764	181190	39589	---	---	248524	213186	366886	53326	24355	104385	52344	95549	2086539	5200000
Edmonton West	20764	117074	31163	---	---	173841	207251	369279	59010	17486	120074	64118	99043	832292	2211988
Edmonton Royal Alex	44769	107897	70782	---	---	225571	375456	612937	102730	39327	272903	153981	259772	1817006	4110442
Edmonton University	69780	339959	200780	7579	50388	669885	510480	834823	138225	58793	275368	410308	---	2228395	5875969
Lechbridge Municipal	15104	79507	---	---	---	94611	89233	22040	34722	6960	6960	57897	32584	590107	1289303
Lehrbridge St. Michael's	10450	82662	---	---	---	93112	87900	153482	31130	10610	6960	42949	399532	979791	2286584
Medicine Hat	9238	78554	---	---	---	84892	73234	152188	30562	9932	56023	44096	37391	403340	1032705
TOTAL	279686	1364930	369423	11974	50888	2076901	2394223	3715441	675913	289286	1420776	1023782	794563	10113293	253292729
GRAND TOTAL	390638	1399377	369972	18634	64940	2233561	3490400	6029450	1138790	484410	2444145	1958851	1261712	16595028	34679152

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TABLE 45: - OTHER REVENUE FUND EXPENSE FOR THE YEAR ENDING DECEMBER 31, 1959

Hospital	Interest on Short term Loans	Interest on Long term Loans	Depreciation on Buildings & Building Service	Depreciation on Equipment	Other Expense	Total other Revenue Fund Expense
1 - 29 Beds						
Beaverlodge	---	4513	9170	2780	200	16664
Bentley	---	768	5001	2747	---	8516
Berwyn	---	600	5593	3496	---	9689
Bonnyville K.H.P.	20	---	1462	1176	---	2657
Bow Island	741	---	11400	5268	---	17329
Cannore	---	---	---	262	2400	2662
Carungay	371	8523	7000	---	---	15984
Caster	---	---	2151	3066	1025	6242
Cereal	63	537	1157	410	19	2181
Coaldale	---	---	2770	2646	33	5448
Cold Lake	14	7863	5968	2290	370	16485
Consort	---	991	5513	1587	---	8091
Coronation	---	---	984	2376	---	3360
Daysland	14	---	2296	5110	---	7420
Devon	---	---	1100	2251	2653	6004
Drayton Valley	2261	5004	11217	4421	---	22903
Eckville	51	1668	10546	277	---	12543
Elmora	---	973	2559	2029	---	5559
Empress	---	---	2084	2636	---	4693
Glendon	342	2509	3563	2865	50	9329
Hardisty	---	---	3745	3187	---	6931
Hinton	---	18288	---	---	3186	21444
Hythe	597	---	1730	636	---	2962
Innisfail	167	---	3215	6957	---	10338
Islay	---	---	1356	770	---	2126
Jasper	121	495	4440	2969	---	8025
Killam	12	---	4396	3940	---	8348
Magrath	---	2745	7519	449	---	10714
Manning	645	3235	10912	1649	---	16441
Mannville	---	---	1000	2552	---	3651
Hayerthorpe	172	2308	2095	2957	19	7551
McMurray	---	3139	1806	2918	---	7862
Mundare	---	---	2002	2544	---	4546
Myram	---	3005	3120	2332	---	8456
Oyen	---	396	2800	775	1265	5237
Provost	---	2526	5200	4033	3	11762
Radway	---	---	937	1195	---	2132
Raymond	---	820	3061	120	---	4001
Rimbey	---	2343	6138	2291	---	10769
Smoky Lake	---	2855	1305	1142	---	5302
Three Hills	---	1962	5634	4978	160	12785
Turner Valley	1	---	2367	2510	525	5404
Vilna	---	---	3093	1131	---	4224
Willington	---	---	795	2350	---	3144
TOTAL	5592	77999	170172	101948	11998	367614

DIVISION OF HOSPITAL AND MEDICAL SERVICES

OTHER REVENUE FUND EXPENSE FOR THE
YEAR ENDING DECEMBER 31, 1959

Hospital	Interest on Short Term Loans	Interest on Long Term Loans	Depreciation on Buildings & Building Services	Depreciation on Equipment	Other Expense	Total Other Revenue Fund Expense
30 - 89 Beds						
Athabasca	183	5653	9380	3511	---	13726
Banff	---	40340	21377	14109	---	75826
Barrhead	---	15655	25471	7669	---	48794
Bassano	28	7002	1512	1392	---	9875
Blairmore	---	7215	10500	5612	4398	28225
Bonnyville St. Louis						
Brooks	---	5315	6260	4584	47	16205
Calgary Grace	300	---	12182	10246	---	22728
Cardston	592	---	12676	9171	317	22776
Clareholm	---	---	4623	6757	---	11331
Didsbury						
Edson	39	1667	11519	4319	326	17871
Elk Point	---	---	2287	4564	---	6851
Fairview	---	5251	11161	3934	2643	22939
Ft. McLeod	1238	1620	8048	4736	---	15641
---	---	13560	5434	2417	---	21411
Pt. Vermilion						
Galahad	64	2354	6863	3447	---	12729
Hanna	2	3000	7801	5037	---	15840
High Prairie	1972	11061	7200	4830	---	25033
High River	---	---	3642	4592	---	8234
---	270	23788	10639	4975	---	39674
Lascombe						
Lac La Biche	---	457	10449	2142	---	13048
Lloydminster	---	16155	14339	5815	---	36309
Molennan						
Olts	---	18010	13467	9022	---	40499
---	2	7356	7203	3315	326	18202
Peace River						
Fincher Creek	41	666	7333	3469	---	11508
Fonoka	---	2717	12649	6137	---	21503
Hokey Mt. House	---	5634	13487	4796	---	23917
Spirit River	309	4318	5502	2808	240	12868
---	---	9221	20274	5338	631	35772
Stettler						
St. Paul	---	2805	5783	8765	---	17353
Taber	126	923	7909	3842	---	12800
Tofield	---	9747	24925	454	---	35126
Trochu	22	7594	11347	3904	330	23199
---	300	1890	5714	4773	---	12877
Two Hills						
Vegreville	---	3360	11235	4107	---	19702
Vermilion	---	2250	20625	7660	---	30535
Viking	---	7286	9859	8403	---	25549
Vulcan	---	820	10326	5372	46	16564
---	64	1328	4699	5335	---	11426
Mainwright						
Westlock	85	8378	16566	5413	---	30442
Westaskwin	---	1209	13355	10957	---	25521
---	---	---	9960	5361	---	15321
TOTAL	5637	256822	446800	227225	9804	946289

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OTHER REVENUE FUND EXPENSE FOR THE YEAR ENDING DECEMBER 31, 1959

Hospital	Interest on Short Term Loan	Interest on Long Term Loan	Depreciation on Buildings & Building Service	Depreciation on Equipment	Other Expense	Total Other Revenue Fund Expense
90 - 179 Beds						
Calgary Children's						
Camrose	1540	7294	16641	10576	---	36051
Drumheller	69	4252	16924	5634	---	26873
Grande Prairie	7543	33061	33039	12043	---	90691
Lamont	126	1938	8343	5596	---	16004
Red Deer	----	18939	16496	14204	---	49673
TOTAL	9283	65534	96433	48053	---	219302
180 Beds & Over						
*Calgary General						
Calgary Holy Cross	90	43757	53263	47951	---	155060
Edmonton General	----	84434	100001	56351	---	240836
Edmonton Misericordia	----	23883	50294	41980	---	115257
Edmonton Royal Alex	----	148068	133149	-----	---	231216
**Edmonton University						
Lethbridge Municipal	4952	403859	-----	-----	---	403859
Lethbridge St. Michael's	412	88701	97533	41176	87	232443
Medicine Hat	3284	12244	25409	52200	---	90266
		95989	94356	33030	---	231660
TOTAL	8738	900985	564005	276798	97	1750602
GRAND TOTAL	29250	1301340	1277410	654014	21799	3283807

* Not available

** Depreciation not available

DIVISION OF HOSPITAL AND MEDICAL SERVICES

NET EARNINGS FROM SERVICES TO IN-PATIENTS
FOR THE YEAR ENDED DECEMBER 31, 1959

Hospital	In-Patients - General Services				In-Patients - Additional Services						Total In-Patient Earnings				
	Adults & Children		Newborn		Federal Government	Women's Compensation Board	Non-Residents	Other Non-Eligibles	Total	Differential Charges		Non-Benefit Drugs	Ambulance Services	Other	
	Provincial Insurance	Patient Co-Insurance	Provincial Insurance	Patient Co-Insurance										Ambulance	Other	Total
90 - 179 Beds															
Calgary Children's	14814	53560	---	---	---	6569	---	54943	---	418	8224	---	---	8642	63986
Cowdrey	52306	3358	43	---	65	1557	---	59400	15529	---	---	---	---	18574	69377
Drumheller	13208	2453	139	---	---	1261	69	50038	---	278	---	---	---	278	50317
Grande Prairie	15874	3768	172	---	520	5443	65	69178	1066	---	---	---	6	1066	70244
Lamont	20715	20689	968	---	---	6495	---	50905	17942	---	---	---	72	18014	68918
Red Deer	17021	39533	5572	328	715	1881	1739	75006	3905	---	---	---	190	3-95	79001
TOTAL	96970	135699	15638	720	1300	23206	1873	359470	38336	696	8224	---	268	47524	408995
180 Beds & Over															
Calgary General	98248	344352	28432	1623	75	67659	---	653759	262110	---	---	---	194	262334	916093
Calgary Holy Cross	52306	141644	15798	1169	---	43718	---	299395	194164	191	---	---	---	194655	494050
Edmonton	52325	153308	15893	1508	66	40275	4170	317194	202600	---	---	---	---	519794	733090
Edmonton Misericordia	62225	245455	2816	465	135	35955	300	275406	152210	---	---	---	803	157003	539780
Edmonton Royal Alex	139810	242747	39951	3973	90	67780	105	620830	169104	3986	---	---	---	173980	793920
Edmonton University	131614	373112	15704	1131	401027	129267	---	1481640	216308	---	---	---	19291	233598	1515238
Lehrbridge Municipal	31855	79327	7103	386	425	11295	---	125700	490	---	---	---	---	58723	199549
Lehrbridge St. Michael's	22386	80998	195	195	128543	7080	---	128543	83651	---	---	---	---	95636	209279
Medicine Hat	27950	71591	5515	378	339	26577	---	1492350	16602	---	---	---	797	17399	168749
TOTAL	636649	1692174	146565	12979	402862	396560	4575	3864043	1353354	4610	---	---	21085	1379048	5243092
GRAND TOTAL	1098818	2579853	243363	20099	421879	513255	8104	5705997	1501253	9296	8662	28906		1547714	7252810

TABLE 471 - NET EARNINGS FROM UNINSURED SERVICES TO OUT-PATIENTS FOR THE YEAR ENDED DECEMBER 31, 1959

Hospital	Emergency Unit	Operating Room	Central Supply Room	Pharmacy	Laboratory	Radiology	Physiotherapy	Other	Total	Deductions	Total Net Earnings
1 - 29 Beds											
Beaverlodge		264	1101	340	372	2271			5347	191	4156
Bentley		237		17		1169			1157		1077
Berkyn		88	207	1	1	87			1062	100	1062
Bonnyville K.H.P.		231	239	75	51	1680			1782		1782
Bow Island		473			21	1289					
Camrose		3	4	10		82			98		98
Carmangay		20	1251	89	54	276		387	2076		2076
Castor		201	52	52	25	1186			1463		1463
Cereal		57	10	10	1	676			1794		1794
Coaldale		356	97	100	191	3992			4796		4796
Cold Lake	116	231	89	44	159	1695			2262		2262
Consort		159		120		449			708		708
Coronation		332		2	2	397			731		731
Daysland		197	132	38	136	1808		125	2396	48	2396
Devon								3427	3427		3427
Dreyton Valley	2200				357	1098			3657	397	3260
Edmonton		238			134	643		156	1171		1171
Elmore	50	17	87	363	5	186	177		885		885
Empress		446	284	1020	68	396		21	2244		2244
Glendon		18	112	11	4	374			519		519
Hardisty		674	134	143	206	1741			2962	100	2861
Hythe		219	1832	20	802	3194			6950	194	6754
Innisfail		42		4		208			258		258
Jasper		161	43	19	38	428		4	689		689
Killam		717	695	768	404	2673	151	274	5681	282	5398
Magrath		98	93	8	14	1230		220	1663		1663
Naumung		407	1032	1032	10	939			2731	100	2631
Nanton		203	132	12	4	142			348		348
St. Mary's		2003	357	209	53	543			3218		3218
Mayerthorpe	54										
McMurray		144	259	395	86	1608	10	59	2559	524	2034
Mundare		6	172	313	68	672			1230		1230
Neyburn		458	355	339	145	694	22		2012		2012
Oyen		572	61	1767	168	1126			3693		3693
Provost		420	289	201	80	3447			4436		4436
Ridgway		387	162	97	77	1575		267	2564		2564
Raymond		43	255	55	111	339	12		915		915
Rimbey		472	413	149	47	1538			2618		2618
Smokey Lake		111	121	167		935		38	1370		1370
Three Hills	125	154	96	223		989			1597	57	1540
Turner Valley	6	600	416	37		81		27	1136		1136
Wainwright		368	510	218	310	1215			2612		2612
Willington		238	163	244	361	856	259		2121		2121
TOTAL	2551	12337	10248	9944	4680	46216	631	5310	91891	1953	89933

NET EARNINGS FROM UNINSURED SERVICES TO OUT-PATIENTS
FOR THE YEAR ENDED DECEMBER 31, 1959

Hospital	Emergency Unit	Operating Room	Central Supply Room	Pharmacy	Laboratory	Radiology	Physiotherapy	Other	Total	Deductions	Total Net Earnings
30 - 89 Beds											
Altabasca	126	235	200	33	76	2964			3633		3633
Banff		1265	25	30		3451	848	6	5924		5924
Barrhead		1825			484	1532	151		3930		3930
Bassano		634	126		88	1575			2360		2360
Blairmore		365	549	318	376	6434	11		8050		8050
Bonnyville St. Louis		814			526	1544			2884		2884
Brooks				568	2081				3368		3368
Calgary Grace		2008		212				787	787		787
Clareholm					1534				5886		5886
Clareholm					1309				5223		5223
Didsbury						4708		35	5231		5231
Edmonton		425		4	484	3699			4675		4675
Elk Point		374	17	159	184	3699		3	592	202	4675
Fairview		179	37	21	21	3522	32	3	592		593
High Prairie		521		295	236	3522			5393	200	5193
Pt. McLeod		729	25		206	4084			5002		5002
Pt. Vermilion		398		4467	241	366		2	5454		5454
Quahad		467		675	75	711			3978	13	3978
St. Elizabeth		199		5	382	960	43		2111		2111
High Prairie		1755	565	504	466	8878	39	771	12412	1053	11359
High River		1280	499	292	248	4082			6322		6322
Lacombe											
380		287		54		640			1361		1361
Lac La Biche		528	37	35	194	2347		23	3193	91	3102
McLennan		402	192	45	82	1968			2893		2893
Okotoks		925	283	63	344	3749		221	5565		5565
Peace River		865	1172	898	1185	6359		4	10669	150	10519
Fincher Creek		195		165	490	19			4314		4314
Ponoka		356	3176	54	98	1654			2528		2528
Rocky Mt. House		421	217	54	121	618			1413		1413
Spirit River		354	74	55	168	818	122		1459		1459
Stettler		905			4	778		88	1687		1687
St. Paul		1187		450					5626		5626
Taber		960	429	223	223	3336			5250		5250
Tofield		406	106	264	374	3429			2400		2400
Trochu		53	35	268	143	1836		35	1844		1844
Two Hills					73	1826	403	369	2287		2287
Vegreville		676	426	131	530	2383			4170		4170
Vermilion		297	16	661		3606	24		4582		4582
Viking		30	2720	3266	1604	4913	13		12601	350	12601
Vulcan		1009		306		2006			2425		2425
Wainwright			932		452	9679			14208	967	1457
Wetlock		347		35	132	2211			2885		2885
Wetlock	18	455	228	41	13	1989		68	2745	6	2739
Wetlock										346	
TOTAL	261	20,108	13012	14,378	15317	114,731	2248	24,32	186,976	3378	183,596

NET EARNINGS FROM UNINSURED SERVICES TO OUT-PATIENTS
FOR THE YEAR ENDED DECEMBER 31, 1959

Hospital	Emergency Unit	Operating Room	Central Sup-ply Room	Pharmacy	Laboratory	Radiology	Physiotherapy	Other	Total	Deductions	Total Net Earnings
90 - 179 Beds											
Calgary Children's	6			7	204	4,310	719	3,174	8,120	874	7,246
Camrose		516	865		633	2,123			4,536	98	4,438
Drumheller	1638	448			867	7,811	1,000		10,964	154	10,710
Greene Prairie		200	3408	1083	6518	21,683	4,192		38,924	1,608	37,316
Lacombe		24			19		3,293		3,336		3,336
Red Deer	1347	23	1090	408	700	4,188		107	8,562	305	8,257
TOTAL	3491	3451	5363	1498	8942	40115	8304	3281	74442	3119	71323
180 Beds & Over											
Calgary General	48907	2431	4053	1787	10870	36267	12248	2503	119065		119065
Calgary Holy Cross	23351	1852			4928	26598	1958		58627	1269	57358
Edmonton General	25618	1111		1258	16165	48342	1497		94022	5390	88632
Edmonton Hibernicoria	46724	6886		5804	6822	11250	2642		43848	2633	41216
Edmonton Royal Alex	56824	1359	12155	2752	4745	41984	12879	170	132068	7718	124351
Edmonton University	46391	5970		50867	36984	76461	34524	24722	276984	8636	267462
Lethbridge Municipal	9340	13235			40660	4204			67239		67239
Lethbridge St. Michael's	372	1429	72	1	5074	10651	5077		22636		22636
Medicine Hat	4638		1774		5192	3691			15295	181	15113
TOTAL	226564	18888	18954	62269	104035	295624	76949	27796	828998	25827	803072
GRAND TOTAL	232367	53784	46677	89599	132953	496686	87272	38419	1182207	34277	1147924

DIVISION OF HOSPITAL AND MEDICAL SERVICES

ANALYSIS OF VALUE AND DEPRECIATION OF MAJOR EQUIPMENT
BY HOSPITALS, 1959

Hospital	Plant Assets					Depreciation of Plant Assets				Net Book Value At End of Year
	Balances at January 1, 1959	Assets added in 1959	Less: Assets Retired in 1959	Balances at December 31, 1959	Balances at January 1, 1959	Depreciation Provided During 1959	Less: Accumulated Depreciation of Assets Retired	Balances at December 31, 1959	Net Book Value At End of Year	
90 - 179 Beds										
Calgary Children's	145872	5120	---	151092	91615	10576	---	102191	48901	
Carbone	65763	5360	---	71123	63796	5634	---	31630	43693	
Drumheller	159800	25700	950	184550	18683	18683	659	71801	112749	
Grande Prairie	111920	12275	---	124195	17911	5986	---	42107	101083	
Lamont	196379	6131	515	201994	129314	14204	40	143477	58517	
Red Deer										
TOTAL	683834	54586	1465	736954	324633	48053	679	372006	364948	
180 Beds & Over										
*Calgary General	726642	54524	1863	782203	160198	47951	458	207691	576612	
Calgary Hosps	75984	650	650	834228	291185	56551	191	347045	487483	
Edmonton General	466819	51689	---	518508	199318	41080	---	240398	281111	
Edmonton Misericordia	877330	70266	---	947597	152840	---	---	152846	794753	
Edmonton Royal Alex										
**Edmonton University	1906097	327621	12086	2221634	117206	41176	1651	156731	2201634	
Lebanon Municipal	459819	17850	7889	469780	263586	52200	---	315785	313694	
Lebanon St. Michael's	453158	18798	14297	457639	36588	38030	96	76522	141854	
Medicine Hat	487379	12215	955	499239					424717	
TOTAL	6179287	592679	37740	6734226	1220927	278788	2696	1495019	5239207	
GRAND TOTAL	11395747	1337263	139886	12589724	3810317	654014	56143	4408188	8181076	

* Not available

** Depreciation not available

TABLE 49: - ANALYSIS OF VALUE AND DEPRECIATION OF BUILDINGS AND BUILDING SERVICE EQUIPMENT BY HOSPITAL, 1959

Hospital	Plant Assets			Depreciation of Plant Assets				Net Book Value At End of Year
	Balances at January 1, 1959	Assets added in 1959	Less: Assets Retired in 1959	Balances at December 31, 1959	Balances at January 1, 1959	Depreciation Provided During 1959	Less: Accumulated Depreciation on Assets Retired		Balances at December 31, 1959
1 - 79 Beds								
Beaverlodge	174246	310	---	174556	27969	9170	---	36539
Bentley	100020	---	---	100020	45980	5091	---	47981
Berwyn	111860	---	---	111860	45512	5593	---	52755
Birmingham	180718	---	741	180718	30879	11320	---	18949
Bow Island	---	46418	---	26599	---	---	---	235979
Camrose	---	---	---	---	---	---	---	---
Carmanzy	159806	11731	---	171537	---	7030	---	164537
Castor	86026	---	---	86026	10206	2151	---	12356
Ceresla	34549	8920	---	43469	11325	1157	---	79570
Coaldale	92317	---	---	92317	19556	2770	---	27987
Coaldale	---	---	---	---	---	---	---	73591
Cold Lake	238593	963	800	238755	9635	5963	---	18726
Consort	17331	---	---	17331	5461	---	---	15383
Constitution	190099	1731	---	190829	54083	5641	---	59623
Coronation	190775	35686	---	55360	11794	984	---	51206
Layaland	91837	---	---	91837	24979	2276	---	42532
Deven	21910	---	---	21910	4380	1100	---	27266
Deacon Valley	219010	56280	---	289290	66331	13237	---	64571
Edmonton	13449	379	---	13482	58650	12666	---	24811
Edmonton	---	---	---	---	---	---	---	45506
Elmira	51144	---	---	51144	24257	2557	---	26315
Empress	41329	421	---	41750	2088	2088	---	20299
Glendon	71268	---	---	71268	17104	3163	---	12237
Hardisty	144863	580	---	145443	37066	---	---	20663
Herts	32641	---	---	32641	16899	1720	---	35811
Jonistad	112777	15821	---	128598	42027	3015	---	146179
Jolley	27121	---	---	27121	20456	1356	---	83266
Jasper	176061	1534	---	177595	57377	4660	---	5309
Killian	97140	547	---	97686	37477	4396	---	61747
Kapreth	145857	29480	163	170969	23517	7519	69	41873
Kennedy	13424	1861	11300	13424	15664	1090	2300	140002
Kennville	39937	---	---	39937	24267	1090	---	18464
Mayerthorpe	97837	---	---	97837	55931	2095	---	14721
McKurray	72234	---	---	72234	30937	1806	---	39810
Mundare	80093	---	---	80093	12304	2002	---	39591
Nyman	175038	---	553	174485	3129	---	---	32643
Oyen	48379	833	---	49212	24900	---	---	65787
Provost	192309	939	---	193248	19649	---	---	120554
Badway	35878	1607	---	37485	71033	5200	---	22049
Raymond	49831	753	---	50584	23401	937	---	76233
Rimber	122769	---	---	122769	13423	3061	---	13147
Stooky Lake	28464	1118	97	29526	3433	1195	---	33151
Three Hills	113228	460	---	113688	58705	5684	---	56140
Turner Valley	47347	---	---	47347	7050	2467	---	66629
Vilna	51097	10760	---	61857	10428	7983	---	4738
Willmorden	31798	---	---	31798	11898	795	---	20788
TOTAL	4,095,542	255,683	13,349	4,297,376	1,103,989	17,220	23,600	3,026,157

DIVISION OF HOSPITAL AND MEDICAL SERVICES

ANALYSIS OF WAIVES AND DEPRECIATION OF BUILDINGS AND BUILDING SERVICE EQUIPMENT BY HOSPITAL, 1959

Hospital	Plant Assets				Depreciation of Plant Assets				Balances at December 31, 1959	Net Book Value At End of Year
	Balances at January 1, 1959	Assets added in 1959	"Less" Assets Retired in 1959	Balances at December 31, 1959	Balances at January 1, 1959	Depreciation provided During 1959	"Less" Accumulated Depreciation on Assets Retired	Balances at December 31, 1959		
30 - 49 Beds										
Atakaska	294734	---	---	294734	63089	9380	---	72468	222266	
Baruff	854489	874	---	855363	79268	21377	---	46944	808119	
Barrhead	509411	---	---	509411	70268	33511	---	96420	418991	
Bassano	189217	266545	18562	437201	23102	10590	15543	10072	427129	
Bloomere	254795	---	---	254795	39500	---	---	99000	155795	
Bonnyville St. Louis										
Brooks	449773	---	---	449773	41704	11219	---	52924	398849	
Calgary Grace	600717	8377	542	609252	77079	6260	---	167044	473398	
Candison	425598	96451	15478	507036	6066	12876	5828	47398	561696	
Citresholm	185079	---	---	185079	24692	4653	---	12917	494119	
Disabury	202076	---	---	202076	74248	11519	---	29315	155764	
Edson	90882	590	---	91472	37857	2287	---	85707	144699	
Elk Point	223212	---	---	223212	79877	1161	---	40114	51368	
Fairview	160950	---	---	160950	10805	8048	---	90838	132374	
Ft. McLeod	418471	4627	---	423098	32351	5434	---	68253	92697	
Ft. Vermillion	137270	---	---	137270	47215	6863	---	37565	385533	
Galahad	312558	999	---	313557	34001	7801	---	51078	83192	
Hanna	340628	60953	---	421528	127547	7200	---	41807	118721	
High Prairie	72878	3550	---	76428	34354	3642	---	134747	280756	
High River	374338	263758	---	638096	76006	10639	---	37996	287732	
Lacombe	289886	---	---	289886	105286	10449	---	86696	551410	
Leckie	573545	---	---	573545	44822	13439	---	118735	94251	
Lloydminster	572462	7105	---	579567	68676	13467	---	56160	517985	
McLennan	259323	11580	---	270902	50098	7203	---	82163	497124	
Olds										
Peace River	146655	170	---	146825	94072	7133	---	61301	209601	
Picher Creek	382310	2040	---	384350	65501	12649	---	100405	46420	
Pineau	139754	924	---	140678	115032	13497	---	78150	308200	
Rocky Mt. House	403383	5485	---	408867	39706	5502	---	111220	118549	
Spirit River										
Stettler	289158	---	---	289158	63727	20274	---	52834	344866	
St. Paul	211980	---	---	211980	92998	5783	---	98082	191076	
Stony	481055	1450	---	482505	81512	24922	---	57266	154634	
Tofield	228924	---	---	228924	56887	11347	---	106437	376068	
Trochu										
Two Hills	217276	7853	434	224699	47455	57144	---	53269	179399	
Vegreville	584282	239973	---	824255	89191	11235	---	94726	129969	
Vermilion	387637	69759	16	457412	59286	20823	---	76813	786403	
Wainwright	200052	5468	---	205520	71164	10239	---	69155	325225	
Wetaskiwin	189778	---	---	189778	75099	4699	---	81100	125030	
Wetaskiwin	324008	11803	---	335811	16566	16566	---	17798	108430	
Wetaskiwin	534199	---	---	534199	13355	9860	---	124008	178464	
Wetaskiwin	243156	---	---	243156	138624	---	---	139184	421091	
TOTAL	13470912	1048205	35932	14480885	2747540	446800	18371	3179689	11308116	

ANALYSIS OF VALUE AND DEPRECIATION OF BUILDINGS AND BUILDING SERVICE EQUIPMENT BY HOSPITAL, 1959

Hospital	Plant Assets					Depreciation of Plant Assets				Net Book Value At End of Year
	Balances at January 1, 1959	Assets added in 1959	Less: Assets Retired in 1959	Balances at December 31, 1959	Balances at January 1, 1959	Depreciation Provided During 1959	Less: Accumulated Depreciation on Assets Retired	Balances at December 31, 1959		
90 - 179 Beds										
Alberta Children's										
Carroze	665624	---	---	665624	193439	16661	---	210078	455546	
Drumheller	676278	2573	---	676951	254069	16924	---	270992	405959	
Granite Prairie	1110692	2310	---	1113001	163987	38039	---	201726	911075	
Lamont	333737	341315	---	675051	35793	8343	---	44136	631415	
Red Deer	667919	255946	1225	928640	166068	15686	429	182125	740315	
TOTAL	3432350	602644	1225	4033767	813255	96433	429	909257	3144510	
180 Beds & Over										
*Calgary General	10152495	81579	---	10234173	539511	65663	---	586904	10291173	
Calgary Holy Cross	1700	---	---	1700	1090459	100001	---	1310470	2914421	
Edmonton General	419494	---	---	419494	---	---	---	---	2014421	
Edmonton Misericordia	2011767	---	---	2011767	531108	50294	---	581702	1430065	
Edmonton Royal Alex	6412337	1343124	---	7755461	1293344	1331448	---	1425493	6325868	
*Edmonton University	10629770	201275	---	12642145	335371	97533	---	429393	12642145	
Lehrbridge Municipal	3360396	---	---	3360396	18866	15429	---	200000	2968493	
Lehrbridge St. Michael's	656	---	---	656	---	---	---	---	656	
Medicine Hat	3022311	20394	---	3072705	93969	94236	---	139325	2932681	
TOTAL	45009252	3460387	---	48469639	4127371	564004	---	4691375	43778644	
GRAND TOTAL	60140966	5337119	50126	71105969	8791554	1277437	21169	10047822	61257217	

* Depreciation not available

DIVISION OF HOSPITAL AND MEDICAL SERVICES

PROVINCIAL PAYMENTS TO GENERAL HOSPITALS FOR OPERATING COSTS
AND EQUIPMENT PURCHASES, 1959

Hospital	Payments For Operating Purposes						Equipment Payments			Grand Total
	Co-Insurance	Approved Costs	Bad Debt	Out-Patient Pensioner	Total	Shareable Equipment	Non-Shareable Equipment	Total		
90 - 179 Beds										
Calgary Children's	14614.00	404831.72	3846.29	—	423494.01	9891.74	1092.20	10983.94	434477.95	
Calgary City Hospital	15314.60	371189.99	1107.67	64.50	391480.76	—	—	—	391480.76	
Dumbellair	15234.00	357146.77	187.46	321.50	309948.33	4257.54	2207.91	6465.35	314413.68	
Grande Prairie	19174.60	351470.77	187.46	87.00	385341.91	45623.84	—	45623.84	431065.75	
Lacombe	21602.80	255011.36	784.17	44.00	277260.25	9094.33	2197.51	11291.84	288512.07	
Red Deer	22594.60	449406.56	1578.46	106.50	473636.12	1379.13	915.05	2294.18	475980.30	
TOTAL	112321.00	2134620.24	10868.62	1401.50	2259211.36	70264.58	6412.57	76659.15	2335870.51	
180 Beds & Over										
Calgary General	133244.00	3460790.57	2906.58	1621.70	3624701.85	316885.94	—	348571.84	3641587.79	
Calgary City Hospital	9130.00	152271.35	752.26	348.00	167002.61	20660.12	—	20660.12	167062.73	
Edmonton City Hospital	77230.00	16515.02	1589.60	2589.60	179317.52	15871.01	—	15871.01	174803.53	
Edmonton Misericordia	156490.00	1664959.88	1073.90	24595.01	1664959.88	24595.01	—	33828.07	1698757.95	
Edmonton Royal Alex	177938.00	2914884.23	30031.79	28324.60	3124688.53	33005.10	—	33005.10	3157693.63	
Edmonton University	147188.00	3624468.93	37050.28	2387.90	3811595.11	178897.65	—	178897.65	3990492.56	
Lebridge Municipal	38422.00	906497.00	4667.38	1159.10	910745.48	13129.20	5244.15	18373.35	929118.83	
Leduc Municipal	5945.00	4804.07	331.00	—	70941.10	6219.03	753.00	6972.03	71633.93	
Medicine Hat	37796.00	825392.78	3566.93	186.65	808996.36	4451.35	11176.77	15628.12	905524.48	
TOTAL	786738.00	17156570.49	156970.20	12830.45	18108169.14	333704.21	26416.98	360121.19	18468290.33	
GRAND TOTAL	1356486.10	27262742.35	196394.13	22006.75	28837559.33	716120.28	61527.58	777647.86	29615207.19	

PART III

ANNUAL REPORT

OF THE

Bureau of Vital Statistics

OF THE

DEPARTMENT OF PUBLIC HEALTH
PROVINCE OF ALBERTA

1959

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DIVISION OF VITAL STATISTICS

John Colville, Director

This is the fifty-fifth Annual Report of the Division of Vital Statistics and is for the year 1959.

The report shows insignificant decreases in the birth, death and marriage rates and a considerable increase in the divorce rate as compared to the preceding year. Favourable decreases will also be noted in the maternal death, stillbirth and infant death rates. The natural increase of births over deaths was 23.8, the same as in 1958.

POPULATION

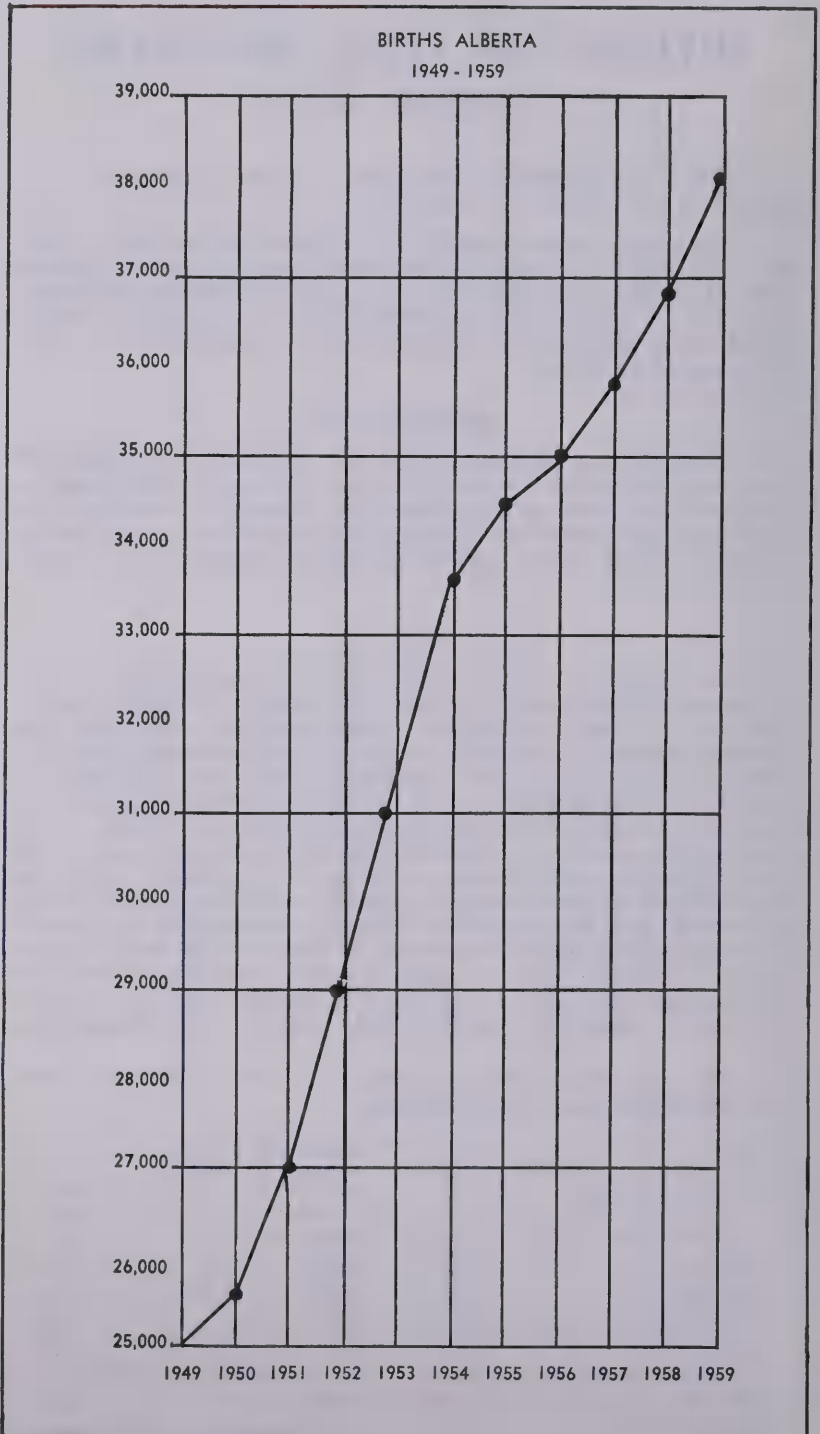
The population for the Province of Alberta for the year 1959 has been estimated by the Dominion Bureau of Statistics at 1,243,000. All rates in this report are, therefore, based on this figure. A table commencing on page 5 shows the population by census divisions, cities, towns and villages for the census years 1951 and 1956.

BIRTHS

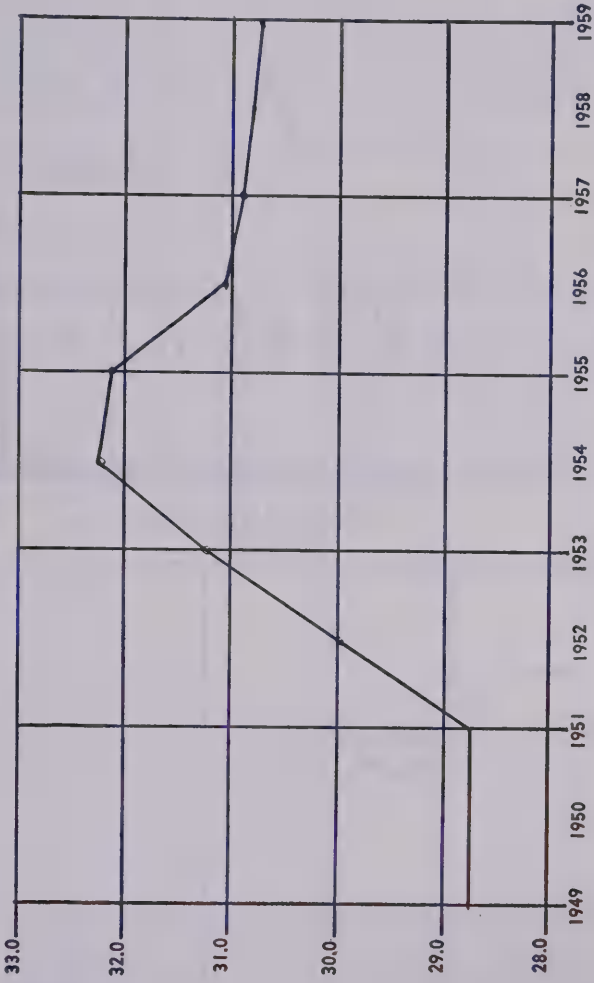
The number of children born to residents in the province numbered 38,080, of which 19,562 were males and 18,518 females. The ratio of male to female births was 1,056 males to 1000 females. Although the birth rate has been decreasing gradually from the high record of 32.3 per population in the year 1954, the rate of 30.6 for 1959 is very favourable in comparison with the rate for Canada of 27.5. Ninety-eight percent or 37,305 of the total births occurred in hospital. Multiple births comprised three sets of triplets and 379 sets of twins. Of the total number of births 37,469 were attended by physicians, 189 by nurses, 227 by midwives, and 195 were unattended or attendance not stated. The number of births registered in the cities of the province were as follows: Calgary, 7,259; Camrose, 170; Drumheller, 124; Edmonton, 8,604; Grande Prairie, 304; Jasper Place, 1099; Lethbridge, 913; Medicine Hat, 602; Red Deer, 634, and Wetaskiwin, 148.

The following table shows the most recent birth rates for Canada and certain other countries:

Canada	27.5	United States	24.1
Newfoundland	33.0	Australia	22.6
Prince Edward Island	26.7	New Zealand	26.5
Nova Scotia	26.6	Denmark	16.4
New Brunswick	27.9	Finland	18.4
Quebec	28.5	France	18.3
Ontario	26.4	Italy	18.4
Manitoba	25.8	Austria	17.5
Saskatchewan	27.0	Norway	18.0
Alberta	30.6	Netherlands	21.3
British Columbia	25.5	Portugal	23.5
England and Wales	16.5	Spain	21.8
Scotland	19.1	Sweden	14.1
Northern Ireland	21.9	Switzerland	17.8
Ireland (Republic)	21.1	Western Germany	17.6

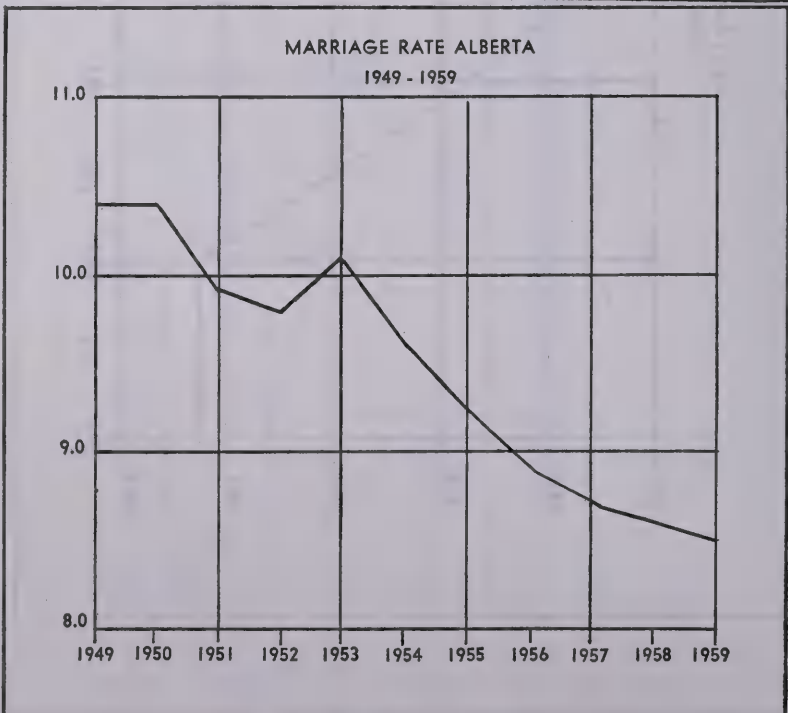
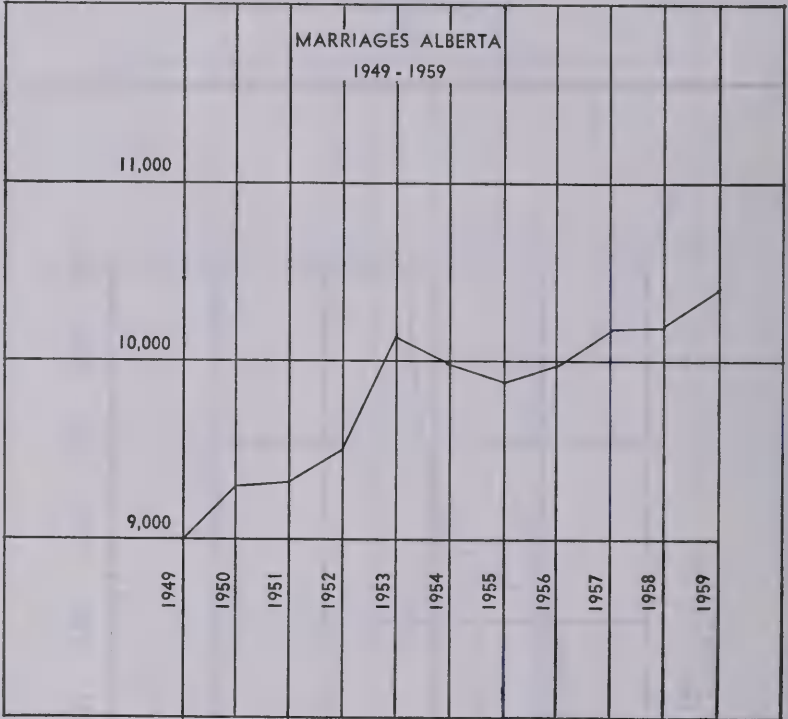


BIRTH RATE ALBERTA
1949 - 1959



BUREAU OF VITAL STATISTICS

MARRIAGES



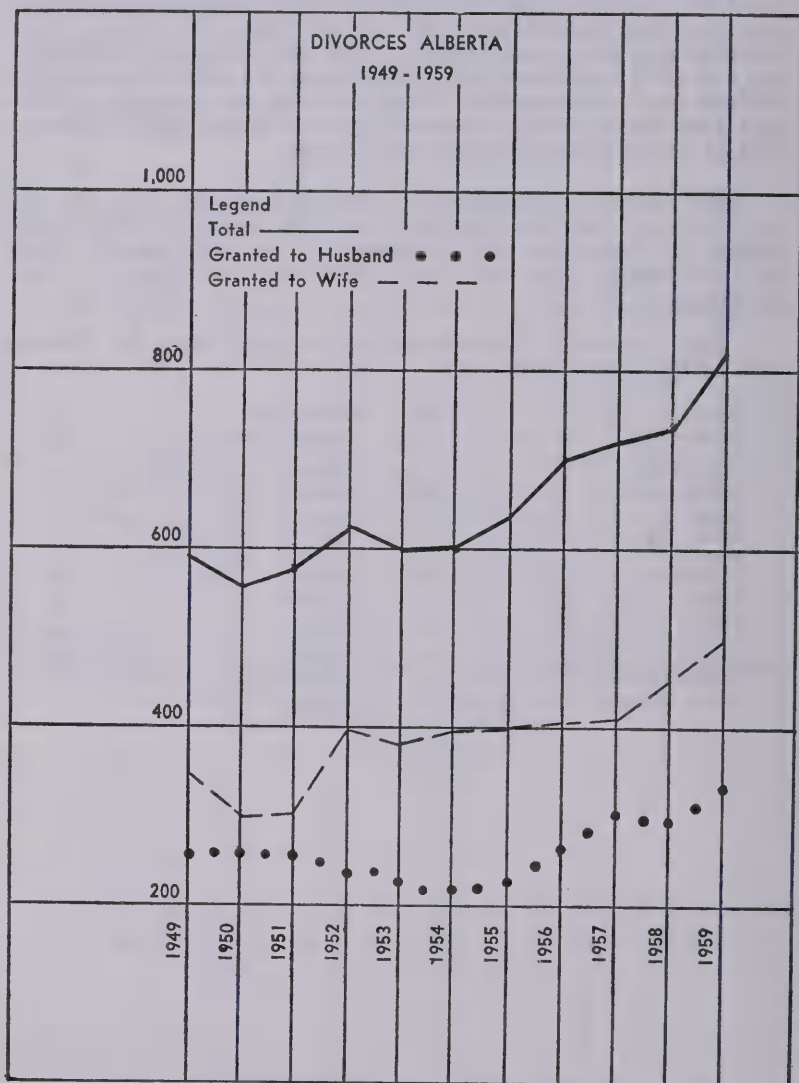
During the year 10,402 marriages were registered, an increase of 216 over the previous year. The marriage rate was 8.4 per 1000 population and this is the eleventh straight year Alberta has held the highest rate for the provinces of Canada. Five hundred and sixty-three of the grooms were divorced, 363 widowers and 9,476 bachelors, and of the brides 591 were divorced, 500 widows and 9,312 spinsters. Two hundred and nineteen grooms and 2,407 brides were 18 years of age and under, and 25 grooms and 12 brides were 75 years old and over.

The number of marriages registered in the cities of the province were as follows: Calgary, 2,230; Camrose, 86; Drumheller, 61; Edmonton, 3,229; Grande Prairie, 117; Jasper Place, 23; Lethbridge, 385; Medicine Hat, 274; Red Deer, 212, and Wetaskiwin, 59.

The following table shows the marriage rates for Canada and certain other countries:

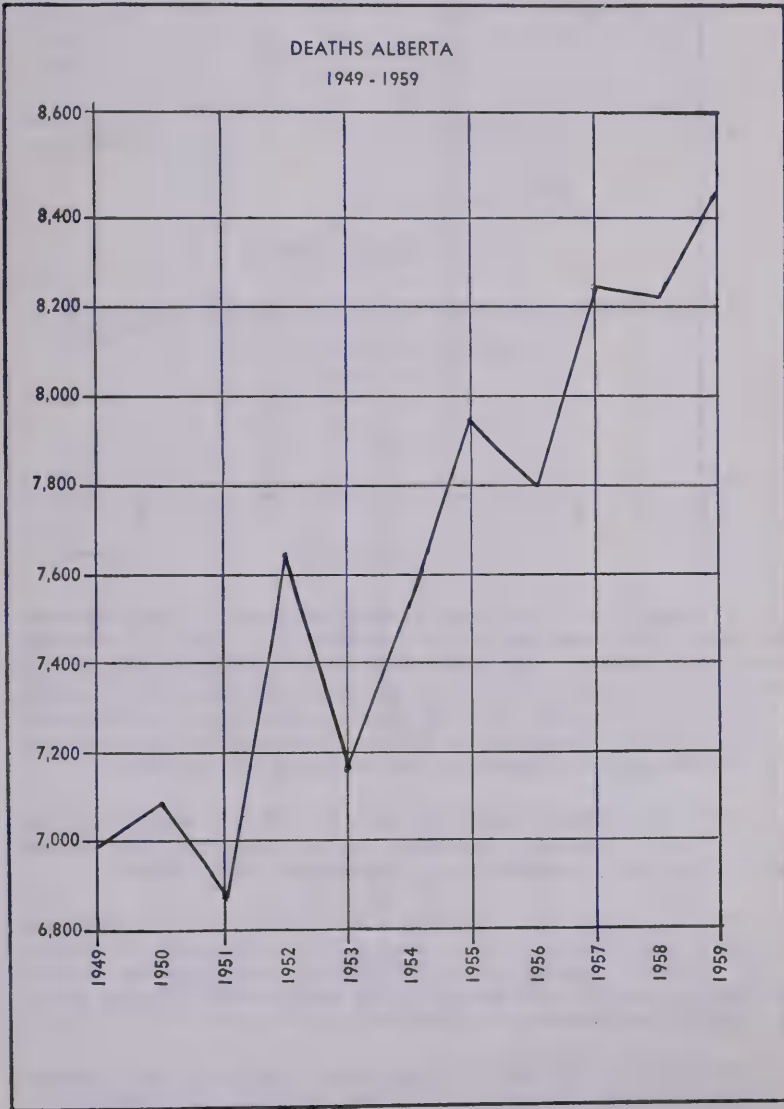
Canada	7.6	United States	8.5
Newfoundland	6.4	Australia	7.4
Prince Edward Island	6.3	New Zealand	7.9
Nova Scotia	7.4	Denmark	7.2
New Brunswick	7.3	Finland	7.2
Quebec	7.4	France	7.1
Ontario	7.8	Italy	7.8
Manitoba	7.5	Austria	8.3
Saskatchewan	7.1	Norway	6.5
Alberta	8.4	Netherlands	7.8
British Columbia	7.6	Portugal	8.4
England and Wales	7.5	Spain	8.1
Scotland	7.8	Sweden	6.3
Northern Ireland	6.8	Switzerland	7.7
Ireland (Republic)	5.4	Western Germany	9.2

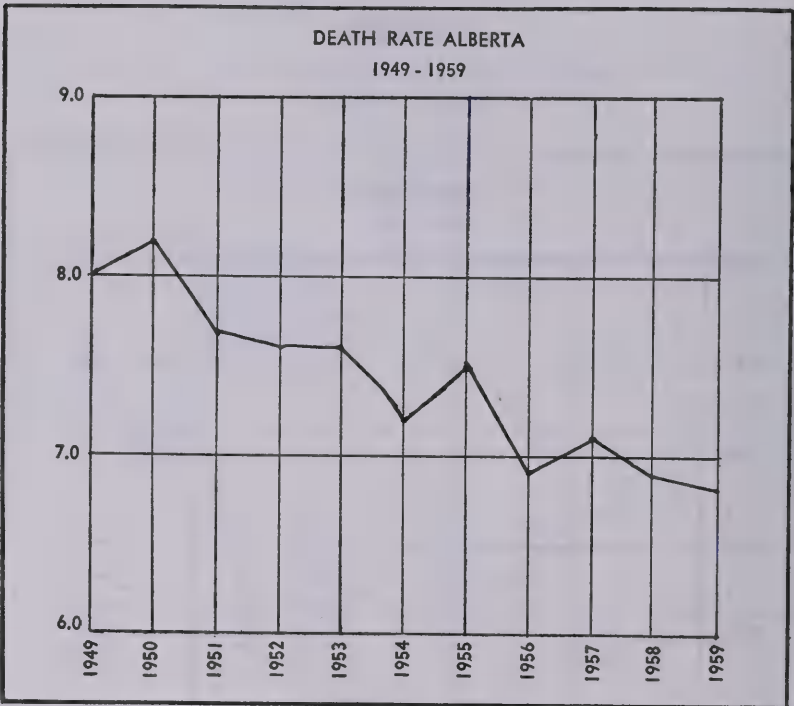
DIVORCES



The divorce rate of 67.3 per 100,000 population for 1959 is a considerable increase over the previous years rate of 61.9 and was only exceeded in the period 1945 to 1948 after the second great war. There were 1,836 divorce decrees and 16 decrees of nullity granted during the year. Of the divorces 337 were granted to husbands and 499 to wives, and of the nullities 6 to husbands and 10 to wives.

DEATHS





The deaths of 8,481 residents were registered during the year of which 5,382 were males and 3,099 females. The ratio between males and females was 1,736 males to 1000 females. The deaths of 217 Indians are included in the total. Although the number of deaths increased by 244 over the previous year, the death rate of 6.8 per 1000 population for 1959 is the lowest for the provinces of Canada and the lowest in the history of the province.

The five major causes of death in order of standing were heart disease; cancer; vascular lesions affecting the central nervous system; accidents, and pneumonia (all forms).

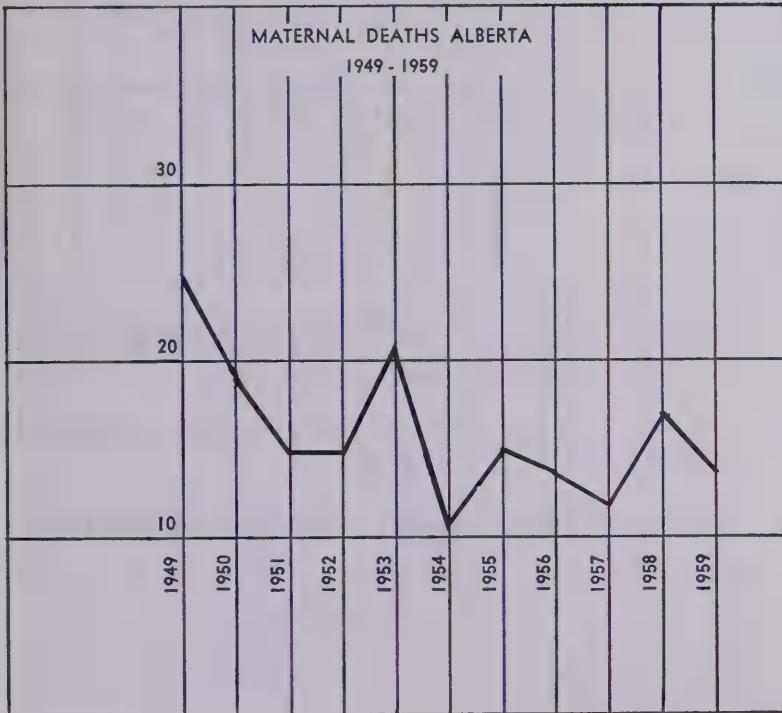
Heart disease accounted for 2,581 deaths and the rate was 2.04 per 100,000 population; cancer 1,357 deaths, and the rate of 1.09; vascular lesions affecting the central nervous system accounted for 952 with a rate of 76; accidents 659 deaths and a rate of 53, and pneumonia 346 deaths and a rate of 27.

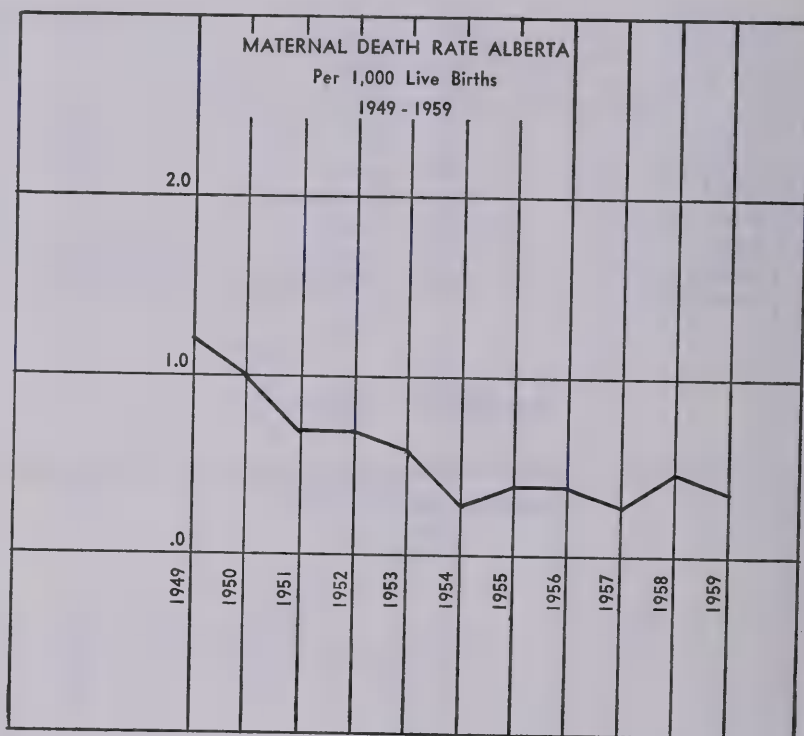
The number of deaths registered in the cities of the province were as follows: Calgary, 1,809; Camrose, 221; Drumheller, 81; Edmonton, 2,297; Grande Prairie, 45; Jasper Place, 14; Lethbridge, 302; Medicine Hat, 235; Red Deer, 122, and Wetaskiwin, 66.

The following table shows the death rates for Canada, the provinces, and certain other countries:

Canada	8.0	United States	9.4
Newfoundland	7.1	Australia	8.9
Prince Edward Island	9.9	New Zealand	9.1
Nova Scotia	8.9	Denmark	9.4
New Brunswick	8.0	Finland	8.8
Quebec	7.3	France	11.2
Ontario	8.5	Italy	9.3
Manitoba	8.4	Austria	12.4
Saskatchewan	7.8	Norway	8.9
Alberta	6.8	Netherlands	7.1
British Columbia	9.1	Portugal	10.8
England and Wales	11.6	Spain	9.0
Scotland	12.1	Sweden	9.5
Northern Ireland	10.9	Switzerland	9.5
Ireland (Republic)	12.0	Western Germany	10.8

MATERNAL DEATHS





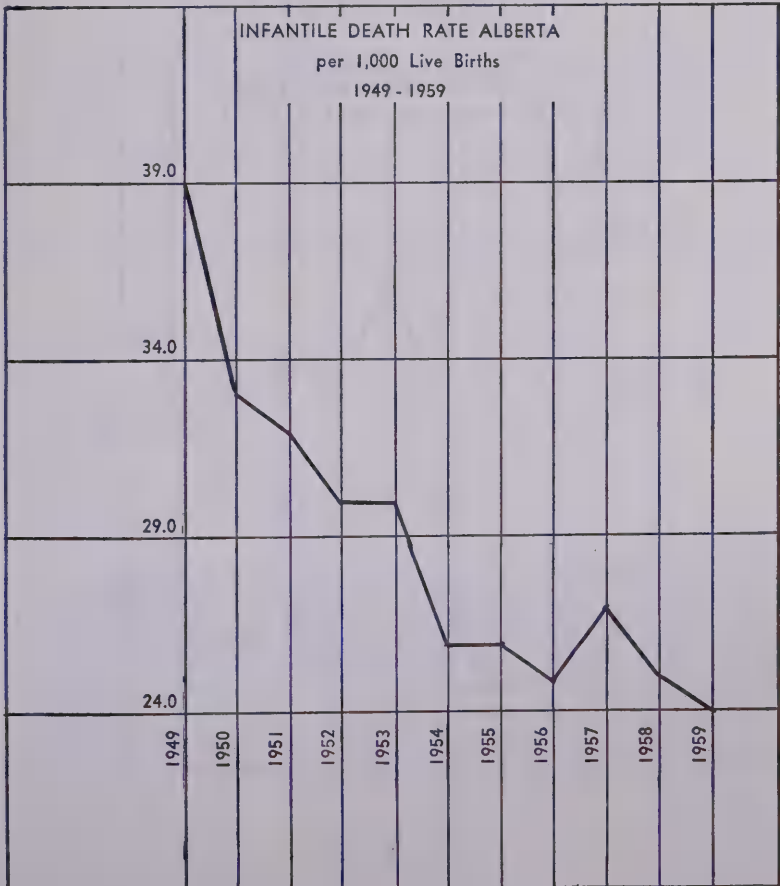
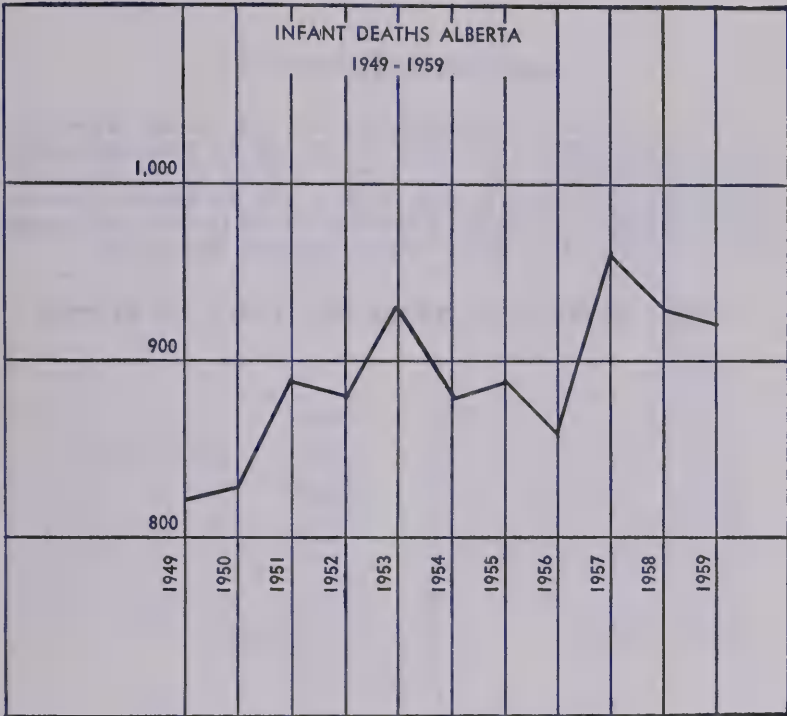
It will be noted there is a gratifying decrease in the number of maternal deaths. Fourteen deaths were registered during 1959 as compared to 17 for the previous year.

The rate of 0.4 per 1000 live births is the lowest in Canada and is matched by four other provinces.

MATERNAL DEATH RATES PER 1,000 LIVE BIRTHS

Canada	0.5	Ontario	0.5
Newfoundland	0.8	Manitoba	0.6
Prince Edward Island	0.4	Saskatchewan	0.4
Nova Scotia	0.4	Alberta	0.4
New Brunswick	0.4	British Columbia	0.4
Quebec	0.7		

INFANT DEATHS

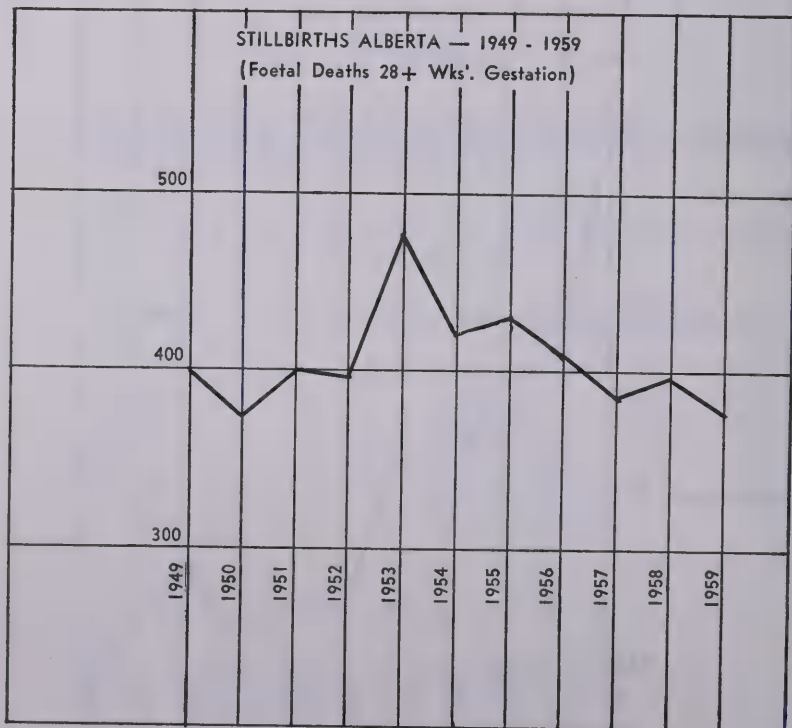


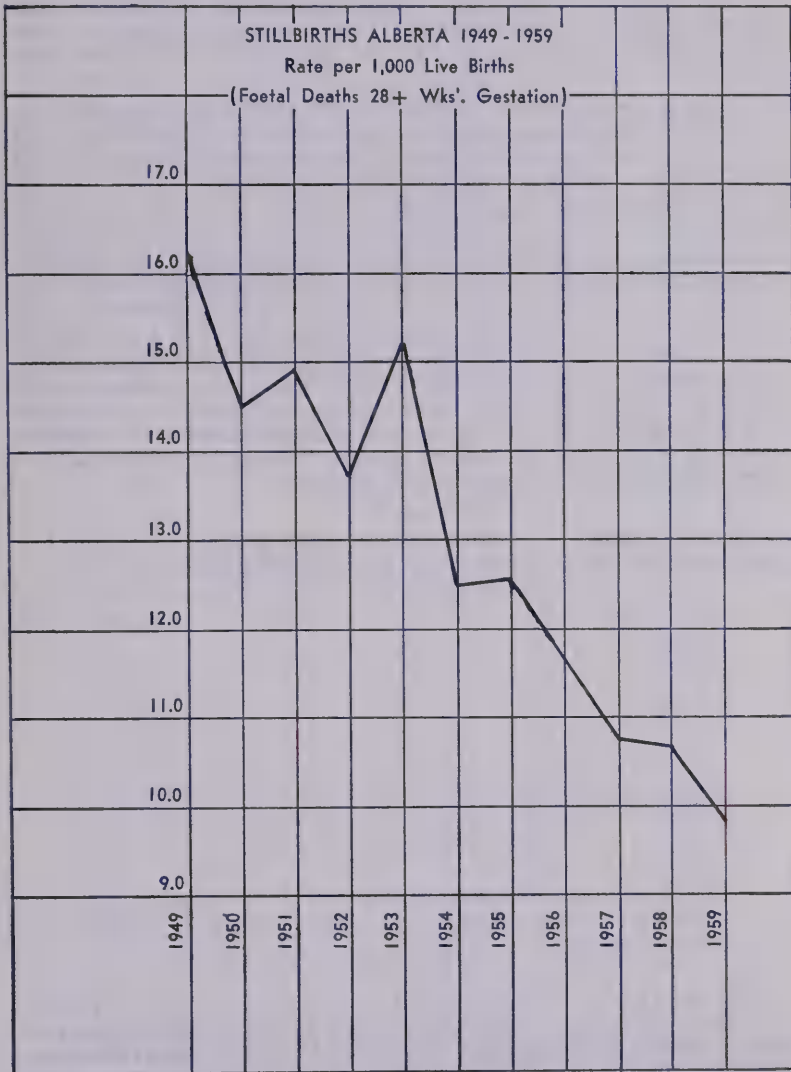
The deaths of 922 infants under one year of age were registered during 1959, 10 less than in 1958. Of the total deaths 554 were male and 658 female. The ratio of male to female infant deaths was 1,506 males to 1000 females. For the second consecutive year Alberta shares with the Province of Ontario the lowest rate in Canada of 24 infant deaths per 1000 live births.

INFANT MORTALITY RATES PER 1,000 LIVE BIRTHS

Canada	28	United States	26
Newfoundland	39	Australia	21
Prince Edward Island	31	New Zealand	20
Nova Scotia	31	Denmark	23
New Brunswick	33	Finland	24
Quebec	33	France	30
Ontario	24	Italy	45
Manitoba	27	Austria	40
Saskatchewan	26	Norway	20
Alberta	24	Netherlands	17
British Columbia	25	Portugal	88
England and Wales	22	Spain	41
Scotland	28	Sweden	16
Northern Ireland	28	Switzerland	22
Ireland (Republic)	32	Western Germany	34

STILLBIRTHS





There was a marked decrease in the number of stillbirths (foetal deaths - 28 + weeks gestation) registered. The number registered was 379, a drop of 19 under the previous year. The stillbirth rate has fluctuated on a downward trend for the past half century and the 1959 rate of 9.9 per 1000 live births is the lowest for Canada, and also the lowest in the history of the province.

ADMINISTRATION

The Vital Statistics Act, The Solemnization of Marriage Act, and the Regulations providing for the licensing of embalmers are administered by the Director of the Division of Vital Statistics.

Under the provisions of The Vital Statistics Act the administrative procedure necessary for matters of civil registration is provided. There are approximately 165 District Registrars located in the larger centres of the province whose duties are to acquire the registration of each vital event (birth, stillbirth, marriage and death) which occurs within their districts for recording and transmission to this Division on a weekly basis. In addition decrees of dissolution and annulments of marriages; adoptions, and legal changes of names are received for recording. All registrations are edited, etc., arranged and bound in a systematic manner and continuous indexes prepared. Certified copies; photocopies of original registrations; certified extracts; certificates and verifications are issued to applicants or agencies upon receipt of the prescribed fee. Verifications and photocopies of registrations are also supplied free of charge to other government departments and certain authorized agencies.

Listed below is a summary of work processed under the provisions of The Vital Statistics Act during 1959:

Births processed	37,996
Stillbirths processed	379
Marriages processed	10,402
Deaths processed	8,498
Certificates of Birth	59,708
Certificates of Marriage	18,116
Certificates of Death	4,213
Searches	37,100
Legal changes of surname recorded	521
Changes of christian names recorded	1,006
Legitimations of birth	141
Delayed registrations of births and marriages	915
Corrections of record	1,185
Adoptions registered	988

In addition to the above the Division supplies free of charge to other government departments and agencies verifications of births, deaths and marriages. No accurate record of verifications supplied for the year 1959 was kept, however, we estimate 6,000 were made during the year.

Under The Solemnization of Marriage Act the Division provides administrative procedure for the appointment of Marriage License Issuers, Marriage Commissioners, and the registration of clergymen authorized to perform marriages in the province. Approximately 170 Marriage License Issuers are located in the larger centres of the province whose duties are to issue marriage licenses and certificates of publication of banns in accordance with the provisions of The Marriage Act.

The following summary shows work processed under the provisions of The Solemnization of Marriage Act during the year 1959:

Marriage Licenses	9,840
Certificates of Publication of Banns	185
Clergymen registered	2,295
Marriage Commissioners registered	15

Under the provisions of the Regulations providing for the licensing of Embalmers the Division licenses embalmers and registers apprentice embalmers. During the year 177 embalmers were licensed and 10 apprentice embalmers registered.

STAFF

The staff complement of the Division during 1959 was 26 and during the year there were 10 appointments and 14 resignations.

DIVISIONS OF ALBERTA FOR CENSUS AND VITAL STATISTICS 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 smaller areas, the Dominion Census Divisions.

Prior to 1956 the Province was divided into 17 census divisions. However in 1956 the census division boundaries were completely revised and there are now 15 census divisions. These divisions are further sub-divided into municipal areas. The municipal areas which were each originally within the boundaries of a single census division, have been reorganized by the Provincial authorities into larger units, and now, in many cases, part of the new municipality or improvement district is in one census division and part in another.

The following table shows the census divisions divided into municipalities, improvement districts, cities, towns and villages with the 1956 and 1951 division population figures.

POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES
FOR CENSUS YEARS, 1951 AND 1956

Division and Subdivision	Total		Division and Subdivision	Total	
	1956	1951		1956	1951
ALBERTA	1,123,116	939,501	Division No. 5—Continued:		
Division No. 1	34,496	28,317	Cities:		
2. Forty Mile	4,224	3,924	Drumheller	2,632	2,601
11. I.D.—D.A.	4,076	4,025	Towns:		
22. I.D.—D.A.	592	563	Gleichen	581	430
Army Experimental Range	863	533	Strathmore	727	704
Cities:			Three Hills	1,095	1,026
Medicine Hat	20,826	16,364	Vulcan	1,204	1,040
Towns:			Villages:		
Bow Island	1,001	653	Acme	292	275
Irvine	232	224	Arrowwood	240	222
Redcliff	2,001	1,538	Carbon	354	374
Villages:			Carmangay	299	285
Burdett	225	118	Champion	402	378
Foremost	456	375	Cluny	197	202
Division No. 2	74,991	67,694	Craigmyle	138	136
14. Taber	6,730	6,157	Della	282	278
25. Lethbridge	11,624	13,857	Hussar	168	120
Newell County No. 4	5,943	7,023	Lomond	189	153
Warner County No. 5	5,157	5,322	Milo	167	141
Cities:			Munro	267	226
Lethbridge	29,462	22,947	Munson	82	78
Towns:			Rockyford	226	246
Bassano	753	624	Rumsey	104	110
Brooks	2,320	1,648	Standard	230	237
Coaldale	2,327	806	Trochu	680	630
Milk River	642	481	Division No. 6	237,886	177,441
Raymond	2,399	2,279	31. Foothills	7,902	8,100
Taber	3,688	3,042	44. Rocky View	12,788	14,770
Villages:			46. I.D.—D.A.	4,650	1,390
Barons	352	369	49. Mountain View	9,273	9,497
Duchess	177	258	Indian Reserves	478	385
Grassy Lake	282	167	Cities:		
Nobleford	263	255	Calgary	181,780	129,060
Picture Butte	881	865	Towns:		
Rosemary	158	.....	Black Diamond	991	1,154
Stirling	430	520	Bowness	6,217	2,922
Tilley	240	259	Didsbury	1,227	1,180
Vauxhall	713	393	Forest Lawn	3,150	1,079
Warner	450	422	High River	2,102	1,888
Division No. 3	30,426	27,667	Okoeks	764	767
6. Cardston	5,398	6,293	Olds	1,980	1,617
9. Pincher Creek	3,109	3,215	Sundre	923	337
26. Willow Creek	6,344	5,166	Villages:		
Indian Reserves	3,524	2,555	Airdrie	327	267
Towns:			Beiseker	321	325
Cardston	2,607	2,487	Blackie	198	224
Claresholm	2,431	1,608	Carstairs	449	468
Fort Macleod	2,103	1,860	Cayley	1467	139
Granum	322	327	Cochrane	707	530
Magrath	1,382	1,320	Cremona	192	.....
Nanton	1,047	934	Crossfield	459	443
Pincher Creek	1,729	1,456	Irricana	158	180
Stavelay	338	327	Turner Valley	704	719
Villages:			Division No. 7	40,214	40,217
Cowley	92	119	52. Provost	3,621	3,751
Division No. 4	14,294	13,182	53. Paintearth	3,515	3,462
34. Acadia	914	705	61. Wainwright	4,481	4,690
Special Area No. 2	3,687	3,590	62. Flagstaff	6,806	7,194
Special Area No. 3	5,036	4,811	Stettler County No. 6	6,061	6,059
Towns:			Buffalo National Park	604	2,708
Hanna	2,327	2,027	Towns:		
Cereal	154	135	Castor	958	798
Chinook	154	116	Coronation	784	738
Consort	434	396	Daysland	499	475
Empress	480	411	Hardisty	628	536
Oyen	562	433	Provost	878	676
Veteran	241	206	Stettler	3,359	2,442
Youngstown	305	352	Wainwright	2,653	1,996
Division No. 5	38,120	39,055	Villages:		
40. Wheatland	5,582	5,779	Alliance	313	281
42. I.D.—D.A.	5,502	6,925	Amisk	151	.....
47. Starland	2,831	2,891	Big Valley	354	307
48. Kneehill	7,055	7,174	Botha	102	98
Vulcan County No. 2	5,087	5,094	Chauvin	353	340
Indian Reserves	1,507	1,300	Czar	153	123
			Donalda	256	318
			Edgerton	292	309
			Forestburg	552	443
			Gadsby	145	128
			Galahad	215	198

POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES FOR CENSUS YEARS, 1951 AND 1956 (Continued)

Division and Subdivision	Total		Division and Subdivision	Total	
	1956	1951		1956	1951
Division No. 7—Continued:			Division No. 10—Continued:		
Villages—Continued:			Bawlf	287	236
Halkirk	209	148	Bittern Lake	45	25
Hughenden	212	218	Bruderheim	290	387
Irma	421	369	Chipman	192	180
Killam	524	465	Derwent	289	233
Lougheed	201	186	Edberg	167	188
Sedgewick	608	485	Ferintosh	195	205
Strome	306	276	Hairy Hill	183	205
			Hay Lakes	193	231
Division No. 8	64,168	57,513	Holden	544	504
55. Red Deer	12,830	12,243	Innisfree	318	287
64. Lacombe	8,351	8,612	Kitscoty	283	235
65. I.D.—D.A.	5,199	6,066	Lamont	632	637
68. I.D.—D.A.	81	194	Lavoy	127	122
Ponoka County No. 3	8,611	9,139	Manville	599	528
Indian Reserves	1,230	1,129	Marwayne	337	.....
Cities:			Minburn	150	185
Red Deer	12,338	7,575	Myrnam	440	389
Towns:			New Norway	273	258
Innisfall	1,883	1,417	Ryley	495	406
Lacombe	2,747	2,277	Willingdon	431	281
Ponoka	3,387	2,574			
Rimbeý	980	757	Division No. 11	323,539	235,475
Rocky Mountain House	1,285	1,147	74. Wetaskiwin	9,466	8,222
Sylvan Lake	1,114	985	75. Leduc	11,497	12,526
Villages:			77. I.D.—D.A.	3,259	1,310
Alix	517	461	83. Strathcona	8,873	7,591
Bentley	536	439	84. Stony Plain	8,491	8,962
Blackfalds	340	154	90. Sturgeon River	13,865	11,174
Bowden	296	277	Indian Reserves	1,786	1,208
Caroline	296	.....	Cities:		
Clive	249	241	Edmonton	226,002	159,631
Delburne	429	395	Wetaskiwin	4,476	3,824
Eckville	456	379	Towns:		
Elinora	177	211	Beverly	4,602	2,159
Gull Lake	32	32	Calmar	730	944
Mirror	591	635	Devon	1,429	842
Penhold	213	174	Drayton Valley	2,588	.....
Division No. 9	17,239	19,496	Fort Saskatchewan	2,582	1,076
8. I.D.—D.A.	110	167	Jasper Place	15,957	9,139
10. I.D.—D.A.	3,269	4,706	Leduc	2,008	1,842
27. I.D.—D.A.	100	125	Morinville	957	832
33. I.D.—D.A.	47	81	St. Albert	1,320	1,129
50. I.D.—D.A.	75	71	Stony Plain	1,098	878
58. I.D.—D.A.	429	443	Villages:		
69. I.D.—D.A.	152	1,223	Entwistle	354	.....
946. I.D.—D.A.	2,456	2,630	Itaska Beach	2	.....
Banff National Park	3,069	2,856	Lakeview	41	15
Banff (not incorp.)	2,518	2,357	Legal	457	523
Jasper National Park	2,322	1,899	Ma-Me-O Beach	137	98
Jasper (not incorp.)	2,105	1,728	Millet	427	402
Waterton Lakes			Seba Beach	141	103
National Park	277	238	Silver Beach	17	.....
Indian Reserves	1,173	974	Spruce Grove	309	.....
Towns:			Thorsby	411	385
Blairmore	1,973	1,933	Warburg	257	.....
Coleman	1,566	1,961			
Villages:			Division No. 12	44,947	39,886
Frank	221	239	85. I.D.—D.A.	348	208
Division No. 10	71,500	70,677	86. St. Paul	7,979	9,041
63. Camrose	9,626	10,457	87. Bonnyville	10,058	6,744
71. Vermilion River	9,557	9,663	89. Smoky Lake	5,517	6,292
72. Minburn	6,742	7,312	101. I.D.—D.A.	2,039	2,235
73. Beaver	6,883	7,202	102. I.D.—D.A.	5,066	5,115
81. Eagle	7,114	7,722	121. I.D.—D.A.	197	274
82. Lamont	7,700	8,778	143. I.D.—D.A.	879	835
Elk Island National Park	56	55	Wood Buffalo National Park (pt.)		
Cities:			Indian Reserves	143	36
Camrose	5,817	4,131		3,530	3,168
Towns:			Towns:		
Lloydminster (pt.)	2,506	1,706	Bonnyville	1,495	1,139
Mundare	650	596	Cold Lake	1,097	.....
Tofield	800	692	Lac La Biche	967	905
Two Hills	713	525	McMurray	1,110	926
Vegreville	2,574	2,223	St. Paul	2,229	1,407
Vermilion	2,196	1,982	Villages:		
Viking	897	683	Elk Point	594	453
Villages:			Glendon	314	.....
Andrew	602	625	Smoky Lake	563	491
Bashaw	597	603	Vilna	374	378
			Warspite	159	.....
			Waskatenau	289	239

BUREAU OF VITAL STATISTICS

POPULATION OF CENSUS DIVISIONS OF ALBERTA CLASSIFIED BY MUNICIPALITIES
FOR CENSUS YEARS, 1951 AND 1956 (Continued)

Division and Subdivision	Total		Division and Subdivision	Total	
	1956	1951		1956	1951
Division No. 13	45,033	46,638	Division No. 15—Continued:		
92. Westlock	8,731	8,795	128. I.D.—D.A.	947	593
93. Lac Ste. Anne	6,892	7,282	129. I.D.—D.A.	877	502
103. Athabasca	7,367	8,200	130. Smoky River	3,955	4,374
106. Barrhead	5,944	6,501	131. I.D.—D.A.	2,413	2,058
107. I.D.—D.A.	1,502	1,699	132. I.D.—D.A.	3,133	2,927
108. I.D.—D.A.	781	770	133. Spirit River	1,413	1,406
122. I.D.—D.A.	557	550	134. I.D.—D.A.	2,633	2,618
Thorhild County No. 7	5,596	6,174	135. Peace	1,732	1,741
Indian Reserves	332	279	136. Fairview	1,885	2,031
Towns:			137. I.D.—D.A.	127	124
Athabasca	1,293	1,068	138. I.D.—D.A.	3,489	4,210
Barrhead	1,610	1,243	139. I.D.—D.A.	2,635	3,007
Redwater	1,065	1,306	144. I.D.—D.A.	26	115
Westlock	1,136	1,111	145. I.D.—D.A.	136	158
Villages:			146. I.D.—D.A.	634	754
Alberta Beach	127	79	147. I.D.—D.A.	2,500	1,589
Boyle	304	.....	149. I.D.—D.A.	122	39
Clyde	221	219	Grande Prairie County		
Mayerthorpe	563	472	No. 1	8,899	10,126
Onoway	190	189	Indian Reserves	3,032	3,254
Radway	203	184	Towns:		
Sangudo	331	269	Beaverlodge	768	514
Thorhild	288	248	Fairview	1,260	929
Division No. 14	15,846	14,443	Falher	802	575
78. I.D.—D.A.	3,444	3,724	Grande Prairie	6,302	2,664
79. I.D.—D.A.	2,234	3,992	Grimshaw	904	564
95. I.D.—D.A.	4,696	2,561	High Prairie	1,743	1,141
96. I.D.—D.A.	314	299	McLennan	1,092	1,074
109. I.D.—D.A.	1,693	1,506	Peace River	2,034	1,672
Towns:			Spirit River	743	553
Edson	2,560	1,956	Villages:		
Villages:			Berwyn	342	288
Evansburg	358	.....	Donnelly	265	.....
Wildwood	547	405	Girouxville	300	.....
Division No. 15	70,417	61,800	Hines Creek	360	.....
110. I.D.—D.A.	346	73	Hythe	481	342
111. I.D.—D.A.	241	324	Kinuso	306	238
123. I.D.—D.A.	2	1	Manning	726	.....
124. I.D.—D.A.	3,216	2,853	Rycroft	424	372
125. I.D.—D.A.	3,155	3,277	Sexsmith	345	331
126. I.D.—D.A.	2,427	2,138	Valleyview	973
			Wembley	272	251

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TABLE 3—DEATHS BY PLACE OF OCCURRENCE AND PLACE OF RESIDENCE, 1959

PLACE OF OCCURRENCE	Total (Occurrence)	PLACE OF RESIDENCE													
		Nfld.	P.E.I.	N.S.	N.B.	Quebec	Ontario	Manitoba	Sask.	Alberta	B. C.	Yukon	N.W.T.	U.S.A.	Other
Total (residence)	140641	3179	1007	6371	4747	36390	50600	7421	7003	8481	14336	89	289	644	84
Newfoundland	3184	3161	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	12	8
Prince Edward Island	1001	.....	991	1	2	.....	.....	.....	.....	.....	.....	.....	.....	7	.....
Nova Scotia	6362	6	10	6290	18	6	8	.....	.....	.....	1	.....	.....	19	4
New Brunswick	4797	.....	2	24	4647	27	9	.....	.....	1	.....	.....	.....	83	.....
Quebec	36265	3	1	7	27	35949	138	6	4	4	3	.....	.....	2	88
Ontario	50764	6	3	19	19	280	50042	22	14	11	16	.....	.....	3	307
Manitoba	7499	.....	.....	.....	.....	1	64	7307	58	11	14	.....	.....	13	29
Saskatchewan	6969	.....	.....	.....	1	1	13	29	6845	52	12	.....	.....	.....	16
Alberta	8498	.....	.....	.....	.....	1	11	12	48	8319	58	4	18	25	.....
British Columbia	14308	.....	.....	1	2	5	17	11	13	44	14143	6	1	54	11
Yukon	82	.....	.....	.....	.....	.....	.....	.....	.....	.....	177	.....	.....	4	.....
N.W.T.	259	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	251	.....	.....
U.S.A.	653	3	.....	26	31	116	298	34	19	37	86	2	1	.....	.....

TABLE 4—DEATHS AND HOSPITAL DEATHS BY OCCURRENCE AND RESIDENCE FOR CENSUS DIVISIONS, ALBERTA, 1959

CENSUS DIVISIONS	TOTAL DEATHS				DEATHS IN HOSPITAL			
	Total by Occurrence	Total by Residence	By Occurrence: Residence Elsewhere	By Residence: Occurrence Elsewhere	Total by Occurrence	Total by Residence	By Occurrence: Residence Elsewhere	By Residence: Occurrence Elsewhere
ALBERTA	8498	8481	179	162	6030	6004	121	85
Division No. 1	274	285	15	26	196	207	10	21
Division No. 2	485	492	53	60	352	355	45	48
Division No. 3	188	229	23	64	137	180	15	56
Division No. 4	105	121	19	35	67	81	15	29
Division No. 5	236	322	18	104	141	218	11	83
Division No. 6	2083	1984	248	149	1435	1337	203	105
Division No. 7	235	287	18	70	168	215	12	59
Division No. 8	518	496	110	88	382	356	95	69
Division No. 9	120	134	25	39	85	108	10	33
Division No. 10	555	581	102	128	360	394	81	115
Division No. 11	2684	2299	521	136	2105	1725	466	86
Division No. 12	300	351	24	75	177	224	17	64
Division No. 13	261	348	30	117	161	241	21	101
Division No. 14	68	117	10	59	21	68	1	48
Division No. 15	386	435	25	74	243	295	11	63

TABLE 5—DEATHS AND HOSPITAL DEATHS BY OCCURRENCE AND RESIDENCE IN URBAN PLACES OF 1,000 POPULATION AND OVER, ALBERTA, 1959

CITY, TOWN OR VILLAGE	TOTAL DEATHS				DEATHS IN HOSPITAL			
	Total by Occurrence	Total by Residence	By Occurrence: Residence Elsewhere	By Residence: Occurrence Elsewhere	Total by Occurrence	Total by Residence	By Occurrence: Residence Elsewhere	By Residence: Occurrence Elsewhere
Athabasca	51	28	27	4	32	15	20	3
Barrhead	44	25	24	5	39	18	24	3
Beverly	5	39	.....	34	.....	29	.....	29
Blairmore	7	26	4	23	4	22	3	21
Bonnyville	28	18	13	3	21	13	11	3
Bow Island	10	12	2	4	8	10	2	4
Bowness	9	38	1	30	.....	23	.....	23
Brooks	34	24	14	4	28	19	12	8
Calgary	1809	1596	357	144	1307	1090	305	88
Camrose	22	113	113	5	155	56	103	4
Cardston	23	30	9	11	25	27	8	10
Claresholm	45	26	26	7	43	23	26	6
Coaldale	14	16	2	4	11	13	1	3
Cold Lake	23	12	14	3	19	9	13	3
Coleman	4	16	.....	12	1	11	.....	10
Devon	1	1	.....	.....	1	1	.....	.....
Didsbury	34	18	21	5	33	16	21	4
Drayton Valley	11	19	2	10	9	16	1	8
Drumheller	81	37	50	6	68	25	48	5
Edmonton	2297	1730	728	161	1949	1353	690	94
Edson	24	26	14	16	20	19	12	11
Fairview	18	12	12	6	16	9	12	5
Forest Lawn	13	27	6	20	.....	19	.....	19
Fort Macleod	32	27	10	5	24	22	7	5
Fort Saskatchewan	6	12	4	10	.....	9	.....	9
Grande Prairie	79	45	41	7	74	37	40	3
Hanna	49	25	30	6	42	18	27	3
High Prairie	42	20	30	8	38	15	28	5
High River	38	24	22	8	30	18	19	7
Innisfail	39	25	20	6	37	21	20	4
Jasper Place	14	78	1	65	.....	55	.....	55
Lacombe	54	32	32	10	43	24	28	9
Leduc	7	13	4	10	.....	8	.....	8
Lethbridge	302	261	71	30	239	194	65	20
Lloydminster	8	18	1	11	.....	9	.....	9
Magrath	15	12	7	4	11	9	6	4
McLennan	17	5	15	3	15	4	13	2
McMurray	12	13	2	3	9	11	1	3
Medicine Hat	235	207	44	16	188	156	39	7
Nanton	2	15	.....	13	1	12	.....	11
Olds	36	27	17	8	28	17	17	6
Peace River	31	22	17	8	27	17	16	6
Pincher Creek	36	29	11	4	30	23	10	3
Ponoka	128	38	96	6	119	30	94	5
Raymond	23	18	7	2	17	11	7	1
Redcliff	4	16	.....	12	.....	12	.....	12
Red Deer	122	116	30	24	95	83	27	15
Redwater	4	5	1	2	.....	2	.....	2
Rocky Mountain House	34	19	18	3	24	12	14	2
St. Albert	45	31	23	9	2	8	2	8
St. Paul	45	22	28	5	40	20	25	5
Stettler	51	34	24	7	42	24	24	6
Stony Plain	6	12	3	9	.....	9	.....	9
Sylvan Lake	4	18	.....	14	.....	11	.....	11
Taber	39	26	18	5	35	21	18	4
Three Hills	19	7	14	2	16	5	12	1
Vegreville	53	35	22	4	48	29	22	3
Vermilion	28	23	11	6	24	20	10	6
Vulcan	26	16	18	8	23	13	17	7
Wainwright	40	37	16	13	32	27	14	9
Westlock	59	25	41	7	55	19	41	5
Wetaskiwin	66	49	33	16	50	36	26	12

TABLE 6—CAUSE OF DEATH BY SEX FOR CENSUS DIVISIONS
(INCLUDING CITIES, TOWNS AND VILLAGES) IN ALBERTA, 1959—Continued

CAUSE OF DEATH (Intermediate List)	SEX	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.	Division No.
XI. DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM	Total	14			1		2	1	1	1			2	1			5
A115 Sepsis of pregnancy, childbirth and the puerperium	Female	1															1
A116 Toxaemias of pregnancy and the puerperium	Female	3			1								1				1
A117 Haemorrhage of pregnancy and childbirth	Female	3							1					1			1
A118 Abortion without mention of sepsis or toxæmia	Female	2						1					1				
A119 Abortion with sepsis	Female	2						1			1						
A120 Other complications of pregnancy, childbirth and the puerperium	Female	3								1							2
XII, XIII. DISEASES OF THE SKIN AND MUSCULO-SKELETAL SYSTEM	Total	30	1		1		2	3	1								2
	Male	10							1				2	5	1	1	
	Female	20	1		1		2	3					7	1	1		2
A121 Infections of skin and subcutaneous tissue	Male	2							1							1	
	Female	1												1			
A122 Arthritis and spondylitis	Male	3												2			
	Female	12	1		1		2	1					2	4		1	
A124 Osteomyelitis and periostitis	Male	1											1	1			
	Female	5											1	3	1		
A126 All other diseases of skin and musculoskeletal system	Male	5						2					2				2
	Female	6											2				
XIV. CONGENITAL MALFORMATIONS	Total	188	13	10	6	1	4	47	4	10	4	9	54	3	7	4	12
	Male	103	12	3	4		2	21	4	3	4	4	30	2	4	1	9
	Female	85	1	7	2	1	2	26		7		5	24	1	3	3	3
A127 Spina bifida and meningocele	Male	4	1				1						1	1			
	Female	9						4					2	1			1
A128 Congenital malformations of circulatory system	Male	55	8	3	4			6	1	1	2	3	18		2	1	6
	Female	38	1	4	1			8		5		2	14				1
A129 All other congenital malformations	Male	44	3					15	3	2	2	1	11	1	2		3
	Female	38		3	1			2	14	2		2	8		2	2	2
XV. CERTAIN DISEASES OF EARLY INFANCY	Total	522	16	24	22	8	10	141	18	17	8	16	147	37	16	13	29
	Male	324	12	17	16	6	5	90	8	8	4	12	89	22	8	6	21
	Female	198	4	7	6	2	5	51	10	9	4	4	58	15	8	7	8
A130 Birth injuries	Male	53		1	2	1		16	1	2		3	18	3			2
	Female	28			1			9	2	1			13	1			1
A131 Postnatal asphyxia and atelectasis	Male	79	4	3	6			22	4		1	3	25	3	1	1	5
	Female	39	2		1			7	2	4	1	1	12	3	2	3	1
A132 Infections of the newborn	Male	24	1	2	2			4		1	1	1	6				2
	Female	25	1	1	2			2			2		6	2	3		4
A133 Haemolytic disease of newborn	Male	13			1			3		1	1	1	2	3			1
	Female	2						1	1								
A134 All other defined diseases of early infancy	Male	11			1	1		2	1				3	1	1		1
	Female	7	1					4					1				
A135 Ill-defined diseases peculiar to early infancy, and immaturity unqualified	Male	144	7	11	4	2	4	43	2	4	1	4	35	10	6	3	8
	Female	97		6	4		5	28	5	4	1	2	27	8	3	2	2
XVI. SYMPTOMS, SENILITY, AND ILL-DEFINED CONDITIONS	Total	278	2	6	3	1	8	191	4	6	2		28	8	8		11
	Male	186	2	5	3		6	133	2				15	5	6		7
	Female	92		1			2	58	2	4	2		13	3	2		4
A136 Senility without mention of psychosis	Male	27		2				14		1			4	1	3		1
	Female	30					1	13	2	4	1		5		1		2
A137 Ill-defined and unknown causes	Male	159	2	3	3		5	119	2	1			11	4	3		6
	Female	62		1			1	45					8	3	1		2
EXVII. ACCIDENTS, POISONINGS, AND VIOLENCE (CLASSIFICATION ACCORDING TO EXTERNAL CAUSE)	Total	796	25	45	23	9	29	158	27	60	11	47	225	41	36	12	48
	Male	613	17	30	19	9	18	118	21	51	8	36	175	32	28	10	41
	Female	183	8	15	4		11	40	6	9	3	11	50	9	8	2	7
AE138 Motor vehicle accidents	Male	221	4	5	7	4	4	40	7	21	3	14	67	9	18	6	12
	Female	69	3	6	3		2	16	1	5	1	4	18	3	2	1	4
A Traffic accidents (810-825)	Male	215	4	4	7	4	4	39	7	21	2	14	65	9	18	6	11
	Female	65	3	6	3		2	15	1	5	1	2	18	3	2	1	3
B Non-traffic accidents	Male	6		1				1			1		2				1
	Female	4						1				2					1

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 TABLE 6—CAUSE OF DEATH BY SEX FOR CENSUS DIVISIONS
 (INCLUDING CITIES, TOWNS AND VILLAGES) IN ALBERTA, 1959—Continued

CAUSE OF DEATH (Intermediate List)	SEX	Total	Division No.															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
AE139 Other transport accidents	Male	38					2	7		3		3	17	5				1
	Female	4											3	1				
A Submersion of occupant of small boat (850)	Male	16						2		1		3	9	1				
	Female	2											2					
C Other	Male	22					2	5		2			9	4				1
	Female	2											1	1				
AE140 Accidental poisoning	Male	31	3	3	1			5	1	5	1		1	1	1			
	Female	7						1					4	1	1			5
AE141 Accidental falls	Male	55	2	2	1	1	1	16	2	2	1	4	16	3	2			3
	Female	43	3	2	1	3	3	11	1	1	2	4	14	1	4			
AE142 Accident caused by machinery	Male	36		2	1	2	4	6	3				10	1	4			2
	Female	5		1			1	1					1	1				
AE143 Accident caused by fire and explosion of combustible material	Male	15		1	2			2		3			1	2				3
	Female	13	2	2				2				2	4					1
AE144 Accident caused by hot substance, corrosive liquid, steam and radiation	Male	4	2											1	1			
	Female																	
AE145 Accident caused by firearm	Male	10	1		1				1	1				3				2
	Female	3		1											1			
AE146 Accidental drowning and submersion	Male	27		4	1			11				3	4	1				2
	Female	7		1			1	3										
AE147 All other accidental causes	Male	63	2	9	2	1	1	9		8	2	2	16	4				6
	Female	8					1	3		1			2					
AE148 Suicide and self-inflicted injury	Male	104	3	4	3	1	5	22	3	8	2	7	32	7				5
	Female	13					1	2	1	1		1	5	1	1			
AE149 Homicide and injury purposely inflicted by other persons (not in war)	Male	9						4				1	3		1			
	Female	11		2			1	1	3			1	1	1	1			
NXVII. ACCIDENTS, POISONINGS AND VIOLENCE (CLASSIFICATION ACCORDING TO NATURE OF INJURY)	Total	796	25	45	23	9	29	158	27	60	11	47	225	41	36	12		48
	Male	613	17	30	19	9	18	118	21	51	8	36	175	32	28	10		41
	Female	183	8	15	4		11	40	6	9	3	11	50	9	8	2		7
AN138 Fracture of skull	Male	113	3	5	2	1	4	22	10	9	2	3	35	4	5	3		5
	Female	33		3	3		2	7	3	2		3	7	1				2
AN139 Fracture of spine and trunk	Male	24	1	1		1	1	4	1	2			6	2	1			4
	Female	9	1				2	2		1			1	1				
AN140 Fracture of limbs	Male	38			1	1	1	6	2	4		4	13	1	3			2
	Female	38	3	2	1		2	11	1	1	2	3	10		2			
AN143 Head injury (excluding fracture)	Male	81	3	2		4	4	17	1	6	3	3	29	4	4	1		4
	Female	20	1	3			1	4	1				4	3	2	1		
AN144 Internal injury of chest, abdomen, and pelvis	Male	132	1	2	8	3	4	26	2	14	1	11	36	8	7	2		7
	Female	26	1	1				6		3	1	2	7		3			
AN145 Laceration and open wounds	Male	19	1	1	2			2	2	2		1	4	2				2
	Female	3											2	1				
AN146 Superficial injury, contusion and crushing with intact skin surface	Male	1											1					
	Female																	
AN147 Effects of foreign body entering through orifice	Male	11	1	1						3			2	1				3
	Female	3								1			1	1				
AN148 Burns	Male	28	2	3	2	1		4	1	1		1	7	3	1			2
	Female	11		4				1					2					
AN149 Effects of poisons	Male	63	3	5	2	1	3	14	1	6	1	2	15	1	1			8
	Female	16	2				1	4		1			6					1
AN150 All other and unspecified effects of external causes	Male	103	2	10	2	1	1	23	1	4	1	11	27	6	6	2		6
	Female	24		2			3	5	1				8	2				2

TABLE 7—CAUSE OF DEATH BY SEX FOR URBAN PLACES OF 5,000 POPULATION AND OVER IN ALBERTA, 1959

CAUSE OF DEATH (Intermediate List)	SEX	Total	Bowness	Calgary	Camrose	Edmonton	Grande Prairie	Jasper Place	Lethbridge	Medicine Hat	Red Deer
ALL CAUSES	Total	4184	38	1596	113	1730	45	78	261	207	116
	Male	2536	26	954	72	1052	34	45	163	123	67
	Female	1648	12	642	41	678	11	33	98	84	49
I. INFECTIVE AND PARASITIC DISEASES	Total	43	1	15	1	17	1			3	3
	Male	29	1	7	1	13	1			3	2
	Female	14		8		4				1	1
A 1 Tuberculosis of respiratory system	Male	13		3	1	7			1	1	
	Female	6		3		3					
A 4 Tuberculosis of bones and joints	Male										
	Female	1				1					
A 5 Tuberculosis, all other forms	Male	2				1	1				
	Female	2		2							
A 8 Tabes dorsalis	Male	1							1		
	Female										
A 9 General paralysis of insane	Male	4		2		1				1	
	Female										
A 10 All other syphilis	Male	3				2			1		
	Female	2		2							
A 16 Dysentery, all forms	Male	1									1
	Female	1									1
A 28 Acute poliomyelitis	Male										
	Female	1									1
A 30 Late effects of acute poliomyelitis and acute infectious encephalitis	Male	1	1								
	Female										
A 32 Measles	Male	1				1					
	Female										
A 34 Infectious hepatitis	Male										
	Female	1		1							
A 39 Hydatid disease	Male	1				1					
	Female										
A 43 All other diseases classified as infective and parasitic	Male	2		2							
	Female										
II. NEOPLASMS	Total	722	2	283	20	301	4	15	48	35	14
	Male	407	2	151	14	177	3	4	30	17	9
	Female	315		132	6	124	1	11	18	18	5
A 44 Malignant neoplasm of buccal cavity and pharynx	Male	13		3		8			1	1	
	Female	5		3		2					
A 45 Malignant neoplasm of oesophagus	Male	8		3		4			1		
	Female	2		2							
A 46 Malignant neoplasm of stomach	Male	59		23	3	26			4	3	
	Female	26		9	1	13		1		2	
A 47 Malignant neoplasm of intestine, except rectum	Male	34		15	1	12	1		4	1	
	Female	33		12	1	16	1	1		1	1
A 48 Malignant neoplasm of rectum	Male	18		7		8			2	1	
	Female	14		5		8					1
A 49 Malignant neoplasm of larynx	Male	3		3							
	Female	1		1							
A 50 Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	Male	72		28	1	35	1	1	1	3	2
	Female	7		1		3			1	2	
A 51 Malignant neoplasm of breast	Male	1				1					
	Female	61		30		22		1	3	5	
A 52 Malignant neoplasm of cervix uteri	Female	22		10	1	8		1	2		
A 53 Malignant neoplasm of other and unspecified parts of uterus	Female	10		4		3		1	1	1	
A 54 Malignant neoplasm of prostate	Male	43		13	5	14	1		5	2	3
A 55 Malignant neoplasm of skin	Male	2		1	1	1					
	Female	1		1							
A 56 Malignant neoplasm of bone and connective tissue	Male	7		2		5					
	Female	2		1		1					
A 57 Malignant neoplasm of all other and unspecified sites	Male	93	1	35	2	40		2	8	1	4
	Female	87		34	3	33		3	8	5	1
A Other digestive organs (155-159)	Male	40	1	16	2	17			4		
	Female	15		6	1	6			2		
B Other respiratory organs (160, 164, 165)	Male	3				2			1		
	Female										
C Urinary organs (180, 181)	Male	25		6		14		1	2	1	1
	Female	13		6		4		1	1	1	
D Brain and other parts of nervous system (193)	Male	14		7		4		1	1		1
	Female	6		3		3					
E Other	Male	11		6		3					2
	Female	53		19	2	20		2	5	4	1

TABLE 7—CAUSE OF DEATH BY SEX FOR URBAN PLACES OF 5,000 POPULATION AND OVER IN ALBERTA, 1959—Continued

CAUSE OF DEATH (Intermediate List)	SEX	Total	Bowling	Calgary	Camrose	Edmonton	Grande Prairie	Jasper Place	Lethbridge	Medicine Hat	Red Deer
A 58 Leukaemia and aleukaemia	Male	24	1	7	....	11	....	....	3	2	....
	Female	25	....	13	....	9	....	....	1	1	1
A 59 Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	Male	19	....	7	1	9	....	....	1	1	....
	Female	11	....	5	....	3	....	1	1	....	1
A Hodgkin's disease (201)	Male	4	....	3	....	1	....	....	....	....	....
	Female	3	....	....	....	2	....	1	....	....	....
B Other	Male	15	....	4	1	8	....	....	1	1	....
	Female	8	....	5	....	1	....	....	1	....	1
A 60 Benign neoplasms and neoplasms of unspecified nature	Male	11	....	5	....	3	....	1	....	2	....
	Female	8	....	1	....	3	....	2	1	1	....
III, IV. ALLERGIC DISORDERS AND ENDOCRINE METABOLIC AND BLOOD DISEASES	Total	107	....	39	3	52	1	2	3	6	1
	Male	64	....	28	2	27	....	1	1	4	1
	Female	43	....	11	1	25	1	1	2	2	....
A 61 Nontoxic goitre	Male	....	....	....	....	....	1	....	....	....	....
	Female	1	....	....	....	....	....	....	....	....	....
A 62 Thyrotoxicosis with or without goitre	Male	2	....	2	....	....	....	....	....	....	....
	Female	1	....	....	....	....	....	....	....	....	....
A 63 Diabetes mellitus	Male	36	....	17	1	15	....	1	....	2	....
	Female	26	....	5	....	18	....	1	1	1	....
A 64 Avitaminosis and other deficiency states	Male	2	....	2	....	....	....	....	....	....	....
	Female	....	....	....	....	....	....	....	....	....	....
A 65 Anaemias	Male	6	....	2	1	3	....	....	....	....	....
	Female	2	....	....	....	2	....	....	....	....	....
A 66 Allergic disorders; all other endocrine, metabolic and blood diseases	Male	18	....	5	....	9	....	....	1	2	1
	Female	13	....	6	1	5	....	....	1	....	....
V. MENTAL, PSYCHONEUROTIC, AND PERSONALITY DISORDERS	Total	11	....	4	....	4	....	....	2	....	1
	Male	5	....	3	....	1	....	....	1	....	....
	Female	6	....	1	....	3	....	....	1	....	1
A 67 Psychoses	Male	2	....	1	....	....	....	....	1	....	....
	Female	4	....	....	....	3	....	....	....	....	1
A 68 Psychoneuroses and disorders of personality	Male	2	....	2	....	....	....	....	....	....	....
	Female	1	....	1	....	....	....	....	....	....	....
A 69 Mental deficiency	Male	1	....	....	....	1	....	....	....	....	....
	Female	1	....	....	....	....	....	1	....	....	....
VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	Total	525	6	196	18	218	6	6	32	23	20
	Male	260	4	96	11	109	5	3	13	9	10
	Female	265	2	100	7	109	1	3	19	14	10
A 70 Vascular lesions affecting central nervous system	Male	225	4	79	11	94	5	3	12	9	8
	Female	248	2	93	7	104	1	3	16	14	8
A 71 Nonmeningococcal meningitis	Male	1	....	1	....	....	....	....	....	....	....
	Female	1	....	....	....	....	....	....	....	....	....
A 72 Multiple sclerosis	Male	5	....	3	....	2	....	....	....	....	....
	Female	2	....	1	....	....	....	....	1	....	....
A 73 Epilepsy	Male	6	....	3	....	2	....	....	....	....	1
	Female	4	....	1	....	1	....	....	....	....	2
A 77 Otitis media and mastoiditis	Male	1	....	....	....	1	....	....	....	....	....
	Female	....	....	....	....	....	....	....	....	....	....
A 78 All other diseases of the nervous system and sense organs	Male	22	....	10	....	10	....	....	1	....	1
	Female	10	....	4	....	4	....	....	2	....	....
VII. DISEASES OF THE CIRCULATORY SYSTEM	Total	1400	9	466	37	613	16	23	116	87	33
	Male	874	7	271	23	391	13	17	76	57	19
	Female	526	2	195	14	222	3	6	40	30	14
A 79 Rheumatic fever	Male	....	....	....	....	....	....	....	....	....	....
	Female	1	....	....	....	1	....	....	....	....	....
A 80 Chronic rheumatic heart disease	Male	27	....	10	....	12	....	....	3	2	....
	Female	29	....	7	3	16	....	....	....	....	1
A 81 Arteriosclerotic and degenerative heart disease	Male	701	7	219	20	319	12	14	57	40	13
	Female	373	1	134	9	153	3	3	33	28	9
A 82 Other diseases of heart	Male	29	....	7	1	11	1	2	....	6	....
	Female	28	....	20	....	7	....	....	....	....	....
A 83 Hypertension with heart disease	Male	43	....	7	1	27	....	....	1	6	5
	Female	50	....	17	1	22	....	....	1	4	....
A 84 Hypertension without mention of heart	Male	16	....	8	....	7	....	....	....	....	1
	Female	16	....	4	....	11	....	....	....	....	1
A 85 Diseases of arteries	Male	45	....	16	1	14	....	....	8	4	2
	Female	24	....	12	....	6	....	....	3	1	2
A 86 Other diseases of circulatory system	Male	13	....	4	....	6	....	....	2	....	1
	Female	5	....	1	1	1	....	1	....	1	....

TABLE 7—CAUSE OF DEATH BY SEX FOR URBAN PLACES OF 5,000 POPULATION AND OVER IN ALBERTA, 1959—Continued

CAUSE OF DEATH (Intermediate List)	SEX	Total	Bowness	Calgary	Camrose	Edmonton	Grande Prairie	Jasper Place	Lethbridge	Medicine Hat	Red Deer
VIII. DISEASES OF THE RESPIRATORY SYSTEM	Total	252	5	81	22	104	2	7	10	14	7
	Male	167	2	61	15	63	2	4	7	8	5
	Female	85	3	20	7	41	...	3	3	6	2
A 87 Acute upper respiratory infections	Male	2	...	2	...	...	...	...	...	...	...
	Female	1	...	...	...	...	...	1	...	...	...
A 88 Influenza	Male	9	...	3	6	...	...	...	...	...	...
	Female	6	...	1	3	1	...	...	1	...	...
A 89 Lobar pneumonia	Male	12	...	6	...	5	1	...	...	...	...
	Female	4	1	1	...	1	...	...	1	...	...
A 90 Bronchopneumonia	Male	70	2	19	9	28	...	3	3	4	2
	Female	37	2	10	3	18	...	2	2	2	...
A 91 Primary atypical, other and unspecified pneumonia	Male	12	...	4	...	4	1	...	2	...	1
	Female	13	...	2	...	7	...	...	1	1	2
A 92 Acute bronchitis	Male	4	...	...	...	2	...	...	1	1	...
	Female	3	...	...	...	3	...	...	...	...	...
A 93 Bronchitis, chronic and unqualified	Male	15	...	7	...	5	...	...	1	1	1
	Female	3	...	...	...	1	...	...	...	2	...
A 94 Hypertrophy of tonsils and adenoids	Male	2	...	1	...	...	...	...	...	1	...
	Female	3	...	...	...	3	...	...	...	...	...
A 95 Empyema and abscess of lung	Male	40	...	20	...	16	...	1	...	2	1
	Female	16	...	5	1	10	...	...	...	...	...
IX. DISEASES OF THE DIGESTIVE SYSTEM	Total	149	1	60	2	58	...	4	8	8	8
	Male	84	1	34	...	34	...	3	6	3	3
	Female	65	...	26	2	24	...	1	2	5	5
A 99 Ulcer of stomach	Male	7	1	3	...	2	...	...	1	...	...
	Female	4	...	3	...	1	...	...	...	...	...
A100 Ulcer of duodenum	Male	15	...	8	...	3	...	1	3	...	...
	Female	2	...	1	...	...	...	...	...	...	1
A102 Appendicitis	Male	3	...	3	...	...	...	...	...	...	...
	Female	3	...	1	2	...	...	...	...	...	...
A103 Intestinal obstruction and hernia	Male	7	...	1	6	...	...	...	...	...	...
	Female	14	...	6	1	6	...	...	...	...	1
A104 Gastro-enteritis and colitis, except diarrhoea of the newborn	Male	10	...	2	...	6	...	...	...	...	1
	Female	9	...	...	...	3	...	...	...	...	1
A105 Cirrhosis of liver	Male	19	...	5	...	6	...	...	...	1	2
	Female	11	...	7	...	3	...	...	...	...	2
A106 Cholelithiasis and cholecystitis	Male	6	...	2	...	3	...	1	...	...	...
	Female	5	...	1	...	1	...	...	...	2	1
A107 Other diseases of digestive system	Male	17	...	7	...	8	...	1	1	...	...
	Female	17	...	3	...	8	...	1	1	2	2
X. DISEASES OF THE GENITO-URINARY SYSTEM	Total	58	...	21	1	28	1	...	3	1	3
	Male	35	...	13	1	17	...	...	2	...	2
	Female	23	...	8	...	11	1	...	1	1	1
A109 Chronic, other and unspecified nephritis	Male	11	...	5	...	4	...	...	1	...	1
	Female	9	...	5	...	3	...	...	...	...	1
A110 Infections of kidney	Male	13	...	4	1	8	...	...	...	...	...
	Female	8	...	1	...	5	1	...	1	...	...
A111 Calculi of urinary system	Male	1	...	...	...	...	...	...	1	...	...
	Female	...	...	...	...	...	...	...	...	...	...
A112 Hyperplasia of prostate	Male	6	...	2	...	4	...	...	...	...	...
	Female	4	...	2	...	1	...	...	...	...	1
A114 Other diseases of genito-urinary system	Male	6	...	2	...	3	...	...	...	1	...
	Female	...	...	...	...	...	...	...	...	...	...
XI. DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM	Total	5	...	2	...	2	...	...	...	...	1
A116 Toxaemias of pregnancy and the puerperium	Female	1	...	...	...	1	...	...	...	...	...
A118 Abortion without mention of sepsis or toxæmia	Female	2	...	1	...	1	...	...	...	...	...
A119 Abortion with sepsis	Female	1	...	1	...	...	...	...	...	...	...
A120 Other complications of pregnancy, childbirth and the puerperium	Female	1	...	...	...	...	...	...	...	...	1
XII, XIII. DISEASES OF THE SKIN AND MUSCULO-SKELETAL SYSTEM	Total	15	...	3	2	9	...	1	...	...	...
	Male	4	...	...	1	3	...	...	...	...	...
	Female	11	...	3	1	6	...	1	...	...	...
A122 Arthritis and spondylitis	Male	2	...	...	1	1	...	...	...	...	...
	Female	6	...	1	1	4	...	...	...	...	...

TABLE 7—CAUSE OF DEATH BY SEX FOR URBAN PLACES OF 5,000 POPULATION AND OVER IN ALBERTA, 1959—Continued

CAUSE OF DEATH (Intermediate List)	SEX	Total	Bowness	Calgary	Camrose	Edmonton	Grande Prairie	Jasper Place	Lethbridge	Medicine Hat	Red Deer
A124 Osteomyelitis and periostitis	Male	1				1					
	Female	2				2					
A126 All other diseases of skin and musculoskeletal system	Male	4		2		1		1			
	Female	4				1					
XIV. CONGENITAL MALFORMATIONS	Total	96		38	1	37	4	4	5	4	3
	Male	53		17	1	23	3	2	2	4	1
	Female	43		21		14	1	2	3		2
A127 Spina bifida and meningocele	Male	1								1	
	Female	5		3		2					
A128 Congenital malformations of circulatory system	Male	27		5	1	14	2	1	2	2	
	Female	18		6		9		1	1		
A129 All other congenital malformations	Male	25		12		9	1	1		1	1
	Female	20		12		3	1	1	2		1
XV. CERTAIN DISEASES OF EARLY INFANCY	Total	272	4	115		114	6	7	10	11	5
	Male	173	1	79		67	3	4	7	9	3
	Female	99	3	36		47	3	3	3	2	2
A130 Birth injuries	Male	30		15		13		1			1
	Female	17		5		11	1				
A131 Postnatal asphyxia and atelectasis	Male	45	1	18		19	1	1	1	4	
	Female	20	1	5		7	1	2			2
A132 Infections of the newborn	Male	11		4		6				1	
	Female	8		3		5	1				
A133 Haemolytic disease of newborn	Male	5		2		2					
	Female	1		1							
A134 All other defined diseases of early infancy	Male	5		2		2		1			
	Female	2		2							
A135 Ill-defined diseases peculiar to early infancy, and immaturity unqualified.	Male	77		37		25	2	1	6	4	2
	Female	51	2	21		24		1	3		
XVI. SYMPTOMS, SENILITY, AND ILL-DEFINED CONDITIONS	Total	189	3	161		21		1	3		
	Male	128	1	112		12			3		
	Female	61	2	49		9		1			
A136 Senility without mention of psychosis	Male	17		13		3			1		
	Female	16		12		4					
A137 Ill-defined and unknown causes	Male	111	1	99		9			2		
	Female	45	2	37				1			
EXVII. ACCIDENTS, POISONINGS AND VIOLENCE (CLASSIFICATION ACCORDING TO EXTERNAL CAUSE)	Total	340	7	112	6	152	4	8	18	15	18
	Male	253	7	82	3	115	4	7	12	10	13
	Female	87		30	3	37		1	6	5	5
AE138 Motor vehicle accidents	Male	91	3	30	1	43	2	3	3	3	3
	Female	35		12		12		1	4	2	4
A Traffic accidents (810-825)	Male	90	3	30	1	42	2	3	3	3	3
	Female	35		12		12		1	4	2	4
B Non-traffic accidents	Male	1				1					
	Female										
AE139 Other transport accidents	Male	19		4		13		1			1
	Female	2				2					
A Submersion of occupant of small boat (850)	Male	10		1		8		1			
	Female	2				2					
C Other	Male	9		3		5					1
	Female	13		3		2			2	2	4
AE140 Accidental poisoning	Male	13		3		3					1
	Female	4									
AE141 Accidental falls	Male	34	2	11	1	15		1	2	2	1
	Female	28		8	3	13				1	3
AE142 Accidents caused by machinery	Male	12		5		6			1		
	Female	1		1							
AE143 Accidents caused by fire and explosion of combustible material	Male	5		1		2	1				1
	Female	1				1					
AE144 Accident caused by hot substance, corrosive liquid, steam, and radiation	Male	2				1				1	
	Female										
AE145 Accident caused by firearm	Male	1				1					
	Female										
AE146 Accidental drowning and submersion	Male	14		9	1	2	1	1			
	Female	3		3							
AE147 All other accidental causes	Male	22	1	5		8		1	4		3
	Female	4		3		1					

TABLE 7—CAUSE OF DEATH BY SEX FOR URBAN PLACES OF 5,000 POPULATION AND OVER IN ALBERTA, 1959—Continued

CAUSE OF DEATH (Intermediate List)	SEX	Total	Bowness	Calgary	Camrose	Edmonton	Grande Prairie	Jasper Place	Lethbridge	Medicine Hat	Red Deer
		Male	38	1	14	20	2	1
AE148 Suicide and self-inflicted injury	Female	6	.....	2	.....	4	.....	.....	.....	.....	.....
AE149 Homicide and injury purposely inflicted by other persons (not in war)	Male	2	.....	.....	.....	2	.....	.....	.....	.....	.....
	Female	3	.....	1	.....	1	.....	1	.....	.....	.....
NXVII. ACCIDENTS, POISONINGS AND VIOLENCE (CLASSIFICATION ACCORDING TO NATURE OF INJURY)	Total	340	7	112	6	152	4	8	18	15	18
	Male	253	7	82	3	115	4	7	12	10	13
	Female	87	.....	30	3	37	.....	1	6	5	5
AN138 Fracture of skull	Male	50	4	14	.....	22	1	1	4	2	2
	Female	13	.....	5	.....	5	.....	1	1	.....	1
AN139 Fracture of spine and trunk	Male	9	.....	4	.....	4	.....	.....	.....	1	.....
	Female	4	.....	1	.....	1	.....	.....	.....	1	1
AN140 Fracture of limbs	Male	17	.....	4	1	10	.....	1	.....	.....	1
	Female	26	.....	10	3	9	.....	.....	1	3	.....
AN143 Head injury (excluding fracture)	Male	37	1	13	1	16	.....	2	1	2	1
	Female	6	.....	3	.....	2	.....	.....	1	.....	.....
AN144 Internal injury of chest, abdomen, and pelvis	Male	49	.....	18	.....	27	1	.....	1	1	1
	Female	13	.....	4	.....	6	.....	.....	.....	1	2
AN145 Laceration and open wounds	Male	7	.....	2	.....	4	.....	.....	.....	.....	1
	Female	2	.....	.....	.....	2	.....	.....	.....	.....	.....
AN146 Superficial injury, contusion and crushing with intact skin surface	Male	1	.....	.....	.....	1	.....	.....	.....	.....	.....
	Female	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
AN147 Effects of foreign body entering through orifice	Male	3	.....	.....	.....	1	.....	.....	.....	.....	2
	Female	1	.....	.....	.....	1	.....	.....	.....	.....	.....
AN148 Burns	Male	9	.....	2	.....	4	.....	.....	1	1	1
	Female	5	.....	1	.....	2	.....	.....	2	.....	.....
AN149 Effects of poisons	Male	29	1	9	.....	10	1	.....	2	2	4
	Female	6	.....	1	.....	4	.....	.....	.....	.....	1
AN150 All other and unspecified effects of external causes	Male	42	1	16	1	16	1	3	3	1	.....
	Female	11	.....	5	.....	5	.....	.....	1	.....	.....

TABLE 10—DEATHS, BY CAUSE AND SEX, BY AGE, CALGARY, 1959

CAUSE OF DEATH (Intermediate List)	SEX	AGE																							
		Total	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 +	Not stated
ALL CAUSES	Total	1596	176	4	5	5	2	10	9	10	10	21	21	26	37	45	88	97	117	148	239	233	156	137	
	Male	954	110	3	5	2	2	6	5	6	6	15	18	14	26	23	63	59	73	106	147	139	73	58	
	Female	642	66	1	3	3	2	3	4	4	4	6	6	12	11	22	25	38	44	42	92	94	83	79	
I. INFECTIVE AND PARASITIC DISEASES	Total	15										1	1		1	1		2	2		2	3	1		
	Male	8										1	1		1	1		2	2		1	1	1		
A 1 Tuberculosis of respiratory system	Male	3										1						1			1		1		
A 5 Tuberculosis, all other forms	Male	3																							
A 9 General paralysis of insane	Female	2																	1						
A 10 All other syphilis	Female	2																							
A 34 Infectious hepatitis	Female	2																							
A 43 All other diseases classified as infective and parasitic	Female	2													1			1			1				
II. NEOPLASMS	Total	283	2	1	1	1	1	3	3	2	2	5	2	10	12	12	22	23	31	36	51	37	90	9	
	Male	151						1	2	2	2	5	2	4	7	2	10	11	14	22	33	24	40	5	
	Female	132	2	1	1	1	1	2	1	3	3	3	3	6	5	10	12	12	17	14	18	13	10	5	
A 44 Malignant neoplasm of buccal cavity and pharynx	Male	3															1			1		1			
A 45 Malignant neoplasm of oesophagus	Male	3																		1		1			
A 46 Malignant neoplasm of stomach	Female	23											1				3	3	2	4	3	4	1	1	
A 47 Malignant neoplasm of intestine, except rectum	Female	15																3	1	3	1	1	1	2	
A 48 Malignant neoplasm of rectum	Female	12																3	1	2	2	6	2	1	
A 49 Malignant neoplasm of larynx	Female	5																2	2	1	1	3	1	2	
	Female	3																2	2	1	1	3	1	2	
	Female	1																1	1	1	1	1			

A 51 Malignant neoplasm of breast	1	1	2	3	3	9	8	35	14	1	2	5	30	4	9	10	9	11	11	7	6	8	11	8	1	2	
A 52 Malignant neoplasm of cervix uteri	36	3	1	1	1	1	1	10	6	7	1	2	5	4	3	3	2	4	4	2	5	6	8	11	3	1	2
A 53 Malignant neoplasm, of other and unspecified parts of uterus	82	1	1	1	1	2	1	16	2	3	1	1	19	2	9	7	2	10	6	2	4	9	7	4	2	5	
A 54 Malignant neoplasm of prostate	61	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	
A 55 Malignant neoplasm of skin	14	3	3	3	3	3	2	3	2	2	2	1	1	2	2	2	1	2	2	1	2	2	2	2	1	1	
A 56 Malignant neoplasm of bone and connective tissue	218	9	1	7	14	2	13	51	79	26	24	22	32	2	13	10	16	10	26	24	17	19	12	19	20		
A 57 Malignant neoplasm of all other and unspecified sites	156	5	2	4	8	2	5	47	110	29	12	13	47	1	10	16	9	12	11	9	12	17	13	18	19		
A Other digestive organs	91	2	1	1	1	2	3	15	26	35	14	3	15	2	6	3	7	13	9	9	8	7	5	3	2		
B Other respiratory organs	37	1	1	1	1	1	1	7	9	7	1	5	1	4	4	4	1	1	1	1	1	1	1	1	1		
C Urinary organs	3	3	3	3	3	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D Brain and other parts of nervous system (193)	57	2	2	4	3	3	2	11	26	6	6	1	8	4	5	1	1	6	7	4	5	5	8	4	4		
E Other	29	2	2	1	1	1	8	10	2	2	2	1	9	2	2	3	2	4	3	2	3	2	2	2	4		
A 58 Leukaemia and leukaemia	26	2	2	2	2	2	2	5	5	5	5	1	6	4	5	3	3	2	2	2	3	2	2	2	4		
A 59 Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	80	3	1	2	3	2	2	4	16	2	2	1	6	5	6	5	7	5	3	5	6	8	7	13	9		
A Hodgkin's disease	32	10	1	2	4	5	6	8	11	2	2	7	22	1	4	4	5	6	4	3	5	6	5	6	4		
A Other	19	1	1	3	1	1	3	15	13	4	8	2	2	1	3	2	2	1	2	2	2	3	3	5	2		
B Other	12	3	3	3	3	3	3	5	3	1	1	3	3	1	2	1	1	2	6	2	4	1	2	1	3		
A 60 Benign neoplasms and neoplasms of unspecified nature	26	6	1	3	3	3	1	10	10	10	10	2	2	2	2	2	2	2	5	2	3	3	3	3	2		
III. IV. ALLERGIC DISORDERS AND ENDOCRINE METABOLIC AND BLOOD DISEASES																											
A 61 Nontoxic goitre	219	7	1	6	5	9	1	37	70	7	12	8	60	3	21	16	12	13	22	15	21	23	13	18	23		
A 62 Thyrotoxicosis with or without goitre	125	2	1	3	8	1	9	24	43	2	9	3	34	3	11	14	6	8	12	12	10	16	8	11	11		
A 63 Diabetes mellitus	72	3	2	5	1	5	6	13	20	1	6	1	15	1	8	10	8	1	7	4	5	8	5	7	7		
A 64 Avitaminosis and other deficiency states	64	1	1	2	1	1	1	6	20	4	4	3	29	1	8	1	4	3	6	1	7	5	6	9	6		
A 65 Anaemias	17	1	1	2	1	2	1	3	3	2	2	3	3	1	2	1	1	1	2	1	2	1	2	1	1		
A 66 Allergic disorders; all other endocrine, metabolic and blood diseases	32	2	2	1	1	1	3	6	12	1	2	2	5	1	1	2	2	6	1	2	1	4	5	2	3		
	19	4	4	1	1	1	2	5	5	2	2	5	36	1	2	1	2	6	1	3	3	2	1	1	1		

BUREAU OF VITAL STATISTICS

TABLE 11 — DEATHS, BY CAUSE AND SEX, BY MARITAL STATUS AND AGE, AND MONTH OF DEATH, ALBERTA, 1959 (Continued)

CAUSE OF DEATH (Intermediate List)	SEX	MARITAL STATUS																	Total												
		Single											Married					Widowed													
		AGE											AGE					Residual													
		15-24 years	25-44 years	45-64 years	65+	15-24 years	25-44 years	45-64 years	65+	15-24 years	25-44 years	45-64 years	65+	15-24 years	25-44 years	45-64 years	65+	Residual													
MONTHS																															
		January	February	March	April	May	June	July	August	September	October	November	December																		
V. MENTAL, PSYCHONEUROTIC AND PERSONALITY DISORDERS	Total	6	1	2	1	3	4	2	2	2	1	3	3	1	1	1	2	2	2	2	2	1	4	4	1	1	4	4			
	Male	23	5	11	24	121	353	22	378	11	102	98	95	101	74	77	87	64	81	97	81	99	81	99	1	1	4	4			
	Female	14	2	11	16	59	230	7	131	9	55	46	56	57	38	37	50	41	41	64	43	46	38	53	1	1	4	4			
A 67 Psychoses	Male	3	1	2	1	1	2	2	2	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1		
A 68 Psychoneuroses and disorders of personality	Female	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	1		
A 69 Mental deficiency	Male	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	Female	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	Total	1056	23	5	11	86	1	24	121	353	22	378	11	102	98	95	101	74	77	87	64	81	97	81	99	81	99	81	99		
A 70 Vascular lesions affecting central nervous system	Male	574	2	2	2	11	8	62	123	15	247	2	47	52	39	44	36	40	37	23	40	33	38	53	1	1	1	1	1		
A 71 Nonmeningococcal meningitis	Female	482	9	3	18	69	9	50	214	7	57	116	13	238	43	48	38	38	33	34	20	35	33	34	49	1	1	1	1	1	
A 72 Multiple sclerosis	Male	509	1	2	3	18	69	9	50	214	7	57	116	13	238	43	48	38	38	34	20	35	33	34	49	1	1	1	1	1	
A 73 Epilepsy	Female	443	4	1	2	1	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
A 77 Otitis media and mastoiditis	Male	8	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	
A 78 All other diseases of the nervous system and sense organs	Female	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Male	2	1	2	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	
	Female	39	7	6	3	8	13	3	8	13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	Female	26	5	4	1	3	6	2	8	12	1	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
VII. DISEASES OF THE CIRCULATORY SYSTEM	Total	2849	2	4	24	85	218	1	73	481	1013	1	20	862	45	241	234	1961	288	266	203	210	219	215	209	263	240	240	240	240	
A 79 Rheumatic fever	Male	1873	1	2	18	71	184	56	365	753	23	361	39	156	144	167	198	181	133	134	151	123	136	187	161	161	161	161	161	161	
A 80 Chronic rheumatic heart disease	Female	976	1	6	14	84	1	17	116	260	1	17	501	6	85	90	94	90	85	70	68	68	90	73	76	79	79	79	79	79	
A 81 Arteriosclerotic and degenerative heart disease	Male	2	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	
	Female	60	3	2	2	2	2	10	21	9	9	9	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	Female	54	1	5	5	15	15	2	7	10	15	15	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Male	1486	1	2	6	139	61	42	311	598	42	311	598	277	28	128	111	124	159	143	111	107	123	97	109	145	129	129	129	129	
	Female	672	1	2	7	24	7	5	63	192	5	63	192	364	5	58	62	63	65	52	50	53	47	57	55	52	58	58	58	58	

XII. XIII. DISEASES OF THE SKIN AND MUSCULO-SKELETAL SYSTEM	Total	30	1	1	1	1	1	1	1	10	1	2	5	4	3	2	1	3	1	5	1	2	1	1
	Male	20	1	1	1	1	1	1	1	8	1	2	4	3	1	1	1	3	1	4	1	2	1	1
	Female	10	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1
	Male	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Female	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Female	12	1	1	1	1	1	1	1	6	1	1	2	1	1	2	1	2	1	1	2	1	1	1	1
XIV. CONGENITAL MALFORMATIONS	Total	188	173	3	4	2	2	2	3	1	1	15	13	23	12	14	14	14	20	14	22	13	14	14
	Male	168	154	2	3	1	1	1	1	1	1	8	11	12	10	8	9	9	10	5	10	5	6	6
	Female	85	79	1	1	2	2	2	2	2	1	7	2	11	2	6	5	5	10	9	12	8	8	8
	Male	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Female	9	9	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Female	55	51	1	1	1	1	1	1	1	1	1	5	6	7	5	4	2	4	8	3	6	1	4
XV. CERTAIN DISEASES OF EARLY INFANCY	Total	522	522	1	1	1	1	1	1	1	1	2	5	5	4	4	2	4	4	4	6	8	3	4
	Male	324	324	1	1	1	1	1	1	1	1	1	2	4	4	4	2	4	4	4	5	2	4	4
	Female	198	198	1	1	1	1	1	1	1	1	1	3	5	5	4	4	6	4	2	1	4	4	4
	Male	53	53	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Female	28	28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Female	79	79	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
XVI. SYMPTOMS, SENILITY, AND ILL-DEFINED CONDITIONS	Total	278	23	2	14	31	3	42	69	8	72	12	24	19	31	26	22	18	27	22	18	26	19	19
	Male	186	12	2	1	14	2	35	52	4	28	6	16	12	21	13	21	15	12	19	18	19	16	14
	Female	92	11	1	1	17	1	7	17	4	44	3	8	7	10	13	6	7	6	8	8	4	10	5
	Male	27	3	1	7	7	1	8	8	1	9	3	5	2	3	5	1	2	1	1	1	3	1	2
	Female	50	5	2	2	2	2	3	5	3	23	3	5	3	3	6	1	4	1	1	3	3	1	1
	Male	169	12	2	1	14	2	35	44	4	19	6	11	10	18	11	16	14	10	18	8	16	15	12
	Female	62	11	1	1	17	1	7	12	4	21	3	5	2	7	7	5	3	5	5	8	15	12	4

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TABLE 12: INFANT DEATHS AND HOSPITAL INFANT DEATHS BY OCCURRENCE AND RESIDENCE FOR CENSUS DIVISIONS, ALBERTA, 1959

CENSUS DIVISIONS	Total Infant Deaths				Infant Deaths in Hospitals			
	Total by Occurrence	Total by Residence	By Occurrence Residence Elsewhere	By Residence; Occurrence Elsewhere	Total by Occurrence	Total by Residence	By Occurrence Residence Elsewhere	By Residence; Occurrence Elsewhere
ALBERTA	926	922	17	13	784	778	16	10
Division No. 1	29	30	1	2	25	26	1	2
Division No. 2	48	43	5	....	41	36	5	....
Division No. 3	23	32	....	9	21	30	....	9
Division No. 4	13	9	5	1	12	9	4	1
Division No. 5	15	19	1	1	11	16	....	5
Division No. 6	227	223	10	6	201	197	10	4
Division No. 7	23	27	4	....	21	25	4	....
Division No. 8	38	42	2	6	30	33	2	3
Division No. 9	11	13	3	5	8	12	1	4
Division No. 10	27	31	6	10	24	27	6	9
Division No. 11	288	243	54	9	260	216	51	7
Division No. 12	77	82	6	11	52	56	5	9
Division No. 13	22	30	4	12	18	23	3	10
Division No. 14	12	22	....	10	8	16	....	8
Division No. 15	73	76	4	7	52	55	4	7

TABLE 13: INFANT DEATHS AND HOSPITAL INFANT DEATHS BY OCCURRENCE AND RESIDENCE FOR URBAN PLACES OF 1,000 POPULATION AND OVER, ALBERTA, 1959

CITY, TOWN OR VILLAGE	Total Infant Deaths				Infant Deaths in Hospitals			
	Total by Occurrence	Total by Residence	By Occurrence; Residence Elsewhere	By Residence; Occurrence Elsewhere	Total by Occurrence	Total by Residence	By Occurrence; Residence Elsewhere	By Residence; Occurrence Elsewhere
Athabasca	9	4	5	.....	7	3	4	.....
Barrhead	7	3	4	.....	7	3	4	.....
Beverly	.....	10	.....	10	.....	9	.....	9
Blairmore	1	1	1	1	1	1	1	1
Bonnyville	7	4	3	.....	5	2	3	.....
Bow Island	.....	.....	.....	.....	.....	.....	.....	.....
Bowness	3	8	.....	5	.....	5	.....	5
Brooks	4	3	1	.....	3	2	1	.....
Calgary	204	176	32	4	188	161	31	4
Camrose	5	1	5	.....	6	1	5	.....
Cardston	4	5	2	3	4	5	2	3
Claresholm	3	2	1	.....	3	2	1	.....
Coaldale	.....	2	.....	2	.....	2	.....	2
Cold Lake	9	2	5	1	9	2	8	1
Coleman	.....	.....	.....	.....	.....	.....	.....	.....
Devon	.....	.....	.....	.....	.....	.....	.....	.....
Didsbury	1	1	1	.....	1	1	.....	.....
Drayton Valley	3	5	1	3	3	5	1	3
Drumheller	8	5	3	.....	7	4	3	.....
Edmonton	271	172	102	3	253	155	99	1
Edson	7	3	6	2	7	2	6	1
Fairview	2	1	2	1	2	1	2	1
Forest Lawn	2	7	.....	5	.....	5	.....	5
Fort Macleod	2	1	1	.....	2	1	1	.....
Fort Saskatchewan	.....	4	.....	4	.....	4	.....	4
Grande Prairie	14	10	4	.....	14	10	4	.....
Hanna	11	7	4	.....	11	7	4	.....
High Prairie	15	5	10	.....	15	5	10	.....
High River	4	2	2	.....	3	1	2	.....
Innisfail	3	3	2	2	3	3	2	2
Jasper Place	2	13	.....	11	.....	11	.....	11
Lacombe	4	1	4	1	4	1	4	1
Leduc	.....	.....	.....	.....	.....	.....	.....	.....
Lethbridge	26	17	9	.....	26	17	9	.....
Lloydminster	.....	1	.....	1	.....	1	.....	1
Magrath	1	2	.....	1	1	2	.....	1
McLennan	4	.....	4	.....	3	.....	3	.....
McMurray	5	5	1	1	4	4	1	1
Medicine Hat	26	15	11	.....	25	15	10	.....
Nanton	.....	3	.....	3	.....	3	.....	3
Olds	6	3	3	.....	6	3	3	.....
Peace River	5	7	2	4	5	7	2	4
Pincher Creek	11	9	3	1	10	8	2	.....
Ponoka	2	1	1	.....	2	1	1	.....
Raymond	6	3	3	.....	6	3	3	.....
Redcliff	.....	1	.....	1	.....	1	.....	1
Red Deer	15	11	6	2	11	7	5	1
Redwater	.....	1	.....	1	.....	1	.....	1
Rocky Mountain House	4	5	.....	1	4	5	.....	1
St. Albert	1	2	.....	1	.....	1	.....	1
St. Paul	12	2	10	.....	11	2	9	.....
Stettler	4	1	3	.....	4	1	3	.....
Stony Plain	1	2	.....	1	.....	1	.....	1
Sylvan Lake	.....	1	.....	1	.....	1	.....	1
Taber	5	3	2	.....	5	3	2	.....
Three Hills	.....	.....	.....	.....	.....	.....	.....	.....
Vegreville	2	2	.....	.....	2	2	.....	.....
Vermilion	3	1	2	.....	3	1	2	.....
Vulcan	1	1	.....	.....	1	1	.....	.....
Wainwright	7	7	3	3	6	7	2	3
Westlock	1	.....	1	.....	1	.....	1	.....
Wetaskiwin	4	2	3	1	4	2	3	1

764	Diarrhoea of newborn—	14	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
	—Without immaturity	19	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	—With immaturity	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
765-768	Other infections of the newborn—	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	—Without immaturity	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	—With immaturity	5	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
769	Maternal toxæmia—	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	—Without immaturity	12	13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	—With immaturity	15	10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
770	Erythroblastosis—	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	—Without immaturity	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	—With immaturity	7	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
771	Haemorrhagic disease of newborn—	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	—Without immaturity	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	—With immaturity	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
772	Nutritional maladjustment—	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	—Without immaturity	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	—With immaturity	40	25	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
773	Ill-defined diseases peculiar to early infancy	14	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	—Without immaturity	26	16	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	—With immaturity	201	119	82	10	9	13	9	10	4	8	4	8	4	8	4	8	4	8	4	8
774-776	Immaturity	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
785	Ill-defined and unknown causes	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
E810-E825	Motor vehicle traffic accidents	15	10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
E840-E804	Accidental falls	7	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
E916	Accidents caused by fire	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
E921-E922	Inhalation and ingestion of food or other object	15	10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
E924-E925	Accidental mechanical suffocation	7	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Residual	All other accidents	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
E800-E962	RESIDUALS																				
Class I	(Infective and parasitic diseases)	7	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Class II	(Neoplasms)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Class III	(Allergic, etc. diseases)	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Class IV	(Blood, etc. diseases)	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Class V	(Diseases of nervous system etc.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Class VI	(Diseases of circulatory system)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Class VII	(Diseases of respiratory system)	6	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Class VIII	(Diseases of digestive system)	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Class IX	(Accidental and violent causes)	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Class XVII	All other causes	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

*Includes Hodgkin's disease, leukaemia and aleukaemia.

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BUREAU OF VITAL STATISTICS
TABLE 16—DEATHS AT ALL AGES ACCORDING TO THE INTERNATIONAL ABBREVIATED LIST OF 50 CAUSES, CANADA, 1959

Int. abbrev. List. No.	Canada		P.E.I.	N.S.	N.B.	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.	Yukon	N.W.T.
	1958												
	1958	1959											
B 1	883	834	3	24	36	423	152	35	22	37	48	1	9
B 2	144	125	1	4	8	62	14	6	5	7	6	.....	2
B 3	177	167	.....	14	3	44	47	9	11	19	15	.....	.....
B 4	3	3	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....
B 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 6	25	20	.....	.....	1	2	6	4	2	2	2	.....	1
B 7	6	26	.....	2	.....	8	5	1	1	5	2	.....	.....
B 8	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 9	40	46	.....	2	3	24	11	1	.....	.....	.....	.....	.....
B 10	68	52	.....	1	6	16	17	3	1	2	3	.....	.....
B 11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 12	26	182	1	.....	7	106	23	2	3	12	14	.....	2
B 13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 14	93	84	.....	3	4	41	24	3	2	3	2	.....	.....
B 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 18	373	344	7	15	12	90	101	28	23	25	38	.....	4
B 19	21,795	22,243	159	1,000	701	5,858	7,959	1,254	1,121	1,357	2,343	13	14
B 20	255	254	2	12	3	70	82	7	7	18	27	.....	.....
B 21	960	1,002	6	58	19	245	342	58	58	88	13	.....	1
B 22	294	333	6	11	19	99	115	14	12	33	72	.....	2
B 23	1,869	1,988	4	98	63	672	617	95	132	136	143	.....	.....
B 24	398	338	2	23	10	108	112	13	12	19	26	.....	.....
B 25	15,122	15,650	395	837	539	2,982	6,571	807	752	952	1,646	8	3
B 26	221	186	8	4	3	73	60	6	3	10	2	.....	3
B 27	80	69	2	1	2	33	9	.....	.....	.....	.....	.....	.....
B 28	1,402	1,437	42	56	40	391	489	71	58	114	171	.....	.....
B 29	38,853	40,970	503	1,797	1,315	9,064	16,923	2,558	1,918	2,158	4,746	1	14
B 30	2,044	2,150	85	10	130	106	612	132	156	145	191	.....	4
B 31	3,710	3,687	88	28	188	1,331	1,155	135	160	164	310	.....	.....
B 32	1,162	1,089	43	19	44	23	445	254	45	61	65	.....	.....
B 33	1,771	1,46	46	26	128	58	529	243	86	83	96	.....	6
B 34	760	5,619	174	48	230	1,149	1,966	428	324	346	651	.....	32
B 35	5,190	883	26	12	39	26	194	342	55	51	61	.....	2
B 36	856	876	9	3	42	19	172	344	52	46	114	.....	.....
B 37	191	157	2	9	3	54	62	9	6	11	18	.....	.....
B 38	860	881	13	6	44	253	307	36	46	56	94	.....	2
B 39	1,070	995	15	4	36	380	256	57	63	58	86	.....	9

CAUSE OF DEATH

Int. abbrev. List. No.

B37	Cirrhosis of liver	965	1,015	15	6	22	14	312	430	46	30	44	93	3
B38	Nephritis and nephrosis	1,844	1,695	30	8	57	58	922	380	55	58	49	78	.....
B39	Hyperplasia of prostate	554	556	10	4	31	26	139	188	29	48	19	60	2
B40	Complications of pregnancy, childbirth and the puerperium	263	263	12	.....	8	6	104	73	14	10	14	17	5
B41	Congenital malformations	2,830	2,767	90	17	126	93	929	862	117	128	188	211	4
B42	Birth injuries, postnatal asphyxia and atelectasis	2,931	2,936	104	6	125	90	973	907	151	156	199	217	7
B43	Infections of the newborn	710	623	23	2	26	23	263	128	30	24	49	44	11
B44	Other diseases peculiar to early infancy and immaturity unqualified	3,923	3,894	146	33	174	165	1,316	1,183	123	166	274	280	3
B45	Senility without mention of psychosis, ill-defined and unknown causes	1,526	1,536	201	14	57	118	387	210	73	66	278	81	51
B46	All other diseases	10,448	11,019	251	97	535	330	2,981	3,675	631	679	688	1,114	13
B47	Motor vehicle accidents	3,517	3,687	44	32	132	138	1,168	1,250	156	162	290	312	9
	Traffic accidents	3,445	3,599	42	31	125	123	1,153	1,221	154	155	280	302	9
	Nontraffic accidents	72	88	2	1	7	5	15	29	2	7	10	10	.....
BE48	All other accidents	5,640	5,752	198	26	248	243	1,380	1,961	279	282	369	717	33
BE49	Suicide and self-inflicted injury	1,271	1,287	14	3	30	32	255	519	65	68	117	179	4
BE50	Homicide and operations of war	203	178	1	.....	4	2	44	60	4	12	20	31	.....
	All causes	135,201	139,913	3,179	1,007	6,371	4,747	36,390	50,600	7,421	7,003	8,481	14,336	89
														289

*Includes Hodgkin's disease, leukaemia and aleukaemia.

TABLE 17 — DEATH RATES PER 100,000 POPULATION AT ALL AGES ACCORDING TO THE INTERNATIONAL ABBREVIATED LIST OF 50 CAUSES, BY PROVINCES, 1959

Int. abbrev. List. No.	CAUSE OF DEATH	Canada		Nfld.	P.E.I.	N.S.	N.B.	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.	Yukon	N.W.T.
		1958	1959												
		B 1	Tuberculosis of respiratory system													5.2	4.8	9.8	2.9	3.4	6.1	8.5	2.6	4.0	2.4	3.0	3.1	7.7	42.9
B 2	Tuberculosis, other forms	0.8	0.7	2.2	1.0	0.6	1.4	1.2	0.2	0.2	0.7	0.6	0.4	.....	9.5
B 3	Syphilis and its sequelae	1.0	1.0	1.1	.....	2.0	0.5	0.9	0.8	1.0	1.2	1.5	1.0	.....	.....
B 4	Cholera	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 5	Dysentery, all forms	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 6	Scarlet fever and streptococcal sore throat	0.1	0.1	0.4	1.0	0.3	0.2	0.2	0.1	0.5	0.2	0.2	0.1	.....	4.8
B 7	Diphtheria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 8	Whooping cough	.....	.....	.....	.....	0.3	0.5	0.5	0.2	0.1	.....	.....	.....	.....	.....
B 9	Meningococcal infections	0.4	0.3	0.7	.....	0.1	1.0	0.3	0.3	0.3	0.1	0.2	0.2	.....	.....
B 10	Plague	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 11	Acute poliomyelitis	0.2	1.0	2.7	1.0	.....	1.2	2.1	0.4	0.2	0.3	1.0	0.9	.....	9.5
B 12	Smallpox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 13	Measles	0.5	0.5	0.4	.....	0.4	0.7	0.8	0.4	0.3	0.2	0.2	0.1	.....	.....
B 14	Typhus and other rickettsial diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 15	Malaria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B 16	All other diseases classified as infective and parasitic	2.2	2.0	1.6	1.0	2.1	2.0	1.8	1.7	3.2	2.5	2.0	2.4	.....	19.0
B 17	All malignant neoplasms*	127.8	127.5	103.3	155.9	139.7	118.8	117.2	133.7	141.7	124.3	109.2	149.2	100.0	66.7
B 18	Hodgkin's disease	1.5	1.5	2.7	2.0	1.7	0.5	1.4	1.4	1.2	1.9	1.4	1.7	.....	.....
B 19	Leukaemia and aleukaemia	5.6	5.7	3.6	5.9	8.1	3.2	4.9	5.8	6.6	5.9	7.2	7.2	.....	4.8
B 20	Benign and unspecified neoplasms	1.7	1.9	1.3	.....	1.5	3.2	2.0	1.9	1.6	1.3	2.7	1.4	.....	9.5
B 21	Diabetes mellitus	11.0	11.4	6.0	3.9	13.7	10.7	13.4	10.4	10.7	14.6	10.9	9.1	7.7	.....
B 22	Anaemias	2.3	1.9	1.6	2.0	3.2	1.7	2.2	1.9	1.5	2.1	1.5	1.6	.....	.....
B 23	Vascular lesions affecting central nervous system	88.7	89.7	88.0	154.9	116.9	91.4	59.7	110.4	91.2	83.4	76.6	104.8	61.5	14.3
B 24	Nonmeningococcal meningitis	1.3	1.1	1.8	.....	0.6	0.5	1.5	1.0	0.7	0.8	0.6	1.0	.....	14.3
B 25	Rheumatic fever	0.5	0.4	0.4	1.0	0.3	0.3	0.7	0.2	0.3	1.1	0.2	0.3	.....	.....
B 26	Chronic rheumatic heart disease	8.2	8.2	9.4	3.0	7.8	6.8	7.8	8.2	8.0	6.4	9.2	10.9	7.7	.....
B 27	Arteriosclerotic and degenerative heart disease	227.9	234.9	112.0	260.8	251.0	222.9	181.3	284.3	235.1	212.6	173.6	302.3	61.5	66.7
B 28	Other diseases of heart	12.0	12.3	18.9	9.8	16.8	18.0	12.2	9.9	14.9	17.3	11.7	12.2	.....	19.0
B 29	Hypertension with heart disease	21.8	21.1	19.6	21.7	26.3	21.7	26.6	19.4	15.3	17.7	13.2	19.7	.....	.....
B 30	Hypertension without mention of heart	6.8	6.2	9.6	18.6	6.1	3.9	8.9	4.3	5.1	6.8	5.2	5.7	.....	.....
B 31	Influenza	4.5	7.3	10.2	25.5	17.9	9.8	10.6	4.1	9.7	9.2	2.9	1.8	.....	.....
B 32	Pneumonia	30.4	32.2	38.8	47.1	35.3	39.0	23.0	33.0	48.4	37.0	27.8	41.5	61.5	28.6
B 33	Bronchitis	5.0	5.1	5.8	11.8	5.4	4.4	3.9	5.7	6.2	5.7	4.9	4.7	.....	.....
B 34	Ulcer of stomach and duodenum	5.0	4.9	2.0	2.9	5.9	3.2	3.4	5.8	5.9	6.1	3.7	7.3	7.7	9.5
B 35	Appendicitis	1.1	1.1	0.4	2.0	1.3	0.5	1.1	1.0	1.0	0.7	0.9	1.1	.....	.....
B 36	Intestinal obstruction and hernia	5.0	5.1	2.9	5.9	6.1	4.1	5.1	5.2	4.1	5.1	4.5	6.0	.....	9.5

B36	Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	6.3	5.7	3.9	5.0	5.1	7.6	4.3	6.4	7.0	4.7	5.5	7.7	42.9
B37	Cirrhosis of liver	5.7	5.8	3.3	3.1	2.4	6.2	7.2	5.2	3.3	3.5	5.9	23.1	....
B38	Nephritis and nephrosis	10.8	9.7	6.7	8.0	9.8	18.4	6.4	6.2	6.4	3.9	5.0	....	....
B39	Hyperplasia of prostate	3.2	3.2	2.7	4.3	4.4	2.8	3.2	3.3	5.3	1.5	3.8	15.4	....
B40	Complications of pregnancy, childbirth and the puerperium	1.5	1.5	2.7	1.1	1.0	2.1	1.2	1.6	1.1	1.1	1.1	....	23.8
B41	Congenital malformations	16.6	15.9	20.0	17.6	15.8	18.6	14.5	13.2	14.2	15.1	13.4	15.4	19.0
B42	Birth injuries, postnatal asphyxia and atelectasis	17.2	16.8	23.2	5.9	17.5	15.3	19.5	17.1	17.3	16.0	13.8	7.7	33.3
B43	Infections of the newborn	4.2	3.6	5.1	2.0	3.6	3.9	5.3	3.4	2.7	3.9	2.8	....	....
B44	Other diseases peculiar to early infancy and immaturity unqualified	23.0	22.3	32.5	32.4	24.3	28.0	26.3	13.9	18.4	22.0	17.8	23.1	147.6
B45	Semility without mention of psychosis, ill-defined and unknown causes	9.0	8.8	44.8	13.7	8.0	20.0	7.7	8.2	7.3	22.4	5.2	....	242.9
B46	All other diseases	61.3	63.2	55.9	95.1	74.7	55.9	59.6	61.7	71.3	75.3	71.0	100.0	119.0
BE47	Motor vehicle accidents	20.6	21.1	9.8	31.4	18.4	21.7	23.4	21.0	17.6	18.0	19.9	30.8	42.9
	Nontraffic accidents	20.2	20.6	30.4	1.0	30.4	1.0	20.5	17.4	17.2	22.5	19.2	30.8	42.9
	All other accidents	0.4	0.5	0.4	1.0	1.0	0.8	0.5	0.2	0.8	0.8	0.6	....	....
BE48	Suicide and self-inflicted injury	33.1	33.0	44.1	25.5	34.6	41.2	32.9	31.5	31.3	29.7	45.7	123.1	157.1
BE49	Homicide and operations of war	7.5	7.4	3.1	2.9	4.2	5.4	5.1	7.3	7.5	9.4	11.4	7.7	19.0
BE50	All causes	1.2	1.0	0.2	0.6	0.3	0.9	1.0	0.5	1.3	1.6	2.0	....	....
		793.1	802.2	708.0	987.3	889.8	804.6	850.1	838.5	776.4	682.3	913.1	684.6	1376.2

■ Includes Hodgkin's disease, leukaemia and aleukaemia.

† Less than 0.1 per 100,000 population.

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TABLE 18—CERTAIN CAUSES OF DEATH, BY NUMBERS AND RATES FOR EACH YEAR OF THE LAST DECENIAL PERIOD

CAUSE OF DEATH	1959		1958		1957		1956		1955		1954		1953		1952		1951		1950	
	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000	Number of Deaths	Rate per 100,000
Diseases of the Heart	2581	204	2431	202	2371	204	2298	204	2420	227	2345	225	2274	227	2247	231	2113	224	2046	228
Cancer	1387	109	1304	108	1262	108	1251	110	1234	116	1164	116	1122	112	1072	110	1065	118	997	110
Diseases of the Arteries	266	21	267	22	254	21	173	15	173	16	155	14	148	14	136	14	139	13	133	14
Violent Deaths (suicide excepted)	679	54	708	58	640	55	667	59	672	63	623	59	667	66	589	60	568	60	573	64
Pneumonia (all forms)	346	27	338	28	352	30	325	28	326	30	253	24	324	32	288	30	341	26	275	30
Pulmonary Tuberculosis	37	2	35	2	60	5	36	3	64	6	45	4	4	5	91	9	119	12	137	15
Influenza	36	2	21	1	135	11	35	3	44	4	14	1	4	3	47	4	114	12	26	12
Nephritis	49	3	59	4	60	5	77	6	62	6	79	7	108	10	74	7	88	6	90	12
Appendicitis	11	1	11	1	15	1	8	1	9	9	12	1	15	1	15	1	18	1	22	2
Suicides	117	9	111	9	105	8	115	10	96	9	83	8	72	7	94	9	86	9	82	9
Cerebral Haemorrhage	952	76	930	77	939	80	806	71	856	80	842	81	851	84	727	74	756	80	693	77
Diabetes Mellitus	136	10	119	9	141	12	98	8	123	11	112	10	99	9	104	10	89	9	91	10
Diarrhoea and Enteritis	56	4	69	5	59	5	64	5	54	5	69	6	47	4	77	7	60	6	69	7
Puerperal Causes	14	1	17	1	12	1	14	1	15	1	11	1	1	2	15	1	15	1	19	2
Whooping Cough	5	1	2	1	4	4	3	3	1	1	7	1	12	1	8	1	7	7	19	2
Scarlet Fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	6	6	11	1
Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Measles	1	1	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	1
Typhoid and Paratyphoid	3	3	4	4	16	1	2	2	24	2	28	2	8	8	7	7	12	12	8	8
Polomyelitis and Infectious Encephalitis	14	1	8	8	8	8	9	9	8	8	28	2	108	10	79	8	2	2	8	8

NXVII. ACCIDENTS, POISONINGS AND VIOLENCE (CLASSIFICATION ACCORDING TO NATURE OF INJURY)	Total		Male		Female	
	21	18	18	3	3	3
ANI38 Fracture of skull	1	1	1	1	1	1
ANI39 Fracture of spine and trunk	1	1	1	1	1	1
ANI40 Fracture of limbs	1	1	1	1	1	1
ANI43 Head injury (excluding fracture)	3	3	3	3	3	3
ANI44 Internal injury of chest, abdomen, and pelvis	4	4	4	4	4	4
ANI45 Laceration and open wounds	1	1	1	1	1	1
ANI47 Effects of foreign body entering through orifice	2	2	2	2	2	2
ANI48 Burns	4	4	4	4	4	4
ANI49 Effects of poisons	1	1	1	1	1	1
ANI50 All other and unspecified effects of external causes	2	2	2	2	2	2

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TABLE 23A—LIVE BIRTHS OF INDIANS, ALBERTA, BY MONTHS, 1959
(ALL INDIANS)

	MONTHS												
	Total	January	February	March	April	May	June	July	August	September	October	November	December
Province of Alberta	1802	133	137	160	148	151	153	161	145	148	153	154	159

TABLE 23B—LIVE BIRTHS OF INDIANS, ALBERTA, BY MONTHS, 1959
(TREATY INDIANS)

	MONTHS												
	Total	January	February	March	April	May	June	July	August	September	October	November	December
Province of Alberta	1073	74	88	98	107	83	94	90	83	86	89	86	95

TABLE 24—LEGITIMATE AND ILLEGITIMATE BIRTHS OF INDIANS (EXCLUSIVE OF
STILLBIRTHS) IN ALBERTA, BY PLACE OF RESIDENCE OF MOTHER, 1959
(ALL INDIANS)

PROVINCE	Total Births			Legitimate			Illegitimate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Alberta	1802	927	875	1166	610	556	636	317	319

TABLE 25—LEGITIMATE AND ILLEGITIMATE BIRTHS OF INDIANS (EXCLUSIVE OF
STILLBIRTHS) IN ALBERTA, BY PLACE OF RESIDENCE OF MOTHER, 1959
(TREATY INDIANS)

PROVINCE	Total Births			Legitimate			Illegitimate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Alberta	1073	561	512	689	370	319	384	191	193

TABLE 26A—LIVE BIRTHS OF INDIANS BY AGES OF PARENTS, ALBERTA, 1959

AGE OF MOTHER (years)	AGE OF FATHER											Total born to married mothers	Born to un- married mothers	Born to all mothers		
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and over				Not stated	
14 years	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2
15 years	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	9	11
16 years	8	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	25	37
17 years	15	6	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	23	47	70
18 years	22	12	1	2	.....	.....	.....	.....	.....	.....	.....	.....	39	56	95
19 years	20	20	6	1	.....	.....	.....	.....	.....	.....	.....	.....	49	50	99
20 years	31	24	4	1	.....	.....	.....	.....	.....	.....	.....	.....	61	54	115
21 years	17	30	9	3	1	1	.....	.....	.....	.....	.....	.....	62	45	107
22 years	20	30	9	1	2	.....	.....	.....	.....	.....	.....	.....	62	37	99
23 years	11	26	16	2	1	.....	1	.....	.....	.....	.....	.....	57	35	92
24 years	10	35	26	3	2	1	1	.....	.....	.....	.....	.....	78	31	109
25 years	5	27	12	5	3	.....	.....	.....	.....	.....	.....	.....	52	35	87
26 years	3	25	22	6	2	.....	1	1	.....	.....	.....	.....	61	40	101
27 years	1	23	21	9	.....	.....	1	.....	.....	.....	.....	.....	57	20	77
28 years	1	15	31	12	3	1	2	1	.....	.....	.....	.....	66	20	86
29 years	7	17	9	4	4	2	.....	.....	.....	.....	.....	43	17	60
30 years	7	20	19	6	2	2	1	.....	.....	.....	.....	58	20	78
31 years	1	4	14	11	6	1	1	.....	1	.....	.....	.....	39	14	53
32 years	2	14	10	7	1	3	.....	1	.....	.....	.....	38	7	45
33 years	7	12	9	3	.....	.....	.....	.....	.....	.....	32	11	43
34 years	2	10	15	17	5	.....	1	1	.....	.....	.....	51	9	60
35 years	1	15	8	2	4	1	.....	.....	.....	.....	31	5	36
36 years	4	11	5	2	2	1	.....	.....	.....	25	7	34
37 years	1	4	10	5	7	3	3	1	2	.....	.....	36	7	43
38 years	2	7	10	7	3	1	.....	.....	.....	.....	31	6	38
39 years	1	5	9	8	2	5	.....	.....	.....	.....	31	7	37
40 years	1	2	8	8	3	.....	.....	1	.....	.....	23	4	27
41 years	1	1	2	3	.....	.....	.....	.....	.....	8	7	15
42 years	2	2	3	2	4	.....	.....	.....	.....	13	3	16
43 years	4	2	1	.....	.....	.....	.....	7	2	9
44 years	3	2	3	1	.....	.....	.....	.....	9	7	16
45 years	1	.....	1	1	.....	.....	.....	.....	.....	3	.....	3
46 years	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
47 years	1	.....	.....	.....	.....	1	.....	1
48 years	1	.....	1	.....	.....	.....	.....	2	.....	2
Not stated	2	1	3
Total Fathers	7	168	299	248	169	121	71	42	23	7	6	5	1166	636	1802

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TABLE 26B: LIVE BIRTHS OF TREATY INDIANS BY AGES OF PARENTS,
ALBERTA, 1959

AGE OF MOTHER (years)	AGE OF FATHER											Total born to married mothers	Born to un- married mothers	Born to all mothers		
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and over				Not stated	
14 years	1	1
15 years	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	7
16 years	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	16
17 years	8	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	32
18 years	12	6	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	21	31
19 years	13	12	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	29	33
20 years	1	12	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38	30
21 years	1	17	4	3	1	1	1	.....	.....	.....	.....	.....	.....	39	23
22 years	16	5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	39	28
23 years	4	13	7	1	.....	.....	1	.....	.....	.....	.....	.....	.....	26	21
24 years	6	21	15	1	1	1	1	.....	.....	.....	.....	.....	.....	46	25
25 years	3	16	5	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	28	18
26 years	2	13	13	4	1	1	1	.....	.....	.....	.....	.....	.....	36	25
27 years	1	10	15	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	31	11
28 years	1	7	20	6	2	1	1	.....	.....	.....	.....	.....	.....	38	13
29 years	5	7	5	4	2	2	.....	.....	.....	.....	.....	.....	25	9
30 years	5	14	12	3	3	1	.....	.....	.....	.....	.....	.....	36	13
31 years	1	11	9	3	3	.....	.....	.....	.....	.....	.....	.....	25	6
32 years	2	8	8	3	1	2	.....	.....	.....	.....	.....	.....	25	4
33 years	4	6	6	1	.....	.....	.....	.....	.....	.....	.....	6	24
34 years	2	8	12	7	3	.....	.....	.....	.....	.....	.....	.....	34	5
35 years	12	6	.....	.....	.....	.....	.....	.....	.....	.....	22	4
36 years	2	6	.....	.....	.....	.....	.....	.....	.....	.....	13	6
37 years	7	1	3	2	.....	.....	.....	.....	.....	.....	13	4
38 years	1	2	7	3	2	1	.....	.....	.....	.....	.....	.....	20	3
39 years	4	8	3	1	.....	.....	.....	.....	.....	.....	18	4
40 years	3	6	5	1	.....	.....	.....	.....	.....	.....	19	5
41 years	1	1	4	6	4	.....	.....	.....	.....	.....	.....	14	1
42 years	1	1	1	3	.....	.....	.....	.....	.....	.....	6	3
43 years	1	1	.....	.....	.....	.....	.....	.....	.....	.....	7	3
44 years	2	2	1	.....	.....	.....	.....	.....	.....	4	1
45 years	2	2	2	.....	.....	.....	.....	.....	.....	6	2
46 years	1	.....	1	1	.....	.....	.....	.....	.....	.....	3	.....
47 years
48 years
Not stated	1	1
Total Fathers	5	105	165	144	110	67	38	27	17	4	4	4	3	689	384	1073

TABLE 27—BIRTHS BY PLACE OR OCCURRENCE AND PLACE OF RESIDENCE, 1959

PLACE OF OCCURRENCE	PLACE OF RESIDENCE														
	Total occurrence	Nfld.	P. E. I.	N. S.	N. B.	Que.	Ont.	Man.	Sask.	Alta.	B. C.	Yukon	N. W. T.	U. S. A.	Other
Total (residence)	479,957	14,826	2,720	19,038	16,486	142,383	157,124	22,801	24,319	38,080	39,971	537	990	657	25
Newfoundland	14,798	14,781		6	9	2	3							6	
Prince Edward Island	2,708		2,691	1	5	2	3							1	
Nova Scotia	19,037	22	15	18,929	38	17	13		2	3	1			1	1
New Brunswick	16,736		7	37	16,271	180	17			1	1	1		218	1
Quebec	141,264	10		43	16,455	140,881	229	4	4	5	4	1	15	43	5
Ontario	158,265	8	7	40	20	1,148	156,640	36	14	23	23	3	19	272	16
Manitoba	23,015			1		6	64	22,633	204	22	12	2	2	51	1
Saskatchewan	24,340					1	9	73	23,970	262	16	8	37	7	
Alberta	37,996			1		1	11	12	110	37,687	111	8	4	18	2
British Columbia	39,870					1	6	2	8	39	39,765	8	4	35	
Yukon	537											514	912	3	
Northwest Territories	933														
United States	458	3		4	85	151	131	41	6	14	23				

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TABLE 28: LIVE BIRTHS AND LIVE BIRTHS IN HOSPITAL BY OCCURRENCE AND RESIDENCE FOR CENSUS DIVISIONS, ALBERTA, 1959

CENSUS DIVISIONS	TOTAL BIRTHS				BIRTHS IN HOSPITALS			
	Total by Occurrence	Total by Residence	By Occurrence; Residence Elsewhere	By Residence; Occurrence Elsewhere	Total by Occurrence	Total by Residence	By Occurrence; Residence Elsewhere	By Residence; Occurrence Elsewhere
ALBERTA	37,996	38,080	309	393	37,224	37,305	309	390
Division No. 1	957	988	40	71	946	977	40	71
Division No. 2	2,332	2,183	212	63	2,285	2,136	212	63
Division No. 3	860	917	59	116	821	878	59	116
Division No. 4	403	412	51	60	393	402	51	60
Division No. 5	753	953	60	260	719	931	47	259
Division No. 6	9,386	9,144	415	173	9,361	9,106	414	159
Division No. 7	1,065	1,113	88	136	1,056	1,104	88	136
Division No. 8	2,099	2,097	158	156	2,084	2,081	158	155
Division No. 9	484	433	133	82	467	416	133	82
Division No. 10	1,366	1,580	146	360	1,357	1,570	146	359
Division No. 11	13,068	12,483	860	275	13,033	12,447	858	272
Division No. 12	1,635	1,647	103	115	1,398	1,409	103	114
Division No. 13	940	1,077	129	266	927	1,065	128	266
Division No. 14	288	580	11	303	271	563	10	302
Division No. 15	2,360	2,473	38	151	2,106	2,220	36	150

TABLE 29: LIVE BIRTHS AND LIVE BIRTHS IN HOSPITAL BY OCCURRENCE AND RESIDENCE FOR URBAN PLACES OF 1,000 POPULATION AND OVER, ALBERTA, 1959

CITY, TOWN OR VILLAGE	Total Live Births			Live Births in Hospitals				
	Total by Occurrence	Total by Residence	By Occurrence; Residence Elsewhere	Total by Occurrence	Total by Residence	By Occurrence; Residence Elsewhere	By Residence; Occurrence Elsewhere	
Athabasca	210	56	160	6	210	56	160	6
Barrhead	247	58	193	4	247	58	193	4
Beverly	2	462	.....	460	1	460	.....	459
Blairmore	12	35	9	32	12	35	9	32
Bonnyville	193	65	135	7	192	62	135	5
Bow Island	83	23	62	2	82	23	61	2
Bowness	3	346	.....	343	.....	342	.....	342
Brooks	252	82	171	1	252	82	171	1
Calgary	8,708	7,259	1,564	115	8,704	7,254	1,563	113
Camrose	412	170	255	13	412	170	255	13
Cardston	184	78	115	9	184	78	115	9
Claresholm	109	51	61	3	109	51	61	3
Coaldale	93	69	50	26	93	69	50	26
Cold Lake	211	64	156	9	209	62	154	7
Coleman	5	32	1	28	5	32	1	28
Devon	28	33	8	13	28	33	8	13
Didsbury	143	34	112	3	142	34	111	3
Drayton Valley	239	205	106	72	238	204	106	72
Drumheller	302	124	186	8	302	124	186	8
Edmonton	12,443	8,604	3,929	90	12,436	8,597	3,928	89
Edson	251	155	118	22	251	155	118	22
Fairview	175	44	135	4	175	44	135	4
Forest Lawn	1	270	.....	269	.....	269	.....	269
Fort Macleod	118	80	45	7	118	80	45	7
Fort Saskatchewan	4	105	4	105	1	105	1	105
Grande Prairie	660	304	363	7	660	304	363	7
Hanna	178	87	93	2	177	87	92	2
High Prairie	289	83	212	6	288	82	212	6
High River	255	46	215	6	255	46	215	6
Innisfail	177	67	121	11	177	67	121	11
Jasper Place	3	1,099	.....	1,096	3	1,099	.....	1,096
Lacombe	260	95	172	7	260	95	172	7
Leduc	1	63	1	63	.....	63	.....	63
Lethbridge	1,426	913	530	17	1,424	911	530	17
Lloydminster	1	108	.....	107	.....	107	.....	107
Magrath	71	36	41	6	69	34	41	6
McLennan	215	47	172	4	215	47	172	4
McMurray	59	30	36	7	59	30	36	7
Medicine Hat	861	602	272	13	861	602	272	13
Nanton	1	29	.....	28	.....	28	.....	28
Olds	219	79	150	10	219	79	150	10
Peace River	216	124	103	11	215	122	103	10
Pincher Creek	204	89	121	6	204	89	121	6
Ponoka	210	129	93	12	209	129	92	12
Raymond	94	44	58	8	94	44	58	8
Redcliff	.....	55	.....	55	.....	55	.....	55
Red Deer	839	634	248	43	839	634	248	43
Redwater	.....	46	.....	46	.....	46	.....	46
Rocky Mountain House	181	97	91	7	179	96	90	7
St. Albert	.....	73	.....	73	.....	73	.....	73
St. Paul	257	108	169	20	257	108	169	20
Stettler	256	123	152	19	255	122	152	19
Stony Plain	1	38	1	38	1	38	1	38
Sylvan Lake	.....	29	.....	29	.....	29	.....	29
Taber	340	99	243	2	339	99	242	2
Three Hills	145	53	97	5	145	53	97	5
Vegreville	150	65	90	5	150	65	90	5
Vermilion	183	78	110	5	183	78	110	5
Vulcan	133	38	98	3	132	38	97	3
Wainwright	251	144	116	9	251	144	116	9
Westlock	273	58	221	6	272	58	220	6
Wetaskiwin	327	148	197	18	323	144	197	18

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TABLE 30: LIVE BIRTHS BY MONTH IN CANADA, 1959

	Total	January	February	March	April	May	June	July	August	September	October	November	December
Province of Alberta	38,080	3,040	2,774	3,261	3,274	3,354	3,329	3,361	3,169	3,279	3,242	2,944	3,053

TABLE 31: LIVE BIRTHS FOR CENSUS DIVISIONS BY TYPE OF ATTENDANCE, ALBERTA, 1959

CENSUS DIVISIONS	Total	Attended by			
		Physician	Nurse	Midwife	Unattended and Not Stated
ALBERTA	38,080	37,469	100	227	136
Division No. 1	988	976	.....	12	.....
Division No. 2	2,183	2,139	3	35	6
Division No. 3	917	885	.....	27	5
Division No. 4	412	403	.....	6	3
Division No. 5	953	888	52	3	10
Division No. 6	9,144	9,125	3	9	7
Division No. 7	1,113	1,108	.....	3	2
Division No. 8	2,097	2,083	.....	10	4
Division No. 9	433	411	15	.....	1
Division No. 10	1,580	1,576	.....	.....	.....
Division No. 11	12,483	12,467	1	2	.....
Division No. 12	1,647	1,552	34	30	31
Division No. 13	1,077	1,065	4	1	7
Division No. 14	580	570	2	2	6
Division No. 15	2,473	2,221	75	74	103

TABLE 32: LIVE BIRTHS IN INCORPORATED URBAN PLACES OF 1,000 POPULATION AND OVER, BY TYPE OF ATTENDANCE, ALBERTA, 1959

CITY, TOWN OR VILLAGE	Total	Attended by			
		Physician	Nurse	Midwife	Unattended and Not Stated
Athabasca	56	56			
Barrhead	58	58			
Beverly	462	461		1	
Blairmore	35	35			
Bonnyville	65	63		1	1
Bow Island	23	23			
Bowness	346	343			3
Brooks	82	82			
Calgary	7,259	7,257			2
Camrose	170	170			
Cardston	78	78			
Claresholm	51	51			
Coaldale	69	69			
Cold Lake	64	64			
Coleman	32	32			
Devon	33	33			
Didsbury	34	34			
Drayton Valley	205	205			
Drumheller	124	124			
Edmonton	8,604	8,601		1	2
Edson	155	155			
Fairview	44	44			
Forest Lawn	270	270			
Fort Macleod	80	80			
Fort Saskatchewan	105	105			
Grande Prairie	304	304			
Hanna	87	86			1
High Prairie	83	82			1
High River	46	46			
Innisfail	67	67			
Jasper Place	1,099	1,099			
Lacombe	95	95			
Leduc	63	63			
Lethbridge	913	913			
Lloydminster	108	108			
Magrath	36	35		1	
McLennan	47	47			
McMurray	30	27	3		
Medicine Hat	602	602			
Nanton	29	29			
Olds	79	79			
Peace River	124	122	1		1
Pincher Creek	89	89			
Ponoka	129	129			
Raymond	44	44			
Redcliff	55	55			
Red Deer	634	634			
Redwater	46	46			
Rocky Mountain House	97	97			
St. Albert	73	73			
St. Paul	108	108			
Stettler	123	123			
Stony Plain	38	38			
Sylvan Lake	29	29			
Taber	99	99			
Three Hills	53	52	1		
Vegreville	65	65			
Vermilion	78	78			
Vulcan	38	38			
Wainwright	144	144			
Westlock	58	58			
Wetaskiwin	148	148			

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TABLE 33: LIVE BIRTHS BY AGES OF PARENTS, ALBERTA, 1959

Age of Mother (years)	AGE OF FATHER											Total born to married mothers	Born to un-married mothers	Born to all mothers		
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and over				Not stated	
12 years															1	1
13 years																
14 years		3												4	12	16
15 years	9	13	3											25	46	71
16 years	45	89	12	2										148	106	254
17 years	83	247	71	16	7								1	425	170	595
18 years	82	602	184	26	9	1								904	223	1,127
19 years	68	922	423	70	15	1	1						1	1,501	207	1,708
20 years	15	1,019	605	115	22	2	1							1,779	214	1,993
21 years	11	996	950	211	34	7	2	1	1					2,213	147	2,360
22 years	3	851	1,129	272	36	13	5	5	1				1	2,310	133	2,443
23 years	4	647	1,369	396	61	14	1	2					2	2,496	116	2,612
24 years	2	386	1,371	487	88	18	5	3	1					2,361	94	2,455
25 years	1	223	1,328	574	121	28	7	2					1	2,285	86	2,371
26 years		98	1,199	678	165	22	9	6		1	1		1	2,179	101	2,280
27 years		57	941	776	203	36	13	4	1	1			1	2,035	56	2,091
28 years		39	747	891	272	53	10	6	2	2			2	2,024	44	2,068
29 years		22	459	879	356	81	22	5	1	1	1			1,857	61	1,918
30 years		13	295	838	384	98	29	11	2		1	1	1	1,672	42	1,714
31 years		7	171	698	410	121	29	6	2	3	1			1,448	26	1,474
32 years		12	99	546	442	143	42	12	4	3				1,303	17	1,320
33 years		6	64	424	486	192	52	15	3	1	1	3		1,247	22	1,269
34 years		4	43	301	431	209	59	18	4	1				1,070	36	1,106
35 years		2	23	171	421	207	72	24	5	1				926	33	959
36 years		1	13	104	380	188	65	24	9	1				785	25	810
37 years		2	12	74	312	201	95	16	9	2	3			726	24	750
38 years			8	50	204	234	94	30	13		3			636	26	662
39 years			5	28	127	171	98	31	14	1	4			479	15	494
40 years			2	13	84	161	78	27	4	1	1			371	14	385
41 years			1	7	38	88	59	32	6	3	2			236	12	248
42 years				5	22	80	57	29	8	5				206	8	214
43 years		1	1	2	2	43	43	25	7	2				126	3	129
44 years			1		4	29	30	7	6		1			78	5	83
45 years					2	8	14	15	5	3	2			49		49
46 years						1	8	4	4					17		17
47 years						2	5	3	2					12	1	13
48 years						1	2	2	2					7		7
49 years														1		1
50 and over																
Not stated			1		1	1							8	11	2	13
Total Fathers	324	6,263	11,560	8,656	5,139	2,454	1,007	360	115	31	21	22	35,952	2,128	38,080	

TABLE 38: MARRIAGES BY MONTH OF MARRIAGE, 1959
ALBERTA

Total	10,402
January	457
February	523
March	516
April	738
May	922
June	1,241
July	1,103
August	1,208
September	927
October	1,062
November	930
December	775

TABLE 40—MARRIAGES, MARITAL STATUS OF BRIDEGROOM BY STATUS OF BRIDE, 1959, ALBERTA

	Total Marriages	MARRIAGES BETWEEN								
		Bachelors and			Widowers and			Divorced Men and		
		Spinsters	Widows	Divorced Women	Spinsters	Widows	Divorced Women	Spinsters	Widows	Divorced Women
Alberta	10,402	8,860	222	394	103	199	61	349	79	135

TABLE 41: MARRIAGES, MARITAL STATUS BY AGE OF BRIDEGROOM, 1959, ALBERTA

AGES	MARITAL STATUS			
	Total	Bachelors	Widowers	Divorced Men
Under 20 years	671	671	.....	.....
20 - 24	4,803	4,772	3	28
25 - 29	2,674	2,550	16	108
30 - 34	996	850	15	131
35 - 39	453	316	31	106
40 - 44	221	120	25	76
45 - 49	162	89	33	40
50 - 54	108	45	31	32
55 - 59	103	25	58	20
60 - 64	71	17	45	9
65 - 69	57	7	41	9
70 - 74	58	10	44	4
75+	25	4	21	.....
Not stated .....	.....	.....	.....	.....
Total	10,402	9,476	363	563

TABLE 42: MARRIAGES, MARITAL STATUS BY AGE OF BRIDE, 1959, ALBERTA

AGES	MARITAL STATUS			
	Total	Spinsters	Widows	Divorced Women
Under 20	3,712	3,706	1	5
20 - 24	3,940	3,832	19	89
25 - 29	1,252	1,073	33	146
30 - 34	568	410	45	113
35 - 39	314	146	66	102
40 - 44	196	71	51	64
45 - 49	140	43	61	38
50 - 54	90	10	61	19
55 - 59	83	13	61	9
60 - 64	48	6	39	3
65 - 69	26	26
70 - 74	21	1	18	2
75+	12	1	11
Not stated
Total	10,402	9,312	500	590

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TABLE 43 — MARRIAGES, BIRTHPLACE OF GROOM BY BIRTHPLACE OF BRIDE, ALBERTA, 1959

BIRTHPLACE OF GROOM	BIRTHPLACE OF BRIDE																		
	CANADA																		
	Total	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Province Unspecified	British Isles and Possessions	Europe	Asia	United States	Other	Unspecified
8,164	9	11	54	37	56	201	209	1038	5824	213	1	12	212	207	7	73	.....	.....	.....
25	5	1	.....	1	1	.....	1	2	13	1	.....	.....	1	2	.....	.....	.....	.....	.....
19	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
107	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
386	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
337	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
391	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,243	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5,546	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5248	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
287	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
434	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
290	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
492	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,430	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
247	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
174	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
10,402	11	14	66	43	68	252	243	1185	6487	254	2	15	988	1107	113	147	.....	.....	.....

TABLE 45: STILLBIRTHS BY SEX AND PERIOD OF GESTATION, 1959, ALBERTA

PERIOD OF GESTATION	Male	Female
28 weeks	11	10
29 weeks	3	2
30 weeks	9	9
31 weeks	2	8
32 weeks	7	5
33 weeks	3	9
34 weeks	13	10
35 weeks	11	6
36 weeks	26	18
37 weeks	12	13
38 weeks	19	20
39 weeks	14	12
40 weeks	29	42
41 weeks	7	8
42 weeks	15	11
43 weeks	3	3
44 weeks	.....	.....
45 weeks	.....	.....
46 weeks	.....	.....
47 weeks	.....	.....
48 weeks	.....	.....
Not stated	4	2
Total	188	188

TABLE 46: 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	3.13	1932	1,052	3.08
1906	1,094	2.07	1933	1,053	3.01
1907	1,075	2.96	1934	1,032	3.04
1908	1,077	2.73	1935	1,055	2.81
1909	1,086	2.59	1936	1,049	2.57
1910	1,065	2.69	1937	1,019	2.38
1911	1,103	2.43	1938	1,046	2.70
1912	1,084	2.43	1939	1,046	2.85
1913	1,053	2.67	1940	1,033	2.79
1914	1,081	3.30	1941	1,054	2.71
1915	1,000	3.74	1942	1,058	3.02
1916	1,063	3.29	1943	1,041	2.96
1917	1,061	3.25	1944	1,060	3.06
1918	1,069	1.88	1945	1,061	3.08
1919	1,074	2.56	1946	1,036	3.36
1920	1,055	2.92	1947	1,061	3.76
1921	1,055	3.32	1948	1,049	3.44
1922	1,034	3.06	1949	1,051	3.52
1923	1,072	3.13	1950	1,052	3.74
1924	1,036	2.97	1951	1,039	3.76
1925	1,036	2.97	1952	1,058	3.95
1926	1,053	2.80	1953	1,063	4.10
1927	1,065	2.94	1954	1,073	4.60
1928	1,064	2.75	1955	1,066	4.31
1929	1,042	2.71	1956	1,060	4.48
1930	1,027	3.21	1957	1,055	4.32
1931	1,075	3.25	1958	1,064	4.47
			1959	1,056	4.49

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TABLE 47: DIVORCES AND NULLITIES, BY JUDICIAL DISTRICTS,
FOR THE YEAR 1959, ALBERTA

JUDICIAL DISTRICTS	DIVORCES			NULLITIES		
	Number of Divorces	Granted to Husband	Granted to Wife	Number of Nullities	Granted to Husband	Granted to Wife
Edmonton	372	150	222	8	3	5
Calgary	353	135	218	8	3	5
Lethbridge	36	14	22	...	...	...
Medicine Hat	27	14	13	...	...	...
Peace River	2	...	2	...	...	...
Hanna	2	1	1	...	...	...
Drumheller	2	1	1	...	...	...
Fort Macleod	2	2	3	...	...	...
Wetaskiwin	1	1	...	...	...	...
Vegreville	23	8	15	...	...	...
Red Deer	13	11	2	...	...	...
Grande Prairie						
Total	836	337	499	16	6	10

DIVORCES AND NULLITIES 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
1934	62	106	168
1935	74	135	209
1936	74	135	209
1937	102	139	241
1938	105	162	267
1939	104	163	267
1940	119	154	273
1941	135	176	311
1942	179	201	380
1943	190	223	413
1944	245	243	488
1945	302	273	575
1946	494	480	974
1947	404	478	882
1948	302	357	659
1949	262	332	594
1950	249	311	560
1951	255	334	589
1952	239	391	630
1953	228	375	603
1954	224	384	608
1955	233	394	627
1956	278	410	688
1957	317	409	726
1958	295	457	752
1959	343	509	852

TABLE 48 — POPULATION, BIRTHS, MARRIAGES, DEATHS AND RATES FOR THE YEARS 1905 - 1959

Year	Population	Number of Births	Birth Rate	Number of Marriages	Marriage Rate	Number of Deaths	Death Rate	Infantile Death Rate per 1,000 Births	Puerperal Death Rate per 1,000 Births	Natural Increase
1905	185,000	451	20.41	187	6.77	114	7.35	.....	.....	13.04
1906	236,000	3,063	22.05	1,907	8.08	1,578	6.68	90.00	6.33	13.36
1907	266,000	5,732	22.45	2,082	7.63	2,188	8.22	100.27	6.02	14.22
1908	301,000	6,897	22.91	2,384	7.92	2,662	8.81	.....	.....	14.07
1909	340,000	8,321	24.49	3,086	9.18	3,526	10.49	.....	.....	14.00
1910	374,000	8,815	23.56	3,630	9.70	3,618	9.67	129.49	8.63	13.88
1911	409,000	10,284	25.71	4,429	11.07	4,232	10.58	124.75	8.26	15.13
1912	429,000	11,871	28.47	5,053	12.12	4,432	10.63	120.47	7.07	17.84
1913	459,000	13,685	30.75	4,623	10.39	4,417	9.32	100.54	6.13	21.43
1914	480,000	13,452	28.90	4,202	9.06	3,588	7.73	87.9	5.79	21.26
1915	496,000	13,331	27.87	4,230	8.53	4,058	8.18	90.5	7.20	18.69
1916	508,000	13,576	27.01	4,270	8.54	4,047	8.09	87.30	6.48	18.32
1917	522,000	14,890	25.72	4,048	6.98	3,924	13.86	107.10	5.11	11.86
1918	544,000	14,130	23.95	4,718	7.90	3,507	9.35	169.70	6.34	14.57
1919	565,000	16,565	26.72	5,110	8.24	4,975	8.35	159.70	5.83	17.57
1920	588,000	16,414	27.89	4,651	6.99	4,970	8.33	85.66	7.24	19.50
1921	593,000	16,163	26.44	4,177	6.99	5,281	8.62	81.93	6.68	17.83
1922	593,000	15,515	23.75	4,177	6.99	5,281	8.62	81.93	6.68	17.83
1923	602,000	15,013	23.75	4,160	7.50	4,907	8.30	90.54	5.50	18.75
1924	608,000	14,455	25.07	4,363	7.27	4,907	8.30	82.40	5.76	16.42
1925	623,000	14,897	23.79	4,498	7.40	4,717	7.86	72.90	5.76	16.16
1926	658,000	15,692	24.03	4,776	7.40	5,156	8.49	81.63	5.82	15.31
1927	684,000	16,924	24.79	5,776	7.58	5,059	8.16	74.51	6.38	15.87
1928	708,000	17,649	26.19	6,004	9.12	5,699	9.00	76.50	6.75	15.79
1929	732,000	17,252	26.19	5,334	9.29	6,239	9.65	77.40	7.26	16.54
1930	748,000	16,123	23.57	5,142	8.08	5,396	8.33	63.57	6.46	18.41
1931	748,000	16,990	22.96	5,054	7.02	5,302	7.24	69.38	5.04	16.32
1932	756,000	16,236	21.33	5,889	6.83	5,521	7.46	58.68	3.76	15.50
1933	770,000	16,183	21.10	6,053	7.87	5,337	7.07	59.90	4.43	14.24
1934	772,782	15,786	21.0	6,010	7.87	5,337	6.93	54.89	4.89	14.01
1935	778,000	15,903	20.4	6,020	7.8	5,729	7.3	57.8	4.2	13.0
1936	783,000	15,891	20.4	6,345	8.2	6,247	8.0	63.0	5.6	12.4
1937	789,000	16,359	20.9	6,838	8.9	5,971	7.5	51.0	4.3	12.8
1938	796,159	17,308	21.7	7,838	9.9	5,785	7.3	46.0	3.5	13.6
1939	805,000	18,317	22.7	8,470	11.0	6,203	7.8	48.0	3.9	14.1
1940	818,000	19,373	24.3	9,034	11.2	6,091	7.5	51.0	3.6	13.7
1941	826,000	19,939	23.1	7,299	8.9	6,911	7.6	38.0	2.3	15.2
1942	830,330	22,184	27.6	9,478	11.8	6,524	8.2	42.0	2.7	16.1
1943	846,000	24,631	30.0	8,88	11.8	6,454	7.8	46.0	1.6	16.0
1944	871,000	24,935	28.5	8,844	10.7	6,601	8.2	43.0	2.4	16.3
1945	885,000	25,625	28.7	9,037	10.4	6,543	8.0	42.5	0.9	22.0
1946	895,501	27,003	28.7	9,294	10.4	6,987	8.0	37.0	1.0	20.2
1947	970,000	28,105	30.0	9,305	9.9	7,083	8.2	33.0	1.0	20.5
1948	1,002,000	31,576	31.3	9,514	9.6	7,965	7.7	32.0	0.7	23.7
1949	1,039,000	33,353	30.9	9,960	10.6	7,950	7.6	30.0	0.6	23.1
1950	1,089,000	33,353	32.2	9,844	9.6	7,520	7.2	26.0	0.3	22.3
1951	1,128,116	34,951	31.1	9,844	8.9	7,956	7.5	26.0	0.4	23.1
1952	1,160,000	35,719	31.1	9,965	8.7	7,886	6.9	25.0	0.3	23.7
1953	1,201,000	36,842	30.7	10,117	8.5	8,255	7.1	27.0	0.5	23.8
1954	1,243,000	38,080	30.6	10,402	8.4	8,481	6.8	24.0	0.4	23.3



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