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Annual Report

Report of the Department of Public Health
for the fiscal year April 1, 1960
to March 31, 1961

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Province of Saskatchewan

ANNUAL REPORT
of the
DEPARTMENT OF PUBLIC HEALTH

1960-61

**Report of the Department of Public Health for the
fiscal year April 1, 1960 to March 31, 1961**

REGINA, SASKATCHEWAN:

Printed by LAWRENCE AMON, Printer to the Queen's Most Excellent Majesty
1962.



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DEPARTMENT OF PUBLIC HEALTH

of March 31, 1961

DEPARTMENT OF PUBLIC HEALTH,
REGINA, *October 1, 1961.*

TO THE HONOURABLE F. L. BASTEDO,
Lieutenant Governor of Saskatchewan.

MAY IT PLEASE YOUR HONOUR:

I beg to present herewith, for your consideration, the annual report of the Department of Public Health for the fiscal year ending March 31, 1961.

Respectfully submitted,

J. WALTER ERB,
Minister of Public Health.

DEPARTMENT OF PUBLIC HEALTH,
REGINA, *October 1, 1961.*

TO THE HONOURABLE, J. WALTER ERB,
Minister of Public Health.

SIR:

I have the honour to present herewith the annual report of the Department of Public Health for the fiscal year ending March 31, 1961.

Respectfully submitted,

F. B. ROTH, M.D.,
Deputy Minister of Public Health.

DEPARTMENT OF PUBLIC HEALTH

at March 31, 1961

HON. J. WALTER ERB, Minister of Public Health

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- | | |
|--|--|
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Director, Occupational Health Branch |

Note: As of March 31, the position of Director of Co-ordination and Planning Branch was vacant.

CONTENTS

	<i>Page</i>
Introduction	
Changes in Health Legislation, 1961	12
Regional Health Services Branch	
Regional Boards of Health	19
Personnel and Services	22
Northern Health District	26
Child and Maternal Health Services	34
Communicable Disease Control	39
Dental Health Services	46
Public Health Nursing Services	48
Nutrition Services	52
Sanitation Services	55
Venereal Disease Control Services	60
Provincial Laboratories	72
Psychiatric Services Branch	
The Year in Review	79
Mental Hospital Services	80
Saskatchewan Hospital, North Battleford	80
Saskatchewan Hospital, Weyburn	82
Services to the Retarded	84
Saskatchewan Hospital, Moose Jaw	84
Psychiatric Wards in General Hospitals	86
Community Services	89
Psychiatric Research	92
Medical and Hospital Services Branch	
The Year in Review	107
Physical Restoration Services	117
Saskatchewan Hospital Services Plan	129
Hospital Administration and Standards	139
Air Ambulance Service	144
Medical Services (Public Assistance)	146
Municipal Medical Care Programs	165
Health Services Associations	168
Occupational Health Branch	169
Health Education Services	175
Research and Statistics Branch	
Research and Statistical Services	179
Public Health Library	182
Saskatchewan Vital Statistics	184
Saskatchewan Cancer Services	190
University Medical Centre	195
Saskatchewan Anti-Tuberculosis League	207
Appendices	
A. Acts administered by the Department of Public Health	227
B. National Health Grants	228

LIST OF TABLES

<i>Table number</i>	<i>Page</i>
Regional Health Services Branch	
1. Public health staff employed in Regional Health Services Branch, health regions and Northern Health District by type of staff, Saskatchewan, March 31, 1961	28
2. Public health staff establishment and vacancies in Regional Health Services Branch, Saskatchewan, March 31, 1961	29
3. Public health nursing programs by selected services for Saskatchewan health regions, fiscal years, 1958-59 to 1960-61	29
4. Public health nursing services in the organized health regions and in nursing services districts, Saskatchewan, fiscal year, 1960-61	30
5. Sanitation services, Saskatchewan, fiscal years 1958-59 to 1960-61	32
6. Expenditures for public health services by health regions, Saskatchewan, 1960-61	33
Communicable Disease Control	
7. Potential number of persons immunized against certain selected communicable diseases, Saskatchewan, 1956-1960	41
8. Reported cases and deaths from selected notifiable communicable diseases, with annual rates per 100,000 population, Saskatchewan, 1951-1960	42
9. Amount and costs of vaccine, sera and certain drugs issued in Saskatchewan, 1956-1960	44
10. Monthly distribution of reported communicable diseases, Saskatchewan, 1960	45
Venereal Disease Control Services	
11. Reported cases of venereal disease by type and stage of venereal disease, reporting agency, and sex of patient, Saskatchewan, 1960	67
12. Reported cases of venereal disease by type and stage of venereal disease, and age group of patient, Saskatchewan, 1960	68
13. Reported cases of syphilis and gonorrhoea and annual rates per 100,000 population, Saskatchewan, 1956-1960	69
14. Analysis of the examination of venereal disease contacts, Saskatchewan, 1959 and 1960	70
15. Amounts of drugs distributed and costs for venereal disease patients, Saskatchewan, 1959 and 1960	71
16. Places of meeting and exposure in major cities for 631 cases of venereal disease, Saskatchewan, 1960	71
Psychiatric Services Branch	
17. Movement of patient population of the Munroe Wing, Regina General Hospital, the Psychiatric Ward, Moose Jaw Union Hospital, and University Hospital, Saskatoon, Saskatchewan, 1960	94
18. Age of patients admitted to the Munroe Wing, Regina General Hospital, and the Psychiatric Ward, Moose Jaw Union Hospital, Saskatchewan, 1960	95
19. Diagnosis of patients admitted to the Munroe Wing, Regina General Hospital, Saskatchewan, 1960	96
20. Diagnosis of patients admitted to the Psychiatric Ward, Moose Jaw Union Hospital, Saskatchewan, 1960	97
21. Diagnosis of patients admitted to the Psychiatric Ward, University Hospital, Saskatoon, Saskatchewan, 1960	98
22. Movement of patient population of the Saskatchewan Hospitals, North Battleford and Weyburn, 1960	99
23. First admissions, readmissions, discharges, and deaths by age and sex, Saskatchewan Hospital, North Battleford, 1960	100
24. First admissions, readmissions, discharges, and deaths by age and sex, Saskatchewan Hospital, Weyburn, 1960	101
25. First admissions, readmissions, discharges, and deaths by diagnosis, Saskatchewan Hospitals, North Battleford and Weyburn, 1960	102
26. Diagnosis of patients on register, Saskatchewan Hospital North Battleford, December 31, 1960	103
27. Diagnosis of patients on register, Saskatchewan Hospital Weyburn, December 31, 1960	104
28. Movement of patients, Saskatchewan Training School, Moose Jaw, 1960	105
29. Number of patients attending full-time and part-time mental health clinics, Psychiatric Services Branch, Saskatchewan, 1960	106

LIST OF TABLES — Continued

<i>Table number</i>	<i>Page</i>
Medical and Hospital Services Branch	
30. Annual rate per 1,000 beneficiaries of regional and non-regional physicians' services by type of service, Swift Current medical care program, Saskatchewan, 1955-1959	111
31. Number and cost of regional physicians' services by type of service, Swift Current medical care program, Saskatchewan, 1959	112
32. Number and cost of non-region physician's services by type of service, Swift Current medical care program, Saskatchewan, 1959	113
33. Number and rates of regional and non-region selected surgical operations, Swift Current medical care program, Saskatchewan, 1959	114
34. Expenditures and amounts per beneficiary for medical out-patient, x-ray, and dental services, Swift Current medical care program, Saskatchewan, 1953-1960	115
Physical Restoration Services	
35. Number of patients on caseload register, Physical Restoration Centre, Regina, Saskatchewan, fiscal years, 1954-55 to 1960-61	122
36. First visits of patients to Regina Physical Restoration Centre, fiscal years 1954-55 to 1960-61	123
37. First visits of patients to Physical Restoration Centre, Saskatoon, fiscal years 1954-55 to 1960-61	125
38. Number of patients on caseload register, Physical Restoration Centre, Saskatoon, fiscal years 1954-55 to 1960-61	126
Saskatchewan Hospital Services Plan	
39. Volume of hospital care covered by the Saskatchewan Hospital Services Plan, 1947, 1951, 1956, 1959 and 1960	134
40. Hospitalization rates per 1,000 beneficiaries, Saskatchewan Hospital Services Plan, 1947-1960	135
41. Separations per 1,000 beneficiaries by age and sex, Saskatchewan Hospital Services Plan, 1959 and 1960	135
42. Patient days per 1,000 beneficiaries by age and sex, Saskatchewan Hospital Services Plan, 1959 and 1960	136
43. Leading diagnoses of hospital patients, Saskatchewan Hospital Services Plan, 1959 and 1960	136
44. Saskatchewan Hospital Services Plan expenditure, 1947, 1951, 1956, 1957, 1958, 1959 and 1960	138
Hospital Administration and Standards	
45. Counselling services of the division of Hospital Administration and Standards, Saskatchewan, 1958-1960	143
46. Number of beds in public general hospitals, geriatric centres, Indian health services units and nursing homes under permit, Saskatchewan, December 31, 1957-1960	143
Medical and Hospital Services Branch	
47. Utilization and cost of physicians' services by type of service for long-term public assistance beneficiaries (program I) Saskatchewan, 1959-60	153
48. Rate and per capita cost of physicians' services for long-term public assistance beneficiaries, (program I), Saskatchewan, 1957-58 to 1959-60	154
49. Physicians providing care, and payments to physicians for long-term public assistance beneficiaries (program I), Saskatchewan, 1953-54 to 1960-61	155
50. Expenditures for drugs and appliances and number of prescriptions per capita with average prescription cost, for long-term public assistance beneficiaries (program I), Saskatchewan, 1950-51 to 1959-60	156
51. Utilization and cost of broad category of drugs by long-term public assistance beneficiaries (program I), Saskatchewan, 1959-60	157
52. Type and cost of selected prescriptions with the highest total cost for long-term public assistance beneficiaries (program I), Saskatchewan, 1959-60	158
53. Rate of dental services per 1,000 beneficiaries by type of service for both long-term and short-term public assistance beneficiaries (programs I and II), Saskatchewan, 1955-56 to 1959-60	158
54. Utilization and cost of dental services by type of service for both long-term and short-term public assistance beneficiaries (programs I and II), Saskatchewan, 1959-60	159
55. Per capita expenditures for dental services by selected classes of beneficiary for both long-term and short-term public assistance beneficiaries (programs I and II), Saskatchewan, 1950-51 to 1959-60	159

LIST OF TABLES — Continued

<i>Table number</i>	<i>Page</i>
56. Utilization and cost of optical services by type of service for both long-term and short-term public assistance beneficiaries (programs I and II), Saskatchewan, 1959-60	160
57. Cost of optical services by type of service and class of beneficiary for both long-term and short-term public assistance beneficiaries (programs I and II), Saskatchewan, 1959-60	160
58. Percentage of beneficiaries who received health services at least once during the year by type of service and type of beneficiary, for long-term public assistance beneficiaries (program I), Saskatchewan, 1955-56 to 1960-61	161
59. Expenditure by type of service and classification of beneficiary for long-term public assistance beneficiaries (program I), Saskatchewan, 1960-61	162
60. Expenditures for long-term public assistance beneficiaries (program I), under the Medical Services Division for the fiscal year 1960-61, and the Saskatchewan Hospital Services Plan for the calendar year 1960	163
61. Expenditure by type of service and classification of beneficiary for short-term public assistance beneficiaries (program II), Saskatchewan, 1960-61	164
 Municipal Medical Care Plans	
62. Medical care grants to municipalities, Saskatchewan, during the fiscal year 1960-61	167
 Saskatchewan Vital Statistics	
63. Population trend for Saskatchewan, census years 1901 to 1951 and 1956, and estimates for 1952, 1953, 1954, 1955, 1957, 1958, 1959 and 1960	187
64. Natural increase in population, Saskatchewan, 1916-1960	187
65. Number of stillbirths, infant deaths, and maternal deaths, with annual rates per 1,000 live births, Saskatchewan, 1926-1960	188
66. Ten leading causes of death with percentages and rates per 100,000 population, Saskatchewan, 1959 and 1960	188
67. Accidental deaths by cause of death, Saskatchewan, 1958-1960	189
68. Divorces and annulments, ratio to marriage and rates per 1,000 population, Saskatchewan, 1954-1960	189
 Saskatchewan Cancer Services	
69. Summary of all patients seen at the cancer clinics, Saskatchewan, 1960	192
70. Number of new patients admitted to cancer clinics for diagnosis and treatment of cancer, Saskatchewan, 1932 to 1960	193
 University Medical Centre	
71. Growth in service offered at the University Hospital, Saskatoon, Saskatchewan, 1956-1960	200
72. Growth in number of patients discharged from the University Hospital, Saskatoon, Saskatchewan, 1957-1960	200
73. Analysis of care by departments, University Hospital, Saskatoon, Saskatchewan, 1960	201
 Saskatchewan Anti-Tuberculosis League	
74. Saskatchewan tuberculin survey, 1960	220
75. Staff of the tuberculosis sanatoria, Saskatchewan, December 31, 1960	222
76. Surgical, radiological and laboratory services rendered to patients in the tuberculosis sanatoria, Saskatchewan, 1960	222
77. Preventive services provided at the tuberculosis sanatoria, Saskatchewan, 1960	223
78. Number of persons seen with active tuberculosis by type of case and type of tuberculosis, Saskatchewan, 1960	223
79. Bed complement and movement of patients of tuberculosis sanatoria, Saskatchewan, 1960	224
80. Income and expenditures, tuberculosis sanatoria, Saskatchewan, 1960	224
81. Details of operating costs of the tuberculosis sanatoria, Saskatchewan, 1960	225
82. Patients' fees and government grants, tuberculosis sanatoria, Saskatchewan, 1960	225
83. Summary of medical services of the tuberculosis sanatoria, Saskatchewan, 1959 and 1960	226
 National Health Grants	
84. Grants allocated and amounts expended under the national health grants program, Saskatchewan, 1951-52 to 1961-62	233

LIST OF FIGURES

<i>Figure number</i>	<i>Page</i>
Introduction	
1. Organization of the Department of Public Health, Government of Saskatchewan, March 31, 1961	14
2. Percentage Distribution of Principal Causes of Death, Saskatchewan, 1932 to 1936, 1942 to 1946, 1952 to 1956 and 1957 to 1960, Averages Compared	18
Regional Health Services Branch	
3. Organized Health Regions and Public Health Services in Northern Areas, Saskatchewan, at March 31, 1961	20
4. Percentage of Total Population Served by Water and Sewage Systems, Saskatchewan, 1951-1960	59
5. Reported Cases of Venereal Diseases, Canada, 1951-1959	65
6. Reported Cases of Venereal Diseases, Saskatchewan, 1951-1960	66
Medical and Hospital Services Branch	
7. Saskatchewan Public General Hospitals, March, 1961	142
8. Rate of Physicians' Calls per 1,000 Long-term Public Assistance Beneficiaries (Program I), by Type of Call and Beneficiary, Saskatchewan, 1957-58 to 1959-60	148
9. Rate of Drug Prescriptions per 1,000 Long-term Public Assistance Beneficiaries (Program I), by Age Group and Sex, Saskatchewan, 1959-60	149
10. Expenditures on Drug Prescriptions per Long-term Public Assistance Beneficiaries (Program I), by Age Group and Sex, Saskatchewan, 1959-60	149
11. Percentage Distribution of Expenditures on Health Care, Long-term and Short-term Beneficiaries Combined (Program I and II), Saskatchewan, 1960-61	152
Saskatchewan Anti-Tuberculosis League	
12. Patient Days Spent in Tuberculosis Sanatoria, Saskatchewan, 1955-1960 ..	208
13. Active Pulmonary Lesions, Fort San Zone, 1958-1959	211
14. Tuberculosis Death Rate per 100,000 Population, Saskatchewan, 1926-1960 ..	213

INTRODUCTION

How is the level of health of a community measured? By the length of time that the people live? By the number of cases of infectious diseases that occur? By the number of infant deaths? By the number of people hospitalized? The list could be continued indefinitely.

No one has yet been able to produce an index which takes into account all the factors which go together to improve or mar collective health. We are not yet in a position to say that community A is more healthy than community B. We can consider individual indices separately, but what value these indices have in relation to each other is impossible to say.

Who is to say that a sufferer from chronic bronchitis is in a better or poorer state of health than his partially deaf companion? There is no means of measuring diseases quantitatively. Herein lies a difficulty which confronts many health departments. With limited resources and staff it is difficult to assess the degrees of priority which should be given to different programs.

Although it is generally recognized that infectious disease is playing a smaller and smaller role in community health each year, we are grimly reminded that the classical epidemic is still a thing to be reckoned with. Three different events force this to our attention.

A minor epidemic occurred in the field of tuberculosis, where several cases of the disease were traced to one common source of infection. As these sources of infection are being steadily eradicated, the general level of resistance in the population falls, and local epidemics become an ever increasing danger.

The second reminder is given by the situation in respect of infectious hepatitis. This has been with us for several years now, and each year brings a host of notifications from all over the province.

And lastly a localized upsurge of venereal disease reminded us that this particular blight is far from conquered.

Two generations' work on the part of the Saskatchewan Anti-Tuberculosis League saw success expressed in concrete terms this year. The bed need for tuberculous patients had fallen to a degree that one of the sanatoria was closed. The fact that the Prince Albert buildings were taken over by the Psychiatric Services Branch is a demonstration that when one problem is solved or partially solved, it is replaced by one of similar vital importance.

Mental illness is being attacked not only through psychiatry but also through laboratory techniques. The work of the psychiatric research team would seem to indicate that some forms of mental illness may have a biochemical foundation.

A promising area was investigated towards the end of the year, when oral poliomyelitis vaccine was made available on a limited scale in Prince Albert. Whether this new technique will simplify immunizing programs will be known only when the oral vaccine becomes available for general use.

Among other continuing preventive measures, the rheumatic fever program is being carried out successfully. The long-term effects of this program are hard to estimate, although it should be noted that the hospital days of care for chronic rheumatic heart disease have fallen from 6,000 in 1957 to 5,700 in 1960. Many of these will be accounted for by long standing established heart lesions acquired years ago and it will be some years before the effects of the program can be assessed in this fashion.

Dental caries among children still presents a situation which is out of hand. The continuing and worsening shortage of dentists in the province, together with the unsatisfactory number of communities adopting fluoridation, does not give much hope for an improvement in the immediate future.

The problems of the aged and the long-term ill formed a basis for continuing investigation by the committee probing this area. Although the Department of Public Health is not directly concerned with this work, the findings of this body are awaited with interest. The deeper this question is delved into, the more apparent it becomes that there are large gaps in our knowledge related to this field. The urgency of finding a solution becomes, each year, more pressing as the population ages, and the ratio of the dependent to the independent increases.

The slow upward trend of the population continues, and the Dominion Bureau of Statistics estimated that the provincial total at mid-year stood in the neighbourhood of 910,000. The separate endeavours to raise the standard of health of this community throughout the past year are described in the pages which follow.

Summary of Legislation — 1961 Session of the Legislature

The following is a summary of legislation administered by the Department of Public Health passed during the 1961 Session of the Legislative Assembly of Saskatchewan.

The Mental Health Act, 1961

This is a new Act replacing The Mental Hygiene Act. A number of new principles have been incorporated in this revision. Most of the provisions of the former Act were stated to apply to mentally ill or mentally defective persons. Special provisions were contained concerning addicts, epileptics and psychopaths. In the revision, the expression "mental disorder" includes all five of these categories and a new category "psychoneurosis". (The expression "mentally retarded person" is substituted in the revision for "mentally defective person" in keeping with present day usage.) All of the provisions of the revision will now apply to mentally disordered persons which will include all of these categories. An important change from the present legislation is to definitely include psychopaths within the provisions of the Act. (Mentally disordered persons who are socially aggressive and hence are often running afoul of the law.) Provision was contained in the former Act for regulations to be made respecting psychopaths but no such regulations had ever been made.

The other, and really most important addition, is to include psychoneurosis within this broad definition. The former Act authorized the admission of persons to a mental hospital only if they were mentally ill and this included psychotic persons only. (The Act referred to them as requiring care, supervision and control for their own protection or welfare or for the protection of others.) The inclusion of neurotic persons will

authorize milder manifestations of mental disorder to be treated in these facilities. Almost all mentally disordered persons with psychoneurosis will be admitted to mental hospitals only under the authority of the voluntary provisions of the Act since persons may not be admitted under compulsory provisions of the Act unless it is believed that they require care, supervision and control for their own protection or welfare or for the protection of others.

The former Act contained separate provisions respecting admission to and discharge from institutions, psychopathic wards and mental health clinics. In the new Act, the expression "facility" includes all of these categories as well as psychiatric centres and the provisions of the Act apply only to facilities. The Act authorizes regulations to be made specifying the categories or classes of patients who could be admitted to each type of facility.

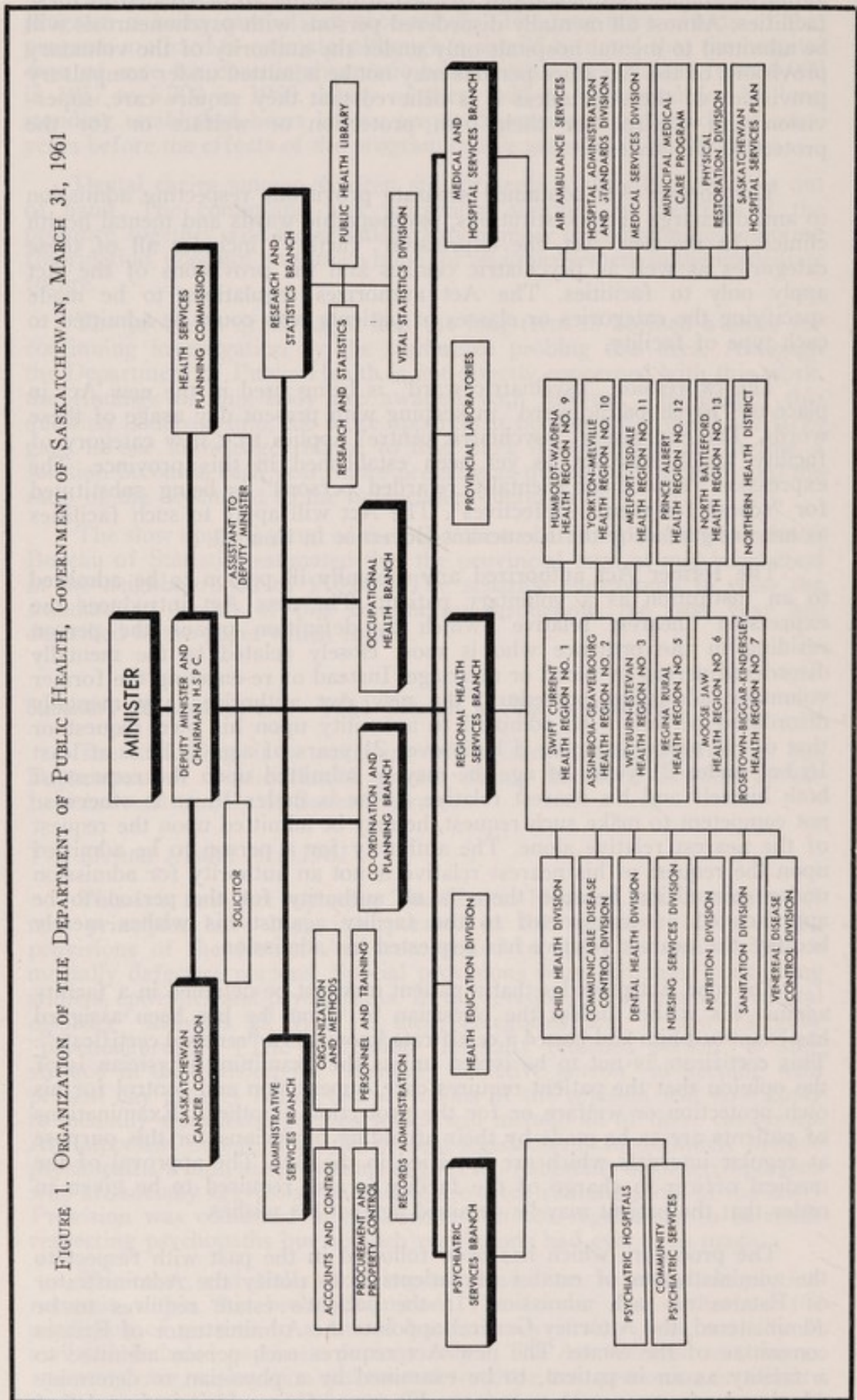
The expression "psychiatric ward" is being used in the new Act in place of "psychopathic ward" in keeping with present day usage of these words. The expression "psychiatric centre" applies to a new category of facility which has not as yet been established in this province. The expression "school for mentally retarded persons" is being substituted for "school for mental defectives". The Act will apply to such facilities as are designated by the Lieutenant Governor in Council.

The former Act authorized any mentally ill person to be admitted to an institution as a voluntary patient. The new Act introduces the expression "nearest relative" which by definition means the person residing in the province who is most closely related to the mentally disordered person by blood or marriage. Instead of re-enacting the former voluntary admission procedure, the new Act authorizes any mentally disordered person to be admitted to a facility upon his own request or that of his nearest relative if he is over 21 years of age. If he is at least 16 but under 21 years of age, he may be admitted upon the request of both himself and his nearest relative. If he is under 16 or is otherwise not competent to make such request, he may be admitted upon the request of the nearest relative alone. The authority for a person to be admitted upon the request of his nearest relative is not an authority for admission under compulsion because there is no authority for the person to be apprehended or transported to the facility against his wishes merely because the nearest relative has requested his admission.

The new Act provides that a patient may not be detained in a facility against his wishes unless the physician to whom he has been assigned has examined him and issued a certificate known as a "renewal certificate". This certificate is not to be issued unless the examining physician is of the opinion that the patient requires care, supervision and control for his own protection or welfare or for the protection of others. Examinations of patients are to be made by their attending physicians for this purpose at regular intervals which are specified in the Act. The approval of the medical officer in charge of the facility is also required to be given in order that the patient may be detained against his wishes.

The procedure which has been followed in the past with respect to the administration of estates of patients is to notify the Administrator of Estates of each admission. If the patient's estate requires to be administered, the Attorney General appoints the Administrator of Estates committee of the estate. The new Act requires each person admitted to a facility as an in-patient, to be examined by a physician to determine whether he is competent to manage his own affairs. If it is found that

FIGURE 1. ORGANIZATION OF THE DEPARTMENT OF PUBLIC HEALTH, GOVERNMENT OF SASKATCHEWAN, MARCH 31, 1961



he is not competent to manage his own affairs, a certificate of incompetence is issued and sent to the Administrator of Estates. The Administrator is therefore apprised only of those patients who have been admitted to a facility in respect of whom a certificate of incompetence has been issued.

Provision is made in the new Act for the Minister of Public Health to appoint a review panel for each in-patient facility. Each review panel shall consist of three persons, one of whom shall be a solicitor and another a physician. The members of the review panel shall have all the rights conferred upon commissioners under sections 3 and 4 of The Public Inquiries Act.

The former Act had authorized any relative or friend of a person committed to, or detained in, an institution, to apply to a judge of the Court of Queen's Bench for his release from custody or the institution upon the grounds that he was not mentally ill or mentally defective. The patient himself had no rights in this regard. Under the new Act any patient may appeal personally to the Chairman of the Review Panel against his continued detention in a facility or the issue of a certificate of incompetence. If the Review Panel, upon investigation, is of the opinion that the renewal certificate authorizing continued detention or the certificate of incompetence, as the case may be, should not have been issued, it will notify the medical officer in charge of the facility to that effect and he will take appropriate action to give effect to such decision.

If the patient is not satisfied with the decision of the review panel, he may apply to the Court of Queen's Bench. The application to the Court of Queen's Bench may be made only after an investigation by a review panel has been completed, but it constitutes a separate and independent action. Appeals to a review panel or the Court of Queen's Bench may be made by the nearest relative of the patient as well as the patient himself.

If the patient has not recovered but wishes to be discharged and his nearest relative is agreeable, the medical officer in charge is to discharge him provided he is satisfied that he will not be dangerous to himself or others, and the home to which he will be released is suitable.

The new Act is to come into force on a date to be fixed by proclamation of the Lieutenant Governor.

An Act to Amend The Marriage Act

The Marriage Act prohibited any person who was a mental defective or who was suffering from a mental illness as defined by The Mental Hygiene Act, from marrying. Since the expression "mental defective" was changed to "mentally retarded person" in The Mental Health Act, 1961, The Marriage Act was amended by substituting the expression "mentally retarded person" for "mental defective" and the expression "The Mental Health Act, 1961," for "The Mental Hygiene Act".

This Act comes into force upon a date to be fixed by proclamation of the Lieutenant Governor.

The Radiological Health Act, 1961

This new Act applies to the use of ionizing radiation emitted by manufactured radiation equipment for industrial, scientific, diagnostic or treatment purposes. Most of the provisions apply to persons occupa-

tionally exposed to ionizing radiation but several provisions apply to patients and other persons. The purpose of the Act is to protect these persons from the harmful effects of unnecessary ionizing radiation.

Provision is made in the Act for each person in control of radiation equipment to furnish the Minister of Public Health annually with a statement setting forth the particulars of such radiation equipment. Another section provides that the establishment of a radiation installation for industrial purposes is subject to the approval of the Minister of Public Health. Persons in control of the possession and use of radiation equipment are required to be qualified in accordance with the provisions of the Act. The use of a fluoroscope as an aid in selling footwear to any person is prohibited. The Act prohibits any person who is under 18 years of age or any person who is known to be pregnant from becoming regularly exposed to ionizing radiation during the course of regular duties or in carrying out professional activities.

Provision is made for the Minister to employ staff for the purpose of providing consultative services to persons in control of the possession and use of radiation equipment. The Minister is authorized to appoint a professional advisory committee to be known as the "Radiological Health Committee" which is to advise him concerning all aspects of protection against the hazards of ionizing radiation emitted by radiation equipment and is to prepare a code of recommended practice for the guidance of persons in control of the possession and use of radiation equipment. Other specific duties are also assigned to this committee.

A number of general provisions require persons in control of radiation equipment to cause the equipment to be operated so that persons affected by reason of their occupation, patients and other people, will not be unnecessarily exposed to ionizing radiation. It is specifically provided that in the operation of radiation equipment, no person in the vicinity of the equipment other than the patient or equipment operator shall be exposed in excess of one-tenth of the maximum permissible dose. The expression "maximum permissible dose" is to be defined by regulation.

The Act applies to Her Majesty, the Queen.

The Act is to come into force upon a date to be fixed by proclamation of the Lieutenant Governor.

An Act to Amend The Union Hospital Act

The Act makes provision for additional board members to be appointed so that the total number of board members would be three in those cases where the total number of board members would otherwise only be one or two. In these cases, the third member of the Board is to be appointed by the other two members. An amendment authorizes the Minister of Public Health to appoint the third member where the other two members are unable to agree as to the person to be appointed.

Another amendment authorizes a municipality to transfer real or personal property, including a hospital, to a union hospital board by way of gift.

The Act had provided that a union hospital board could invest its surplus funds in its own debentures or in bonds of the federal or provincial government. An amendment extended the classes of investments which could be made to the investments specified in section 3 of The Trustee Act.

An Act to amend The Cancer Control Act

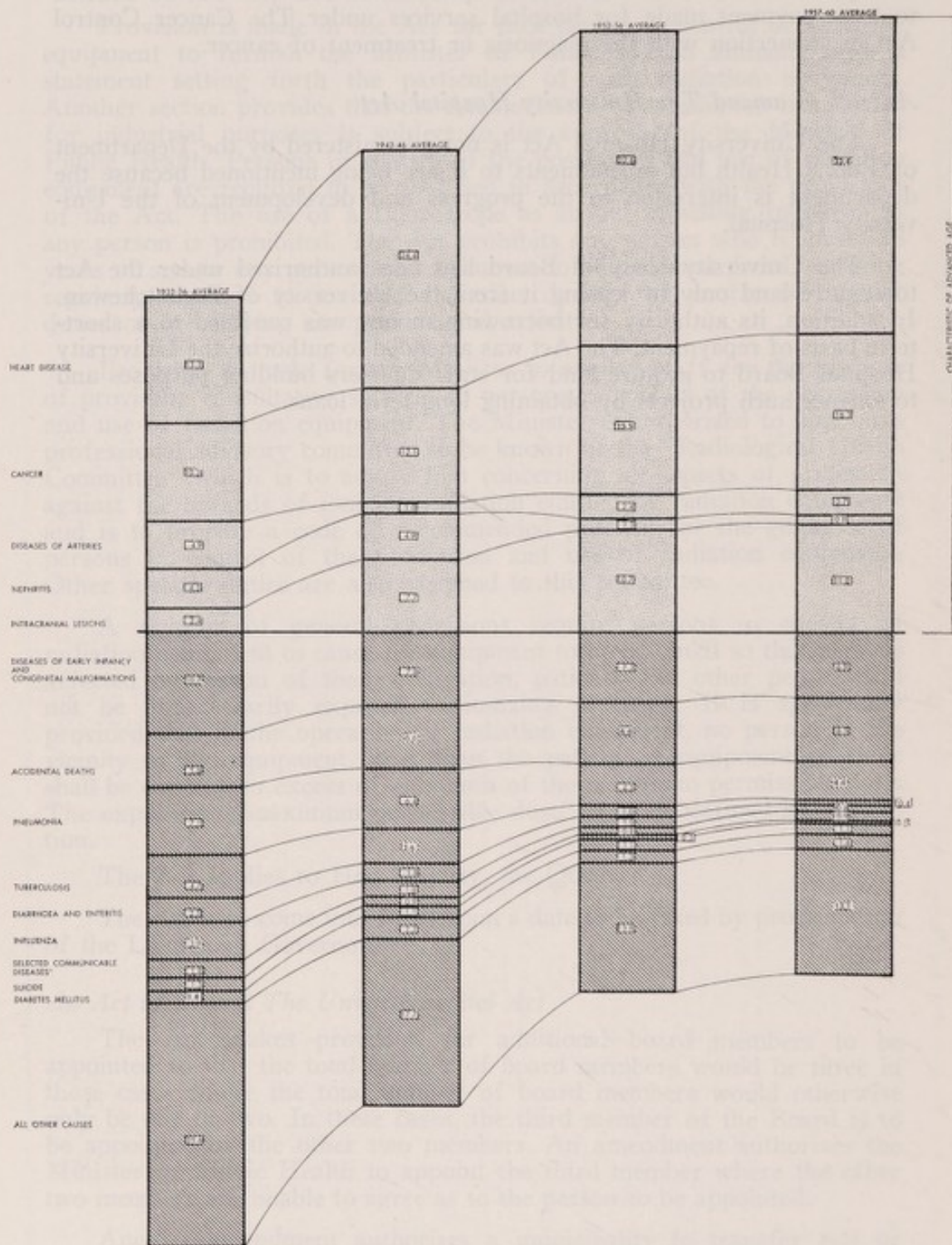
The only amendment is to provide that a person who is not a beneficiary under The Saskatchewan Hospitalization Act will not be entitled to have payment made for hospital services under The Cancer Control Act in connection with the diagnosis or treatment of cancer.

An Act to amend The University Hospital Act

The University Hospital Act is not administered by the Department of Public Health but amendments to it are being mentioned because the department is interested in the progress and development of the University Hospital.

The University Hospital Board had been authorized under the Act to acquire land only by leasing it from the University of Saskatchewan. In addition, its authority for borrowing money was confined to a short-term basis of repayment. The Act was amended to authorize the University Hospital Board to acquire land for staff quarters building purposes and to finance such projects by obtaining long-term loans.

FIGURE 2. PERCENTAGE DISTRIBUTION OF PRINCIPAL CAUSES OF DEATH, SASKATCHEWAN, 1932 TO 1936, 1942 TO 1946, 1952 TO 1956 AND 1957 TO 1960, AVERAGES COMPARED



SOURCE: ANNUAL REPORTS, DIVISION OF VITAL STATISTICS, DEPARTMENT OF PUBLIC HEALTH *TYPHOUS FEVER, DYSENTERY, SHIGELLA AND SHARLET FEVER

REGIONAL HEALTH SERVICES BRANCH

When the notice of establishment of the Saskatoon Rural Health Region was published by the Minister in April, 1961, the regionalization of public health services in Saskatchewan was complete, and the entire population of the province has available to it a modern public health service provided by trained full-time staff. The two main cities, Regina and Saskatoon, have their own autonomous health departments.

Regionalization was conceived because no urban nor rural community, by itself, apart from Regina and Saskatoon, was large enough to support effective preventive services. The following table shows the development of health regions since the first two were established in 1945.

<i>Name and number of health region</i>	<i>Date of establishment</i>	<i>Population</i>
Swift Current Health Region No. 1	Dec. 11, 1945	54,716
Weyburn-Estevan Health Region No. 3	Dec. 11, 1945	56,194
Moose Jaw Health Region No. 6	May 16, 1946	53,311
Assiniboia-Gravelbourg Health Region No. 2	May 26, 1947	27,850
North Battleford Health Region No. 13	Aug. 9, 1947	76,603
Prince Albert Health Region No. 12	Feb. 1, 1951	67,083
Regina Rural Health Region No. 5	Dec. 1, 1952	77,578
Rosetown-Biggar-Kindersley Health Region No. 7	May 1, 1957	52,966
Yorkton-Melville Health Region No. 10	Dec. 1, 1957	83,587
Melfort-Tisdale Health Region No. 11	Jan. 1, 1959	53,530
Humboldt-Wadena Health Region No. 9	Feb. 1, 1960	47,527
Saskatoon Rural Health Region No. 8	Apr. 10, 1961	38,104

Regional Boards of Health

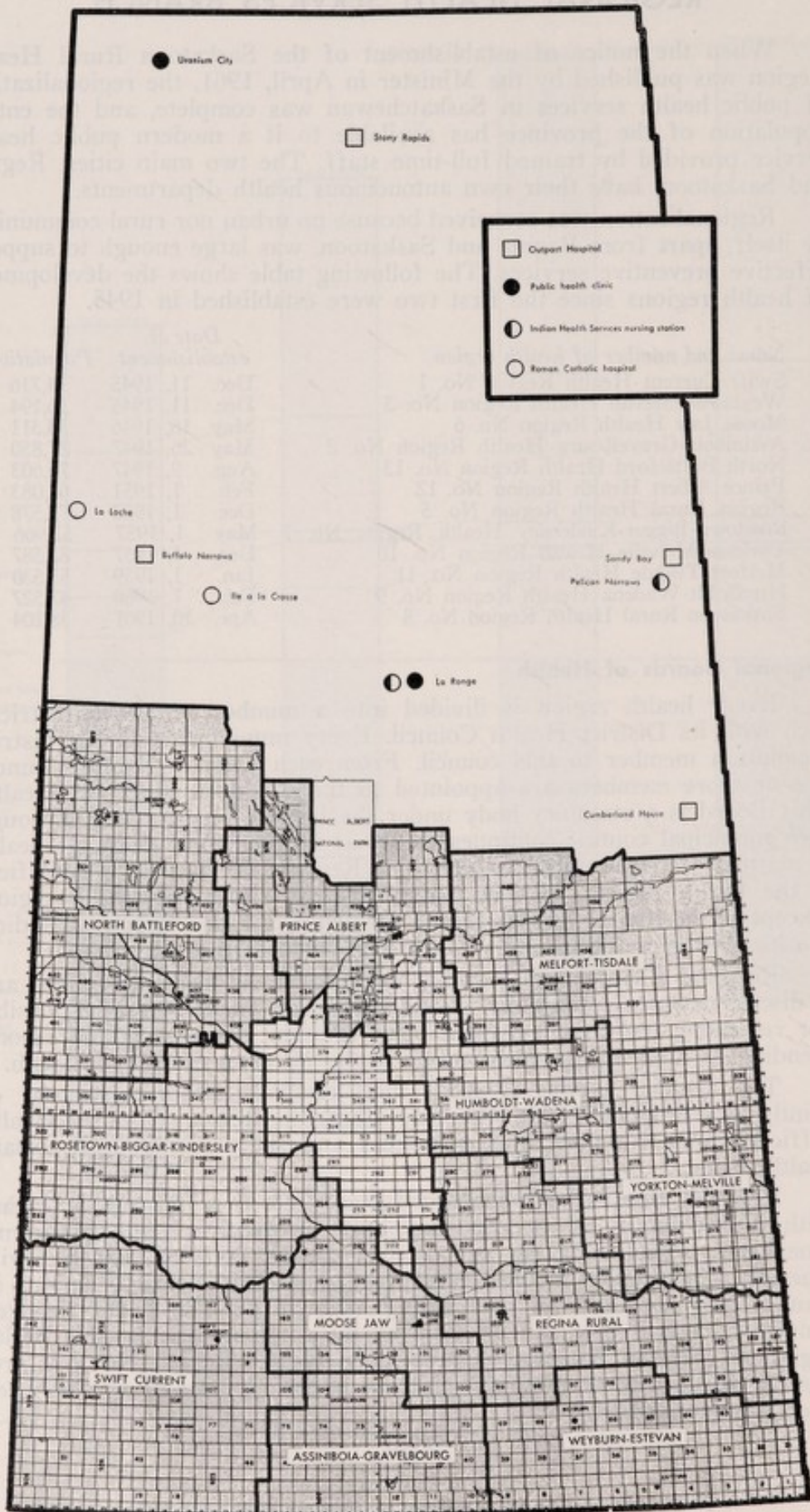
Every health region is divided into a number of health districts, each with its District Health Council. Every municipality in the district appoints a member to this council. From each District Health Council, one or more members are appointed to the Regional Board of Health. This Board is a statutory body under the Health Services Act, although each municipal council continues to act as its own local board of health in matters of purely local concern. The Regional Medical Health Officer is the health officer for every municipality within the health region. Except in the Swift Current Health Region No. 1, the Regional Medical Health Officer is the secretary to the Regional Board of Health.

Regional Boards meet monthly to review their health programs and to discuss new projects with their health officers. They are also responsible for reviewing the budget prepared for the next fiscal year and recommending its approval or modification to the Minister of Public Health.

The District Health Councils meet annually either separately, or jointly, as a Regional Health Council, to hear the Regional Medical Health Officer's annual report, and to discuss and share views on important health issues.

Regional Boards have concerned themselves over the past 15 years with the evolution of modern community preventive health programs. One health region only has supported a curative service, namely Swift Current. The prepaid medical care program of this Board is unique in Canada and has been an outstanding example of how public-financed universal medical care can be supplied by a community. In this health region and in the Assiniboia-Gravelbourg Health Region No. 2 a preventive dental care program for children under 12 years of age has been successfully operated.

FIGURE 3. ORGANIZED HEALTH REGIONS AND PUBLIC HEALTH SERVICES IN NORTHERN AREAS, SASKATCHEWAN, AT MARCH 31, 1961



Regionalization and Medical Care

With the approaching advent of a provincial medical care program with universal coverage, the potential responsibilities and interests of Regional Boards of Health are changing. Members of the Boards have a unique relationship to local government and with their varied experiences, they have a part to play in ensuring that the most effective system of health care services will evolve in the province.

An inter-regional conference of Regional Boards of Health was convened (for the first time in their history) in November, 1960, in order that members might discuss and exchange views on how they could best assist in the application of modern advances in medical and public health services, to meet the health needs of the people.¹ The two-day conference was attended by 46 delegates, representing all the Regional Boards of Health. They were fortunate to have as their expert, Dr. John B. Grant, a leading international consultant on regionalization of health services.

There were two main outcomes of a successful conference. The first was the decision to form a continuing committee to which each Board nominated its chairman or, alternatively, a member. The second was that the continuing committee would, as a first task prepare a brief for presentation to the Advisory Planning Committee on Medical Care (Thompson Committee). This brief was subsequently presented to the Committee at a public hearing in February, 1961.

To illustrate the serious and advanced thinking of the Board members, it is not out of place to record here the conclusion and summary of the recommendations made in their brief to the Thompson Committee.

The Regional Boards of Health of Saskatchewan in this submission record the substantial development of preventive public health services through the successive formation of multi-municipal health regions. Some of the regions undertook to organize extended programs—specifically in the field of prepaid medical care and dental care for children.

“At the same time, a number of important programs of health service have emerged on a province-wide basis, in which the regions have been interested but not directly involved with any formal responsibilities.

“It is concluded that the history of these health programs, taken together reveals uneven rates of growth and a large degree of separateness in their development. This is reflected in the inability to achieve a truly effective co-ordination of health services at the regional level.

“Moreover, the Boards recognize the large degree of interdependence of problems of health and welfare. It is emphasized that these problems can only be solved by the intimate association of health and welfare services at the regional and provincial level.

“It is recommended, therefore, that with the establishment of a comprehensive health service in Saskatchewan, a group of health and welfare regions should be established across the province. It is further recommended that, to achieve effective central co-ordination, the Departments of Public Health and Social Welfare and Rehabilitation be combined.

¹ The proceedings of this conference entitled “Regionalization of Health Services in Saskatchewan” November 9-10, 1960, (processed) are available from the Department of Public Health, Regina.

"The Regional Boards understand that the underlying objectives of a provincial health service are the promotion of health and well-being, the prevention of disease and disability, the diagnosis and treatment of sickness and injury, and the rehabilitation and restoration as far as possible of persons disabled by disease or injury.

"These objectives imply more than a mere program of 'sickness insurance'. It must embrace other essential functions including, the training of health personnel, the provision of adequate health facilities, the promotion of high standards, and the establishment of a co-ordinated organization of services to achieve economy and efficiency.

"Basic principles that logically follow from the underlying objectives of a health service include:

- a. Universal coverage of the population.
- b. Comprehensive range of benefits, staged as necessary over a period of time.
- c. Major emphasis on prevention.
- d. Maintenance of high standards and quality of services.
- e. Public responsibility for administration based on close partnership of those receiving and those providing services.
- f. Promotion of professional education.
- g. Promotion of health education of the public.
- h. Regionalization of services with increasing degree of decentralization.

"The Regional Boards stress the basic importance of the concept of regionalization which is defined 'as the organization and co-ordination of all health resources and services within a defined area for the purpose of maintaining the highest possible level of medical care and adapting a comprehensive health program to the needs of the area'.

"While this concept involves the proposal for a system of integrated health and welfare regions, the Regional Boards are not prepared, at this stage, to specify in detail the organizational aspects of this proposal. Reference is made in this submission to the need for an intensive study of the appropriate size of the regions, the provincial-regional distribution of responsibilities, the form of representation on the boards, economic and financial relationships and related matters. Certain proposals, however, on the distribution of functions between the regional and provincial bodies and on the matter of board representation are included in this submission.

"The Regional Board members propose to continue their discussions of this whole subject."

Public Health Personnel

More and more emphasis is being placed on the need for teamwork to promote a successful health program. The regional team, headed by a qualified public health physician, must include public health nurses, sanitary officers, a nutritionist, an educational psychologist, a health educator, a dental hygienist and her assistant, a regional fieldman and clerical staff. Most of the health regions now have a fully trained staff, but there is still a serious shortage of nutritionists, educational psychologists, and dental hygienists. There is also a more rapid turnover of Regional Medical Health Officers than is desirable, and there is a reluctance on the part of Canadian physicians to train in public health. This state of affairs will continue until the education of medical students is better orientated to the field of social and preventive medicine. It is encouraging to be able to state that the College of Medicine, University of Saskatchewan, has now begun this task.

Public Health Nurses

Last year's report stressed the increasing volume of traditional public health nursing services and the continuing expansion of the variety and scope of these services. These upward trends have been maintained. There has been, for example, a notable increase in the volume of the sodium fluoride tablet program for expectant mothers and preschool children. During 1960, over 200,000 fourth dose or booster injections of Salk poliomyelitis vaccine were given across the province.

A new project, the examination of babies for phenylketonuria has become routine in several health regions.

At the same time, the ratio of public health nurses to population has remained constant. The ratio of one nurse to 5,000 people is baseless now and will be more so as the field of home care is entered and with the further integration of preventive, curative and rehabilitative medicine with its consequent linking of hospital, clinic and family physician.

The comparative analysis of nursing activities over the last three years is shown in Table 3. It will be seen that the upward trend continues, due in part not only to the recent formation of a new health region, but also to increased public demand.

Prenatal Services

These services do not include any basic medical prenatal care, which is done solely by family physicians and obstetricians. The purpose of the prenatal classes is to complement the work of the practitioner and the obstetrician by providing an understanding of the principles of maternal health. Expectant mothers attend such organized classes only with the permission of their own physician. Physicians and hospital personnel generally co-operate well in this program and attendance figures in 1960-61 were 3,985 at 651 classes compared with an attendance of 3,679 at 599 classes in 1959-60.

Child Health Conferences

Total attendances were 127,500, an increase over last year's figures. At these conferences basic preventive care is available for infants and children under school age, and mothers seek advice and are given guidance in the healthy upbringing of their children.

Immunization Services

The number of inoculations given by public health nurses was over 400,000, almost double those of last year (Table 4). The increase was largely due to the offering of a fourth dose of Salk vaccine to all under the age of 40 years. As a result of the drive which began in 1959, it is calculated that by the end of December, 1960, 97.8 per cent of children under 16 years have been given protection against poliomyelitis and 69.1 per cent of adults between 17 and 40 years of age.

Demonstration of Oral Trivalent Poliovirus (Sabin) Vaccine in Prince Albert

A joint project of the Connaught Medical Research Laboratories and the Saskatchewan Department of Public Health to demonstrate the safety and the efficacy of the Canadian manufactured Sabin vaccine was

carried out at Prince Albert. This demonstration was one of the field trials required in Canada as a prerequisite for the licensing of the vaccine.

The feeding program in Prince Albert was carried out between February 27 and March 7, 1961, while the collections of blood samples for antibody assay, and of stool specimens for virus assay, began on January 18 and were completed on April 22, 1961. Although the final results of the trial have not yet been published the indications are that it has fulfilled its objective.

The occasion of this trial was opportune for the Department of Public Health and the Prince Albert Health Region to demonstrate the value of a carefully planned program in which the local medical society, the voluntary organizations, the press, radio and television services of Prince Albert all played their parts. Of the city's population of 22,905, 94.5 per cent received the vaccine, and more than the required 600 volunteers came forward to give blood and stool specimens.

Rheumatic Fever Prophylaxis Program

This program began in the Moose Jaw Health Region in 1954 and has now spread to all health regions as well as the cities of Regina and Saskatoon.

The objectives of this program are the identification and verification of cases of rheumatic fever by regional prophylaxis committees and the provision of continuous penicillin to prevent streptococcal infection and subsequent heart damage. Periodic visiting by public health nurses to ensure follow-up by the family physician and to maintain supplies of oral penicillin is a basic element of this program. On March 31, 1961, a total of 660 rheumatic fever patients were candidates under this program, receiving a daily dose of 400,000 units of oral penicillin.

During this fiscal year, a provincial Rheumatic Fever Prophylaxis Committee was established jointly by the Department of Public Health and the College of Physicians and Surgeons. This committee under the chairmanship of Dr. F. C. Heal and the secretaryship of Dr. S. C. Best will study uniform reporting of new cases, recommended procedure of review of new cases and their follow-up, the collection of uniform statistical data on coverage, recurrence rates and end results, the development of a special consultative service for problem cases, and the encouragement of clinical and epidemiological research.

Regional Conferences on Aging and Long-Term Illness

Since the government set up in 1959 a survey committee to study the problems of the aged and long-term illness, regional conferences have been held in the following areas:

- North Battleford Health Region No. 13
- Moose Jaw Health Region No. 6
- Humboldt-Wadena Health Region No. 9
- Yorkton-Melville Health Region No. 10
- Regina Rural Health Region No. 5
- Swift Current Health Region No. 1
- Assiniboia-Gravelbourg Health Region No. 2

These conferences studied such problems from social, economic and health points of view and in particular they studied ways and means of solving the problems in their own areas. The immediate outcome of each conference was the formation of a community committee to continue these

studies. Members of the committees include senior citizens, members of voluntary organizations, clergymen and many others. The health region staffs have played a major part in organizing these conferences. It is obvious from these meetings that there is a growing appreciation that many of the problems of old age and chronic illness can and should be solved by the individual, the family or the local community, and that there are many approaches to solving them once they have been identified.

Water and Sewerage

Details of the progress in developing and improving the water and sewerage systems of smaller towns and villages are given in the section of the report dealing with sanitation services.

Shortage of good quality ground water is a perennial problem and it is likely that the ultimate solution will be the transportation of water by long distance pipes, although this will be an expensive undertaking. A second development may have to be the demineralization of water supplies which are otherwise not potable.

General Sanitation

With the formation of Saskatoon Rural Health Region No. 8, the Division of Sanitation has now no directive supervision over environmental sanitation services in the province. The main functions of the division are consultative to the regions as well as the major urban centres in matters of water, sewerage, milk quality control, and in relation to sanitary engineering.

Preventive Dental Services

The two health regions which have elected to carry on a preventive dental service for children are handicapped by shortage and too rapid turnover of staff.

There were five dental hygienists at the beginning of the year, and now there are only two, to carry on education and preventive programs in schools and child health clinics.

Suggestions for overcoming the public and professional apathy to prevention of dental caries are discussed in another section of the report.

Fluoridation of communal water supplies has been supplied by the councils of seven additional towns. There are now 18 urban centres with a total population of 165,335 which have the benefit of fluoridation that is in effect a dietary supplement essential for the prevention of dental decay.

The free issue of fluoride tablets to expectant mothers and pre-school children living in areas with no communal water supplies that could be fluoridated is now offered in all health regions and the response has been good. This service which is of great potential value for children in rural areas is fully discussed in the section on Dental Health Services.

Nutrition Services

As in previous years the efficiency of the Nutrition Division has suffered through lack of staff. Six health regions only had a nutritionist and for the last six months of the year there was no divisional director.

Consultant services to other government departments and agencies continued to increase. Animal feeding demonstrations and distribution of nutrition literature at the Teachers' College resulted in an increased interest by young teachers in teaching the subject in their classrooms.

Nutrition and dental surveys on groups of school children, and a report on school lunches, were completed in the year.

Northern Health District

The district covers approximately the northern half of the province and although nearly 119,000 square miles in area, almost one-quarter is under water. The estimated population for 1960 was 19,000 and the recent ratio of approximately 9,000 White persons with the balance divided almost equally between Treaty Indians and Metis, is no longer valid due to the sharp decrease in mining activities. In spite of an extremely low population density however, the fairly recent introduction of centralized health, education, trading and occupational facilities and opportunities, has resulted in considerable urbanization.

Prince Albert serves as the headquarters for this division and is a logical choice since it is a base for two air services, the headquarters of the Radio Division operated by the Department of Natural Resources, and the few roads leading into the area have their origin there. From Prince Albert, the medical health officer, nursing supervisor and senior sanitary officer make periodic visits over the entire area. Two physicians are employed by the department (one position vacant most of the current fiscal year) and are stationed at Ile a la Crosse, from where they make frequent visits to neighboring settlements. The remaining nursing and ancillary staff are stationed at six widely separated centres, so that few areas are left entirely without some service.

In addition to the usual preventive, sanitation and health educational services provided in a health region, this division provides directly many basic treatment services for residents of the Northern Saskatchewan Administration District. Minor illnesses, accidents and uncomplicated maternity cases are cared for at the four outpost hospitals and at St. Martin's Hospital at La Loche. Slightly more complicated conditions are treated at St. Joseph's Hospital at Ile a la Crosse, at the Municipal Hospital in Uranium City and at the La Ronge Hospital, but the serious conditions from the entire area are transported to outside medical centres with the arrangements in the majority of cases being made through the Prince Albert office.

Further information concerning health services for medically indigent non-Treaty patients will be found in the Medical Services Division and Air Ambulance Service sections of this report, and in the Northern Affairs Branch section of the annual report of the Department of Natural Resources.

Outpost hospitals are operated at the following settlements:

1. *Buffalo Narrows*—was opened in 1947 and due to increasing activity, a nurses' aide was added to the staff in 1957. With the population of this area continuing to increase, present facilities are inadequate and plans are underway to enlarge the building and to increase the staff.

2. *Cumberland House*—was opened in 1941 and the services at this centre tend to fluctuate from year to year, with no definite trend becoming established.

3. *Sandy Bay*—was opened in 1950. After declining gradually since the nursing station opened at Pelican Narrows in 1956, there was a considerable increase in services this year.

4. *Stony Rapids*—was opened in 1948 and serves principally Treaty Indians. The volume of services is continuing to increase gradually and may soon equal those provided at Sandy Bay or Cumberland House.

In addition, there are public health clinics in two centres:

1. *Uranium City*—the excellent accommodation rented in the Municipal Hospital is shared with Indian Health Services and this agency again has a full-time nurse stationed there. Both nurses work together closely in providing services not only in the Municipal Corporation of Uranium City and district but to neighboring settlements such as Camsell Portage and Fond du Lac, and the Indian Health Services nurse also visits Stony Rapids.

2. *La Ronge*—is a busy centre and the public health nurse stationed there serves the central and northeastern part of the Northern Health District. On many of her trips, she travels with an Indian Health Services nurse who is also stationed in La Ronge and shares clinic accommodation in the hospital. The La Ronge hospital has been in operation for over one year and although meeting a long awaited need, it is large enough so that the present occupancy rate is moderate.

Hospital facilities and their locations in the Northern Health District as at March 31, 1961 were as follows:

Settlement	Estimated population in area	Name of hospital	Ownership	Bed capacity	Physician supply	Nurse supply
Buffalo Narrows	875	Outpost ¹	Department	3	—	1
Cumberland House	750	Outpost	Department	3	—	1
Ile a la Crosse	1,550	St. Joseph's	Roman Catholic	35	1 ²	8
La Loche	1,000	St. Martin's ³	Roman Catholic	9	—	2
La Ronge	1,650	La Ronge Hospital	Department ⁴	25	1	6
Pelican Narrows	500	Nursing Station	Indian Health Services	4	—	2
Sandy Bay	550	Outpost	Department	3	—	1
Stony Rapids	350	Outpost	Department	3	—	1
Uranium City	3,000	Municipal	Municipal Corporation	26	2	7
		Gunnar	Gunnar Mining	7	1	3

No report of health services in northern Saskatchewan would be complete without paying tribute to the activities of the Canadian Junior Red Cross. Beginning in the fall of 1957, this organization has sponsored and paid for most of the cost of semi-annual dental clinics for school children, held each spring and fall in Ile a la Crosse and Cumberland House. This demonstration project is to extend over a five-year period and there has been a remarkable increase in the number of caries-free children. Each year, some children are sent to Regina for the treatment of conditions such as congenital dislocation of the hip which occurs frequently in northern Saskatchewan, harelip and cleft palate, and the occasional serious burn.

¹ Outposts are small hospitals owned by the Department of Public Health, with nurse-midwives in charge.

² Position for a second physician for the Ile a la Crosse area was vacant most of the year.

³ This frame hospital constructed in 1950 is totally inadequate and preliminary plans are underway for replacement.

⁴ Operated locally by the Lac La Ronge Hospital Association.

TABLE 1. PUBLIC HEALTH STAFF EMPLOYED IN REGIONAL HEALTH SERVICES BRANCH, HEALTH REGIONS AND NORTHERN HEALTH DISTRICT BY TYPE OF STAFF, SASKATCHEWAN, MARCH 31, 1961

Staff	Provincial total	Regional Health Services Branch Head Office	Health region										Northern Health District	
			Swift Current No. 1	Assiniboia-Gravelbourg No. 2	Weyburn-Estevan No. 3	Regina Rural No. 5	Moose Jaw No. 6	Rosetown-Biggart-Kindersley No. 7	Humboldt-Wadena No. 9	Yorkton-Melville No. 10	Melfort-Tisdale No. 11	Prince Albert No. 12		North Battleford No. 13
Total staff.....	221	6	17	8	21	14	18	20	17	25	18	10	27	20
Director.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Regional medical health officer.....	10	1	1	1	1	1	1	1	1	1	1	1	1	1
Assistant regional medical health officer.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Medical officer.....	11	1	1	1	1	1	1	1	1	1	1	1	1	1
Senior sanitary officer.....	34	1	1	1	1	1	1	1	1	1	1	1	1	1
Sanitary officer.....	11	1	1	1	1	1	1	1	1	1	1	1	1	1
Regional nursing supervisor.....	6	1	1	1	1	1	1	1	1	1	1	1	1	1
Public health nurse II.....	86	1	1	1	1	1	1	1	1	1	1	1	1	1
Public health nurse I.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Part-time public health nurse.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nursing supervisor.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nurse attendant.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Supervisor, outpost hospital.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1
Health educator.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Health region fieldman.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Administrative officer I.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Teacher psychologist.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Domestic staff.....	8	1	1	1	1	1	1	1	1	1	1	1	1	1
Clerical staff.....	37	3	2	4	4	3	4	3	3	3	3	3	3	3

TABLE 2. PUBLIC HEALTH STAFF ESTABLISHMENT AND VACANCIES IN REGIONAL HEALTH SERVICES BRANCH, SASKATCHEWAN, MARCH 31, 1961

Staff	Provincial total	
	Establishment	Vacancies
Total staff.....	260	39
Director.....	1	....
Regional medical health officer.....	12	2
Assistant regional medical health officer.....	3	1
Medical officer.....	3	1
Senior sanitary officer.....	11	....
Sanitary officer.....	34	....
Regional nursing supervisor.....	11	....
Public health nurse II.....	10	4
Public health nurse I.....	98	12
Part-time public health nurse.....	2	....
Nursing supervisor.....	1	....
Nurse attendant.....	1	....
Supervisor, outpost hospital.....	4	....
Health educator.....	2	1
Health region fieldman.....	5	3
Administrative officer I.....	1	....
Teacher psychologist.....	4	3
Domestic staff.....	8	....
Clerical staff.....	41	4
Dental hygienist.....	4	4
Dental hygienist assistant.....	2	2
Nutritionist.....	2	2

TABLE 3. PUBLIC HEALTH NURSING PROGRAMS BY SELECTED SERVICES FOR SASKATCHEWAN HEALTH REGIONS, FISCAL YEARS, 1958-59 TO 1960-61

Services	Fiscal year		
	1958-59	1959-60	1960-61
Home visits.....	25,344	32,727	33,455
Prenatal.....	1,325	3,460	4,518
Postnatal.....	5,406	6,688	7,019
Other.....	18,613	22,579	21,918
Attendance at child health conferences.....	119,056	123,460	122,748
Number of visits to classrooms.....	6,186	9,333	9,505
Prenatal classes			
Number of classes.....	337	599	628
Attendance.....	1,885	3,679	3,863
Immunization (number of inoculations).....	290,717	209,484	393,594
Calls on doctors, school officials, etc.....	14,571	14,694	12,610
Group education meetings.....	649	848	1,012

TABLE 4. PUBLIC HEALTH NURSING SERVICES IN THE ORGANIZED HEALTH REGIONS AND IN NURSING SERVICES DISTRICTS, SASKATCHEWAN, FISCAL YEAR 1960-61

Type of service	Provincial Total	Regional total	Health region										Nursing services district				
			Swift Current No. 1	Assiniboia-Gravelbourg No. 2	Weyburn-Estevan No. 3	Regina Rural No. 5	Moose Jaw No. 6	Rosetown-Biggar-Kindersley No. 7	Humboldt-Wadena No. 9	Yorkton-Melville No. 10	Melfort-Tisdale No. 11	Prince Albert No. 12		North Battleford No. 13			
Visits																	
Total home visits.....	34,541	33,455	3,052	1,041	2,792	4,126	2,834	2,954	2,190	4,422	1,443	4,122	4,479	1,086			
Child health conferences.....	11,852	11,519	1,185	369	991	1,648	1,115	1,246	612	1,060	710	1,189	1,394	333			
Prenatal program																	
Mothers seen in home.....	3,479	3,435	297	166	267	601	102	496	39	202	57	433	775	44			
Prenatal home visits.....	4,589	4,518	448	166	346	766	133	688	40	299	73	535	1,024	71			
Prenatal classes.....	651	628	100	.....	36	76	71	40	.....	96	87	57	65	23			
Aggregate attendances.....	3,985	3,863	707	.....	218	328	739	258	.....	591	420	230	372	122			
Postnatal program																	
Home visits.....	7,098	7,019	794	417	678	416	1,219	383	24	478	130	1,443	1,037	79			
Infant child health services																	
Infants registered at a Child Health Centre.....	18,152	17,614	1,645	770	1,836	1,939	1,747	1,848	1,017	1,793	920	1,777	2,322	538			
Aggregate attendances.....	55,349	53,405	6,120	2,114	5,126	6,274	5,000	5,577	2,587	5,508	2,709	5,714	6,676	1,944			
Preschool child services																	
Children registered at a Child Health Centre.....	34,908	34,040	3,608	1,241	4,651	4,049	2,785	4,946	1,879	2,279	1,465	3,084	4,053	868			
Aggregate attendance.....	72,222	69,343	8,156	1,666	6,633	8,795	4,631	7,794	3,754	7,727	5,097	7,374	7,716	2,879			
School child services																	
Classroom visits.....	9,733	9,505	1,111	288	625	955	788	686	867	423	918	2,001	843	228			
Medical school conferences with R.M.H.O.....	1,093	1,093	.....	.....	27	46	22	1	7	.....	28	.....	962	.....		
Miscellaneous services																	
Calls on officials, doctors, etc.....	13,343	12,610	1,063	271	1,049	2,081	895	978	460	2,027	609	1,960	1,217	733			

Home visits to cases of mental illness.....	473	459	33	61	62	43	14	59	3	52	12	17	103	14
Home visits to the physically handicapped.....	1,238	1,209	98	6	95	64	92	76	44	266	107	142	219	29
Group education services														
Meetings attended.....	1,051	1,012	70	8	43	144	135	47	48	242	120	35	120	39
Immunization														
Smallpox-primary.....	20,243	19,280	1,227	565	1,333	2,080	1,870	3,130	2,477	1,682	1,748	1,732	1,436	963
Smallpox-revaccination.....	20,483	20,236	2,061	140	2,811	2,539	1,106	3,005	2,590	870	625	3,508	981	247
Diphtheria-pertussis-tetanus-poliomyelitis														
First dose.....	17,258	16,424	1,488	623	1,718	1,597	1,551	1,346	1,382	1,696	1,173	1,845	2,185	654
Second dose.....	15,943	15,231	1,397	619	1,424	1,596	1,464	1,344	904	1,652	1,025	1,745	2,087	686
Third dose.....	16,768	15,987	1,572	606	1,713	1,626	1,393	1,470	817	1,726	982	1,918	2,258	687
Booster dose.....	69,691	63,103	4,876	672	6,449	13,244	3,253	6,383	9,539	3,936	1,501	8,023	9,657	2,158
Diphtheria-pertussis-tetanus														
First dose.....	1,908	1,834	78	14	55	27	114	375	233	162	358	373	45	74
Second dose.....	2,186	2,091	36	19	19	24	115	391	452	163	467	322	83	95
Third dose.....	2,552	2,450	91	115	26	30	134	344	303	177	784	375	71	102
Booster dose.....	11,554	11,198	892	757	489	101	1,832	1,693	451	1,337	1,909	1,484	253	356
Poliomyelitis														
First dose.....	20,658	19,431	1,089	573	865	1,210	2,221	656	654	2,964	6,850	1,800	1,228	548
Second dose.....	18,501	17,925	894	404	637	1,018	1,734	692	635	2,611	7,151	1,265	909	551
Third dose.....	21,011	20,030	1,722	642	871	1,024	1,546	1,687	1,055	2,194	6,154	2,308	992	816
Booster dose.....	195,529	168,374	17,071	12,484	17,460	13,709	21,183	15,193	10,753	26,218	11,587	18,147	21,510	10,214

TABLE 5. SANITATION SERVICES, SASKATCHEWAN, FISCAL YEARS 1958-59 TO 1960-61

Type of service	Fiscal year		
	1958-59	1959-60	1960-61
All inspections.....	69,025	77,634	86,008
Water supplies			
Municipal waterworks systems.....	506	577	714
Municipal water supplies.....	2,452	2,707	3,090
Private and other supplies.....	2,322	2,598	3,205
Milk supplies			
Producers.....	633	462	454
Producer-distributors.....	673	557	872
Pasteurizing plants.....	673	856	787
Food stores and slaughter houses			
Slaughter houses.....	481	519	453
Food stores.....	4,863	4,939	4,600
Public places			
Eating establishments.....	10,047	11,166	11,027
Hotels.....	1,580	1,762	1,894
Licensed premises.....	2,557	3,079	3,602
Barber shops.....	911	1,312	1,052
Waste disposal			
Municipal sewerage systems.....	262	425	474
Outdoor privies-private.....	5,846	6,820	7,627
Public rest rooms (municipal responsibility).....	891	1,187	1,398
Other public rest rooms.....	2,036	2,498	2,790
Municipal garbage collection.....	1,510	1,502	1,466
Waste disposal grounds.....	1,839	1,964	2,027
Camps, resorts and swimming pools			
Tourist camps.....	698	576	564
Summer resorts.....	280	326	403
Other camps.....	206	259	275
Swimming pools.....	178	238	341
Schools and institutions			
Schools.....	1,230	1,425	1,651
Hospital and social care.....	222	271	266
Communicable disease control			
Investigations.....	197	155	209
Miscellaneous			
Plumbing inspections.....	7,171	9,098	11,268
Nuisance inspections.....	2,930	3,825	4,322
General.....	15,099	15,696	18,148
Surveys.....	732	835	1,029
Other activities			
Public meetings.....	199	277	346
Council meetings.....	280	271	336
Samples submitted			
Milk-ring tests.....	793	454	1,087
Milk-routine.....	3,131	3,935	3,993
Water.....	5,304	5,689	6,632
Field tests.....	26,304	24,503	31,069
Water.....	2,252	2,731	6,887
Milk sediment.....	2,210	2,145	2,654
Resazurin.....	2,924	3,049	3,607
Swab.....	18,918	16,578	17,921

TABLE 6. EXPENDITURES FOR PUBLIC HEALTH SERVICES BY HEALTH REGIONS, SASKATCHEWAN, 1960-61

Health region	Total expenditures	Expenditure by source			Per capita expenditure
		Provincial	Regional	National health grant	
All health regions.....	\$ 1,490,094.46	\$ 1,014,195.62	\$ 310,104.95	\$ 165,793.89	\$ 2.29
Swift Current No. 1.....	142,422.06	98,868.39	26,148.38	17,405.29	2.60
Assiniboia-Gravelbourg No. 2.....	47,362.56	35,114.64	12,247.92	.....	1.70
Weyburn-Estevan No. 3.....	146,754.60	107,764.15	25,729.50	13,260.95	2.61
Regina Rural No. 5.....	209,226.04	101,457.58	37,376.88	70,391.58	2.70
Moose Jaw No. 6.....	125,218.98	89,390.89	25,486.07	10,342.02	2.35
Rosetown-Biggar-Kindersley No. 7.....	126,932.61	102,824.58	24,108.03	.....	2.40
Humboldt-Wadena No. 9.....	100,127.88	76,364.38	23,763.50	.....	2.11
Yorkton-Melville No. 10.....	154,184.88	108,183.99	40,741.08	5,259.81	1.84
Melfort-Tisdale No. 11.....	110,140.58	84,800.58	25,340.00	.....	2.06
Prince Albert No. 12.....	141,913.89	67,575.92	33,051.56	41,286.41	2.12
North Battleford No. 13.....	185,810.38	141,850.52	36,112.03	7,847.83	2.43

Note: Per capita expenditure based upon population data of 1956 census of Canada.

CHILD AND MATERNAL HEALTH SERVICES

Introduction

The phrase "Child Health" is a short summary of a broad group of interests and functions of the division ranging from preparation for marriage to services for crippled children. The division is primarily a consulting and co-ordinating division, established in 1948, to give special emphasis to the physical, mental, and social well-being of mothers and children. Measures of child health must include rates for such diverse items as divorce and separation, illegitimacy, infant and maternal morbidity and mortality, immunization against poliomyelitis, and clinics for crippled children.

Growing children continue to make up more than two out of five in the entire Saskatchewan population. Thousands of marriages take place each year, and many thousands of babies are born.

Consultation and Co-ordination

College of Physicians and Surgeons of Saskatchewan

The division continues to contribute much work to the maternal and perinatal mortality studies of the College's child and maternal health study committee. Twenty maternal deaths were studied exhaustively and reported anonymously to the College committee. All participating hospitals shared in a 100 per cent return in perinatal mortality reporting. With some 600 stillbirths and early infant deaths, this represents a lot of work and goodwill by many physicians and hospitals.

The division's obstetrician continues as secretary of the committee and the director is a voting member. A new Child Health Committee has been established as well, in line with national developments, and the director is a member of this.

There is an extensive organization of all physicians into groups of 10 or 15, for educational purposes. The director is one of some 50 leaders of these groups.

At the request of the obstetrical section of the College the division prepared a model prenatal record for office and hospital use which was financed using child and maternal health grant funds, and distributed to the entire profession, in consultation with the College of General Practice.

Canadian Paediatric Society

The director was elected president of the Canadian Paediatric Society. As part of his work he visited all but one province, and was chairman of a special committee working very intensively on the future needs of Canadian children, and the training requirements of paediatricians which will be needed so as to best serve Canadian children.

Canadian Conference on Children

The first Canadian Conference on Children took place with some 350 parents and professional workers with children, reviewing statistical studies regarding Canadian children.

The director is a member of the Board of Directors of the Conference, chairman of the Saskatchewan Committee, and was in charge of the project given first priority by the Conference, on group premarital education.

Population Control Committee of the American Public Health Association

The American Public Health Association has established a new committee made up of United States members and the division director.

Conference of Mental Retardation

The Saskatchewan Association for Retarded Children organized the first highly specialized Saskatchewan Conference on Mental Subnormality, for health and welfare workers, to review the needs and resources for retarded children. The division gave much help in the planning and conduct of the conference and obtained child and maternal health grant funds for the speakers.

The nursing consultant continues as a member of the Home Care Committee of the Association.

Co-ordinating Council on Rehabilitation

The Co-ordinating Council on Rehabilitation has organized a number of sections. The director is a member of the scientific committee and of the committee to establish a central registry of disabled people.

Saskatchewan Council for Crippled Children and Adults

The Medical Advisory Committee for the Saskatchewan Council for Crippled Children and Adults meets regularly to plan travelling clinics, teaching, use of consultants, research required and other problems. The director is a member of the Committee.

Pilot Hearing Conservation Program

Primarily this division in the Department of Public Health, the Department of Education, and the University have introduced a pilot program of classroom testing of hearing, referral to local health officers, practising physicians, and the University.

Red Cross Society Committee on Paediatric Beds

The Saskatchewan Division of the Canadian Red Cross Society has undertaken a study of the use of paediatric beds and in particular a special new intensive care unit. The director is a member of the committee.

Roman Catholic Regional Conference on Family Living

The Roman Catholic church has embarked on a program of regional conferences on family life. The director was invited to share in the planning of the first Saskatchewan-Manitoba regional conference, including plans to involve all churches—Roman Catholic and others alike—in the local community.

Canadian Nurses' Association

The nursing consultant is the public health representative on nursing education for the Canadian Nurses' Association.

Child Welfare Branch

The director continues to review special problems for the Child Welfare Branch of the Department of Social Welfare, and helps to interpret the program to the medical profession and to improve over-all quality.

Visitors

During a visit, Miss. Esther Robertson, the nursing consultant in Child and Maternal Health from Ottawa, shared in a special staff conference on normal childhood growth and development, for hospital personnel; and reviewed the possibility of a statistical study of quality of child health conferences.

Mrs. MacKenzie, nursing counsellor for the Nova Scotia Hospital Commission, visited the division. as did members of a Japanese pharmaceutical firm.

Saskatchewan Rheumatic Fever Committee

The Department of Public Health and the College of Physicians and Surgeons of Saskatchewan have established a new co-operative rheumatic fever committee. A leading internist is chairman, and the director is secretary.

Saskatchewan Association for Adult Education

A number of task forces were established for preliminary intensive study of a variety of problems leading up to an annual conference. The division director was a member of a special study group on the family and adult education—to discuss the preparation of children for adulthood, the role of the adult in society, leadership available, and so on.

Special Consultation

In addition to other regular duties, members of the division gave special consultation as requested for hospitals regarding construction or epidemics, local health departments regarding nursing programs, Indian and Northern Health Services regarding staff training and several voluntary health agencies; as well as a variety of government departments.

The division carried major responsibility in Saskatchewan for a scientific survey of hospital maternity and newborn care organized by the Department of National Health and Welfare.

Education*Staff Training*

All members of the division carried a steady program of staff training for hospital nurses, public health nurses, medical officers, laboratory technicians, and others, regarding pregnancy, the nature of childhood, the techniques of interviewing, the significance of pain and hospital admission to children, elements of modern immunization practice and so on.

Postgraduate Training in Paediatrics and Obstetrics

The nursing consultant spends much time in the arranging, recruiting, and supervising of nurses for postgraduate training in paediatrics or obstetrics. Emphasis is placed on the need for especially qualified nurses for all paediatric and obstetric departments in Saskatchewan schools of nursing.

University of Saskatchewan School of Nursing and Department of Social and Preventive Medicine

The division director continues as a lecturer in the department and taught the fundamentals of child and maternal health to degree students and certificate students in public health.

Refresher Courses in Paediatrics, Obstetrics, and Public Health for Physicians

Courses were held in both Regina and Saskatoon. Scores of physicians attended these courses. A special feature was the anonymous presentation of selected maternal deaths.

Rh Manual for Physicians

The Saskatchewan Paediatric Society wrote a brochure for physicians regarding the management of Rh disease. The division director assisted with the writing, editing, and financing (through a child and maternal health grant).

Saskatchewan Registered Nurses' Association

The nursing consultant conducted a series of evening classes for the Association, on request, on paediatric nursing.

Regina Marriage Course

The city-wide course on preparation for marriage (instigated by the director some years ago) has now become a regular and formal part of adult education in the city and continues to be supported by the Mayor and City Council, the Medical Society, the Bar Association, all churches, all social welfare agencies, and a number of voluntary agencies.

Canadian Broadcasting Corporation Program on Health Insurance

The director shared in both radio and TV national programs on health insurance.

Postgraduate Study

The nursing consultant attended a short refresher course in maternal and child health at the University of Minnesota. The medical consultant in maternal health attended a course on human relations.

Research and Special Studies

The division shared in the planning of a new research program for Regina city regarding adenoviruses. This is being carried out by a special

research Fellow paid from a national child and maternal health grant project, and supported by the Medical Society, the Regina General Hospital, and the Provincial Laboratories.

A special study of toxæmia of pregnancy patients admitted to hospital continues.

A special study has been started of all stillbirths, live births, and matched infant deaths for 1960.

Pine House Demonstration Nutrition Project

The special demonstration study initiated two years ago in Pine House has been concluded. All children have been re-examined, a report written for publication; and the community visited once again 6 months after the end of the demonstration. By that time all children who had been eating a noon meal according to Canada's Food Rules during the demonstration had reverted to an earlier pattern of tea, bannock and lard—up to some 25 feedings per week per child.

Respirator Centres

The Respirator Centre in Saskatoon was transferred from St. Paul's Hospital to the University Hospital. The department continues to pay for a medical director to co-ordinate the work of a Centre in Saskatoon and in Regina under the Chief of Medicine.

The following table shows the data for 1960:

*Admissions to Respirator Centres, University Hospital, Saskatoon,
General Hospital, Regina, 1960*

	<i>Regina</i>	<i>Saskatoon</i>
Number of patients	14	25
Number with poliomyelitis	12	24
Number paralytic	10	24
Number tracheotomies	1	8
Number respirators	3	9

Thirty-nine patients were admitted during the year, with considerably more in Saskatoon than Regina. Saskatoon admitted twice as many actual poliomyelitis patients and more than twice as many paralytic patients.

In Saskatoon, tracheotomy was performed much more frequently (8 times) than in Regina (only once). And in Saskatoon patients required respirators three times as often (9), as they did in Regina (3).

Child and Maternal Health Grant

Child and maternal health grant money has been used for refresher courses for doctors and nurses, and for professional people working with retarded children. These funds provide for an obstetrician and a nursing consultant in the Child Health Division, and for such special projects as the Pine House Demonstration project, the initiation of the new four-fold D.P.T. poliomyelitis vaccine, and the Regina city research on adenoviruses. The medical consultant in maternal health visited Alberta to study their perinatal mortality study. Funds were also used for preschool hearing consultation at the University, for preventive ophthalmology and consultation services, and for several paediatric research projects.

COMMUNICABLE DISEASE CONTROL

The division has five functions:

1. It maintains a record of notifiable communicable diseases.
2. It acts as an information centre for doctors and health officers in the field.
3. It sends epidemiological data to the federal authorities.
4. It administers the machinery for the distribution of certain free vaccines and sera to health regions, hospitals and private physicians.
5. It administers the regulations governing the care of the dead.

Administration of Regulations

The division operates under the Regulations Governing Control, Notification, Prevention and Treatment of Communicable Disease. Only important communicable diseases are now reported, although health officers notify the occurrence of unusual disease epidemics of whatever nature.

Incidence

Streptococcal Infections

These infections, which include scarlet fever had a reported incidence of 2,715 in 1960. Last year this was 1,780.

Infectious Hepatitis

There was 704 cases of this virus infection reported during the year. Last year this was 672.

Staphylococcal Infections

Staphylococcal infections arising in hospital during 1960 were 283 cases reported compared to 271 the previous year.

Tuberculosis

Tuberculosis continues to smoulder. In 1960 some 294 cases were reported (216 pulmonary and 78 other forms). In 1959 this figure was 242 (182 pulmonary and 60 other forms.) Deaths in 1959 totalled 28, and this year 34. For more detailed description of this problem see the analysis submitted by the Anti-Tuberculosis League elsewhere in this report.

Gastro-Intestinal Infections

There were 287 cases reported with 62 deaths.

Typhoid and Paratyphoid

Two cases were reported in 1960.

Salmonellae, Bacillary Dysentery, Shigellae Infections

There was a sharp rise in this group in 1960, there being 66 cases reported (no deaths). Only 29 cases were reported the previous year.

Influenza

Several cases (unspecified) were reported.

Poliomyelitis

This disease continues to be a vexatious problem. During the year 55 cases of paralytic poliomyelitis were reported, with 8 deaths. The previous year's figures were 46 cases with 10 deaths.

The effect of the distribution of oral vaccine in Prince Albert at the close of the fiscal year is awaited with interest.

Aseptic Meningitis

Like last year, 11 cases of aseptic meningitis were reported in 1960. There were five deaths.

Diphtheria

Seven cases of diphtheria were reported in 1960 compared to two in the previous year.

Rare Diseases

Two cases of brucellosis, one case of malaria, one of trichinosis, and three cases of mononucleosis were reported in 1960.

Preventive Measures*Poliomyelitis Vaccine Immunization*

This was continued in 1960. The quantities issued are shown in Table 9.

Rheumatic Fever Control Program

This program, designed as a prophylactic measure aimed at counteracting the disabling after effects which commonly occur as a sequel to rheumatic fever, continued in 1960. The table shows the amount of penicillin distributed by this division.

	<i>Code</i>	<i>Description</i>	<i>Number of tablets</i>	<i>Number of units</i>	<i>Cost</i>
Total			—	109,470,669,500	\$11,931.53
	Oral Pentids	12x200,000 unit tablets	31,548	6,309,600,000	2,636.10
	P.G.A.	100x444,250 unit tablets	204,900	91,026,825,000	7,815.25
	P.G.A.	Strips of 14 444,250 unit tablets	27,314	12,134,244,500	969.64
	Parenteral Penicillin	1x2 c.c. disposable syringe	—	254 (vials)	510.54

TABLE 7. POTENTIAL NUMBER OF PERSONS IMMUNIZED AGAINST CERTAIN SELECTED COMMUNICABLE DISEASES, SASKATCHEWAN, 1956-1960

Disease	Five year totals	1956	1957	1958	1959	1960
Diphtheria*	297,421	65,288	44,987	54,398	62,731	70,017
Pertussis*	277,996	57,107	43,277	49,823	59,977	67,812
Scarlet fever	1,547	1,547	.....	.....	.....	.....
Smallpox	501,420	80,510	78,120	114,360	121,710	106,720
Tetanus*	309,260	63,688	47,708	57,548	66,620	73,696
Typhoid fever and typhoid paratyphoid fever*	26,115	6,099	5,958	6,651	4,056	3,351
Poliomyelitis vaccine— with D.P.T.	89,673	.....	.....	.....	32,580	57,093†

* Aggregate constituent parts of several combined antigens in terms of full-course immunization.

† Estimated number of persons; 171,280 c.c. issued.

TABLE 8. REPORTED CASES* AND DEATHS FROM SELECTED NOTIFIABLE COMMUNICABLE

Diseases	1951		1952		1953		1954	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Anthrax.....	.....	.....	.....	.....	.....	.....	.....	.....
Brucellosis.....	3	.....	3	.....	2	.....	7	.....
Diphtheria.....	16	2	7	.....	5	.....	11	.....
Diphtheria carriers.....	1	.....	1	.....	.....	.....	7	.....
Dysentery-amoebic.....	2	.....	2	.....	3	.....	1	1
Dysentery-bacillary.....	60	.....	41	.....	49	.....	54	1
Encephalomyelitis.....	17	2	13	2	12	2	18	2
Erysipelas†.....	.....	.....	.....	.....	.....	.....	.....	.....
Food poisoning.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastro-enteritis.....	22	43	79	39	188	85	165	77
Hepatitis-infectious.....	18	4	99	5	328	2	683	3
Impetigo of the newborn†.....	.....	.....	.....	.....	.....	.....	.....	.....
Influenza.....	3,748	139	134	72	48	63	15	32
Malaria†.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningococcal meningitis.....	16	4	25	7	39	8	17	1
Meningitis, viral or aseptic —other and unspecified.....	.....	.....	.....	.....	.....	.....	.....	.....
Mononucleosis†.....	.....	.....	.....	.....	.....	.....	.....	.....
Pertussis.....	459	14	623	21	387	6	163	.....
Poliomyelitis.....	91	12	1,223	90	1,187	70	196	8
Psittacosis.....	.....	.....	.....	.....	.....	.....	.....	.....
Salmonella.....	.....	.....	.....	.....	.....	.....	.....	.....
Staphylococcal infections.....	.....	.....	.....	.....	.....	.....	.....	.....
Streptococcal infections.....	1,118	5	1,691	2	1,149	3	660	1
Trichinosis.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis.....	451	156	463	104	574	87	561	42
Typhoid and paratyphoid fevers.....	12	2	19	1	10	.....	20	.....
Typhoid carriers.....	2	.....	3	.....	2	.....	.....	.....
Vincent's angina†.....	.....	.....	.....	.....	.....	.....	.....	.....
								Annual
Anthrax.....	.....	.....	.....	.....	.....	.....	.....	.....
Brucellosis.....	0.3	.....	0.3	.....	0.2	.....	0.8	.....
Diphtheria.....	1.9	0.2	0.8	.....	0.6	.....	1.3	.....
Diphtheria carriers.....	0.1	.....	0.1	.....	.....	.....	0.8	.....
Dysentery-amoebic.....	0.2	.....	0.2	.....	0.3	.....	0.1	0.1
Dysentery-bacillary.....	7.2	.....	4.9	.....	5.7	.....	6.2	0.1
Encephalomyelitis.....	2.0	0.2	1.5	0.2	1.4	0.2	2.1	0.2
Erysipelas†.....	.....	.....	.....	.....	.....	.....	.....	.....
Food poisoning.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastro-enteritis.....	2.6	5.2	9.4	4.6	21.8	9.9	18.9	8.8
Hepatitis-infectious.....	2.2	0.5	11.7	0.6	38.1	0.2	78.3	0.3
Impetigo of the newborn†.....	.....	.....	.....	.....	.....	.....	.....	.....
Influenza.....	450.5	16.7	15.9	8.5	5.6	7.3	1.7	3.7
Malaria†.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningococcal meningitis.....	1.9	0.5	3.0	0.8	4.5	0.9	1.9	0.1
Meningitis, viral or aseptic —other and unspecified.....	.....	.....	.....	.....	.....	.....	.....	.....
Mononucleosis†.....	.....	.....	.....	.....	.....	.....	.....	.....
Pertussis.....	55.2	1.7	74.0	2.5	44.8	0.7	18.7	.....
Poliomyelitis.....	10.9	1.4	145.1	10.7	137.8	8.1	22.5	0.9
Psittacosis.....	.....	.....	.....	.....	.....	.....	.....	.....
Salmonella.....	.....	.....	.....	.....	.....	.....	.....	.....
Staphylococcal infections.....	.....	.....	.....	.....	.....	.....	.....	.....
Streptococcal infections.....	134.4	0.7	200.6	0.2	133.4	0.3	75.6	0.1
Trichinosis.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis.....	54.2	18.7	55.0	12.3	67.7	10.1	64.3	4.8
Typhoid and paratyphoid fevers.....	1.4	0.2	2.3	.....	1.2	.....	2.3	.....
Typhoid carriers.....	0.2	.....	0.3	.....	0.2	.....	.....	.....
Vincent's angina†.....	.....	.....	.....	.....	.....	.....	.....	.....

* Incomplete reporting indicated where deaths from a specific disease exceed cases reported.

† Not shown prior to 1960.

DISEASES, WITH ANNUAL RATES PER 100,000 POPULATION, SASKATCHEWAN, 1951-1960

1955		1956		1957		1958		1959		1960	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Yearly distribution											
7	.....	1	.....	1	.....	1	.....	.....	.....	2	.....
11	3	15	.....	.....	.....	3	1	2	.....	7	.....
14	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	.....	48	.....	36	.....	28	.....	14	.....	55	.....
13	1	6	3	3	1	7	1	4	3	6	5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1
.....	.....	.....	.....	.....	.....	.....	.....	37	1	6	.....
199	40	133	45	123	33	55	45	42	63	287	62
926	4	1,020	11	929	1	943	6	672	3	704	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
461	69	23	20	985	90	.....	.....	396	84	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
22	6	12	3	4	4	8	3	7	1	9	3
.....	.....	.....	.....	.....	.....	.....	.....	11	7	11	5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1
653	3	368	8	107	3	82	3	88	.....	143	1
72	5	21	3	31	4	3	.....	46	3	55	8
.....	.....	.....	.....	.....	.....	.....	.....	2	3	.....	.....
4	.....	7	.....	7	1	20	.....	15	.....	11	.....
.....	.....	.....	.....	477	.....	363	2	271	6	283	1
403	.....	240	3	160	3	370	.....	1,780	1	2,715	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
449	57	355	46	344	31	307	23	242	28	294	34
26	1	11	.....	7	1	10	.....	7	.....	2	.....
1	.....	3	.....	1	.....	2	.....	3	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
rate per 100,000 population											
0.8	.....	0.1	.....	0.1	.....	0.1	.....	.....	.....	0.2	.....
1.3	0.3	1.7	.....	.....	.....	0.3	0.1	0.2	.....	0.8	.....
1.6	.....	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
3.5	.....	5.5	.....	4.1	.....	3.2	.....	1.6	.....	6.0	.....
1.5	0.1	0.7	0.3	0.3	0.1	0.8	0.1	0.4	0.3	0.7	0.5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.3	0.1
.....	.....	.....	.....	.....	.....	.....	.....	4.1	0.1	0.7	.....
22.7	4.6	15.1	5.1	14.0	3.8	6.2	5.1	4.7	7.0	31.5	6.8
105.6	0.5	115.8	1.2	105.7	0.1	106.3	0.7	74.5	0.3	77.4	1.0
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.3	.....
52.5	7.9	2.6	2.3	112.1	10.2	.....	.....	43.9	9.3	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.1	.....
2.5	0.7	1.4	0.3	0.5	0.5	0.9	0.3	0.8	0.1	1.0	0.3
.....	.....	.....	.....	.....	.....	.....	.....	1.2	0.8	1.2	0.5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.3	0.1
74.4	0.3	41.8	0.9	12.2	0.3	9.2	0.3	9.8	.....	15.7	0.1
8.2	0.6	2.4	0.3	3.5	0.5	0.3	.....	5.1	0.3	6.0	0.9
.....	.....	.....	.....	.....	.....	.....	.....	0.2	0.3	.....	.....
0.5	.....	0.8	.....	0.8	0.1	2.3	.....	1.7	.....	1.2	.....
.....	.....	.....	.....	54.3	.....	40.9	0.2	30.0	0.7	31.1	0.1
45.9	.....	27.3	0.3	18.2	0.3	41.7	.....	197.3	0.1	298.4	0.1
.....	.....	.....	.....	.....	.....	.....	.....	0.1	.....	0.1	.....
51.1	6.5	40.3	5.2	39.1	3.5	34.6	2.6	26.8	3.1	32.3	3.7
3.0	0.1	1.2	.....	0.8	0.1	1.1	.....	0.8	.....	0.2	.....
0.1	.....	0.3	.....	0.1	.....	.....	.....	0.3	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.4	.....

TABLE 9. AMOUNT AND COSTS OF VACCINE, SERA AND CERTAIN DRUGS ISSUED IN SASKATCHEWAN, 1956-1960

Product	Year of service									
	1956		1957		1958		1959		1960	
	Amount*	Cost	Amount*	Cost	Amount*	Cost	Amount*	Cost	Amount*	Cost
Total.....		\$62,537.45		\$50,421.09		\$66,740.52		\$56,953.58		\$50,311.48
Anti-measles serum.....	3,252	4,227.60	2,576	3,348.80	2,176	2,828.80	1,703	2,213.90	2,730	3,549.00
Cholera vaccine.....	101	60.60	93	55.80	103	63.42	71	46.86	108	71.28
Diphtheria antitoxin (units).....	8,781,000	1,623.90	4,652,000	853.20	5,723,000	1,031.70	4,781,000	827.50	4,844,000	1,072.40
Diphtheria toxin for Schlick test.....	21,125	304.20	14,100	203.04	17,800	270.88	18,625	298.00	18,850	301.60
Diphtheria toxoid.....	4,300	997.50	870	315.42	2,024	523.74	619	259.98	496	208.32
Diphtheria toxoid and tetanus toxoid (comb.).....	4,309	2,422.96	1,139	720.58	2,950	1,567.80	2,275	1,320.48	1,544	1,043.58
Diphtheria toxoid and pertussis vaccine (comb.).....	744	628.58	289	254.32	344	287.22	116	90.48	120	93.60
Diphtheria toxoid and pertussis vaccine and tetanus toxoid (comb.).....	55,935	34,998.12	42,742	25,694.80	49,080	29,029.50	27,041	17,066.84	10,464	7,378.02
Pertussis vaccine.....	428	308.16	246	177.12	399	280.40	240	153.60	135	86.40
Rabies vaccine (14 x 2 c.c. vials).....	15	120.00	6	48.00	5	40.00	11	88.00	6	48.00
Scarlet fever toxin.....	1,547	594.82	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet fever toxin for Dick test.....	3,650	131.40	610	21.96	.....	.....	.....	.....	.....	.....
Smallpox vaccine.....	80,510	5,152.64	78,120	4,999.68	114,360	7,319.04	121,710	8,958.04	106,720	7,637.52
Solution silver nitrate 1% (capsules).....	10,152	710.64	.....	468.72	6,192	505.80	4,056	344.76	6,464	537.44
Staphylococcus antitoxin (units).....	.....	.....	100,000	33.30	.....	.....	.....	.....	.....	.....
Staphylococcus toxoid (2 x 2 c.c. vial pkgs.).....	115	115.00	95	95.00	.....	.....	.....	.....	.....	.....
Tetanus antitoxin (units).....	12,756,000	2,740.66	16,177,500	3,301.80	13,975,500	3,098.71	11,488,500	3,049.63	13,343,500	3,768.86
Tetanus toxoid.....	1,268	951.00	1,444	1,083.00	2,969	1,539.00	2,558	1,687.50	2,750	1,605.00
T.A.B.T. vaccine.....	2,176	651.60	2,383	696.15	2,549	779.85	2,166	690.30	1,545	536.85
T.A.B.T.D. vaccine.....	3,923	884.25	3,575	815.10	4,102	961.50	116	245.00	300	90.00
Typhoid-paratyphoid vaccine.....	97	72.75	113	84.75	118	88.50	116	449.55	1,606	457.05
Typhus vaccine.....	22,823,275,000	4,495.61	27,448,150,000	4,315.52	40,579,450,000	5,748.42	74,089,100,000	10,401.10	109,470,669,500	11,420.99
Penicillin—oral (units).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Penicillin—parental (disposable syringes).....	182	301.96	184	367.78	194	389.94	88	176.88	254	510.54
Gamma globulin (2 c.c. vials).....	58	43.50	783	587.25	2,106	2,889.90	375	1,012.50	530	989.55
Gamma globulin (5 c.c. vials).....	1,740	.....	2,189	1,880.00	2,249	7,452.25	1,665	7,074.50	2,443	8,550.50
Sodium fluoride (number of 2, 21 mgs. tablets).....	.....	.....	.....	.....	1,240	2.48	124,776	11.55	1,362,200	196.23
Sulfadiazine (0.5 gm. tablets).....	.....	.....	.....	.....	1,700	41.67	3,300	69.63	9,300	.....
Polioyelitis vaccine—plain (number of c.c.).....	246,552	.....	828,576	.....	352,178	.....	115,020†	.....	405,910	.....
Polioyelitis vaccine with D.P.T. (number of c.c.).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Asian influenza vaccine.....	.....	.....	.....	.....	1,320	.....	99,740†	.....	171,280	.....
Grifulvin tablets (number of tablets).....	.....	.....	.....	.....	3,190†	.....	3,000	330.00	1,000	105.50

* Number of persons unless otherwise indicated.

† Individual costs of these items either unknown to this office or not chargeable to vaccine and sera vote.

TABLE 10. MONTHLY DISTRIBUTION OF REPORTED COMMUNICABLE DISEASES, SASKATCHEWAN, 1960

Disease	Month of notification											
	January	February	March	April	May	June	July	August	September	October	November	December
Brucellosis.....	2	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....
Chickenpox*.....	12	.....	.....	6	.....	1	.....	.....	.....	.....	.....	.....
Diphtheria.....	7	.....	18	3	.....	6	3	.....	.....	.....	.....	.....
Dysentery-bacillary.....	55	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
Encephalomyelitis.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Erysipelas.....	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Food poisoning.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastro-enteritis.....	287	33	20	24	16	21	18	18	6	41	31	40
Hepatitis-infectious.....	704	51	53	22	42	50	30	57	48	39	111	143
Impetigo of the newborn.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malaria.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles (rubella)*.....	21	.....	2	1	12	.....	2	.....	.....	.....	.....	.....
Meningococcal meningitis.....	9	.....	1	.....	.....	1	3	.....	.....	.....	.....	.....
Meningitis, viral or aseptic—other and unspecified.....	11	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
Mononucleosis.....	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mumps*.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Paratyphoid fever.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Pertussis.....	143	19	27	27	12	12	8	5	3	1	3	3
Polio-myelitis—acute.....	55	.....	.....	.....	.....	7	8	18	6	4	6	5
Psittacosis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ringworm*.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rubella (German measles)*.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salmonellosis.....	11	.....	1	.....	.....	1	3	.....	.....	.....	.....	.....
Staphylococcal infections—arising in hospitals.....	283	12	11	25	11	15	34	122	7	2	1	3
Streptococcal infections.....	2,715	786	427	201	88	183	44	47	26	58	145	237
(scarlet fever).....	1,272	272	252	137	54	130	31	15	16	19	49	71
(streptococcal sore throat).....	1,443	514	175	64	34	53	13	32	10	39	96	166
Trichinosis.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis:	216	31	19	14	9	29	14	1	56	10	14	17
(1) pulmonary.....	78	6	7	4	8	7	5	6	18	7	5	5
(2) other forms.....	4	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vincent's angina.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total cases reported.....	4,641	945	594	329	200	341	173	283	190	173	347	492
Less cases not reportable*.....	36	2	6	8	12	1	3	.....	.....	.....	.....	2
Net number of cases notifiable to Dominion Bureau Statistics.....	4,605	943	588	321	188	340	170	283	190	173	347	490

* Cases not reportable to Dominion Bureau of Statistics.

DENTAL HEALTH SERVICES

There is little to report for the fiscal year under review, which essentially differs from the reports of previous years.

The shortage of dentists continues to worsen, as more dentists are dropped from the register due to retirement and death, than are replaced by new registrations.

The two health regions still attempting to carry on programs for children are plagued by inability to maintain staff or obtain satisfactory replacements. No cities presently maintain a dental program of any kind, other than by referrals to private practitioners, at a very low level of coverage.

Dental hygienists reduced in number to two, still carry on in two health regions performing topical fluoride applications for two age groups of children only, as best they can, and carrying on a dental health educational program.

Fluoridation of communal water supplies gained ground during the year with a number of smaller communities adopting the measure usually by action of the local municipal council. By percentage of urban communities Saskatchewan stands first of all the provinces in accepting this preventive measure. The three larger centres, Regina, North Battleford and Yorkton still resist all efforts to induce acceptance of a measure, substantially endorsed once again by the report of the Fluoridation Investigating Committee appointed by the government of the province of Ontario.

As an alternative method of supplying systemic supplementary fluoride to persons living in areas with no communal water systems which could be fluoridated, the Department of Public Health initiated a program of providing fluoride in tablet form. This method, which involves a high degree of personal responsibility by parents, has the tentative approval of the Expert Dental Committee of the World Health Organization, is suggested in the Ontario Fluoridation Committee report, and cautiously approved by both the Canadian and Saskatchewan Dental Associations. This program is limited for the time being to expectant mothers and preschool age children for budgetary reasons. It does not curtail in any way the private purchase of fluoride tablets, by prescription from a doctor or dentist, or without, for the benefit of older children up to the age of 14, which is the end of the tooth development period. After this age, fluoride, applied topically to the erupted teeth by dentists or dental hygienists, or by the consistent use of dentifrices containing stannous fluoride, provides a partial answer to the problem of high rates of dental decay at all ages.

As the gap between the need for dental care and the provision of it, will still exceed the residual need after all means of partial prevention are in full effect, the dire need for an organized program of dental care for children will still remain and involve as it always has, the question of dental manpower. Because of the peculiar nature of dental disease and

the public reaction to it, it is very unlikely that private practice as presently organized, will ever provide the dental coverage for the child sector of the population, which is essential to an adult population with a higher level of dental health than is now the case. This calls for a public health approach, and possibly even the training of a separate corps of dental auxiliaries, primarily responsible for the dental care of children.

Quote from the Report of the Commission on the Survey of Dentistry in the United States—

“In the case of children, however, the Commission calls for an all-out program”.

Recommendation 3—“Official health agencies assert their proper leadership in the initiation, planning and administration of dental care programs, giving first priority to school age children”.

The inescapable conclusion that must be taken from this report, for which there is no Canadian counterpart, is that for children at least, there must be a planned and organized program. No such program exists in Canada today and in fact there is not the personnel available to do it, and at the same time cope with the adult demand for care, which itself is much less than the need, by any definition of adequacy.

Quote from the United States Report

“An astonishingly low priority is set on dental care by the American (also Canadian) people, even by many of those in the higher income, better-educated brackets”.

It is suggested that the state, now involved in programs of “welfare dentistry”, cannot afford to overlook the lack of a program, when large numbers of children are shown to be dentally uncared for, in qualifying for Social Welfare benefits. In addition, of course, there remain unknown numbers of children of low income families for whom dental care involves only the relief of pain and often not even that.

As “dental advisor” to Medical Services Division the evidence of major dental neglect is constantly mirrored before our vision. A concerted effort is being made to introduce preventive measures applicable to this group, which by their very nature will involve both beneficiaries and members of the dental profession. Although many difficulties present themselves, some progress can be reported. For this and other groups as well, nutrition information is of vast importance in preventing dental decay, and could be a considerable factor if more adequately presented and accepted in daily practice. The Ontario report stresses the inadequacy in the number of nutritionists employed in the Department of Health and the complete lack of any such person in the Department of Social Welfare. The same would apply in Saskatchewan.

Dental health education in schools receives a minimum of attention. In fact, it is questionable if as much attention is paid to it now as was the case half a century ago. In the light of the revolutionary changes in food technology it appears that such education is much more vital now than previously. The United States Commission report stresses the importance of school education in these words “Public and private schools can do much more than they now do in the field of dental health education”.

Summed up, although some progress continued to be made in 1960 only the surface of this acknowledged public health problem has barely been scratched.

PUBLIC HEALTH NURSING SERVICES

This division, attached to the Regional Health Services Branch, has the responsibility of developing and maintaining a high standard of public health nursing service as approved by departmental policy. To this end, the director and consultants work with the branch director and in co-operation with other divisions, departments and agencies with related interests. The division keeps in touch with general nursing interests through activities with the provincial and national nursing associations, the schools of nursing in hospitals and the university.

For the last time this report will include the activities of an area outside of organized health regions since, early in the coming fiscal year, the entire province, except for the two major cities, will be under regional health services.

Public Health Nursing Services

The statistical report of public health nursing services will be found in the report of the Regional Health Services Branch.

Health Regions

Demands for services continue to grow and the services increase in scope.

For instance, in several health regions tests for Phenylketonuria are being routinely done in the examination of babies in child health centres.

The demand for fluoride tablets for preschool children in areas where natural fluoride content in the water is low, is increasing rapidly.

Both these services, simple in themselves, take time if the nurse is to give necessary information to the parents.

Education is an essential part of every public health nurse's service and requires a great deal of time and effort if it is to be well done. In the case of provision of fluoride tablets, water samples must be obtained for testing, reports received and noted, before the decision is made as to the need.

A study of the detailed report will show that all services have been kept up well, even though we have not been able to increase greatly the number of nursing positions.

In the area which is to be Saskatoon Rural Health Region, the four nurses gave as much service as possible — three of these nurses gave some assistance in two health regions; two assisted with the oral poliomyelitis project in Prince Albert Health Region, and one nurse gave one month's help in Yorkton Health Region. These four nurses have, for many years, given excellent service in large districts, taking a great deal of responsibility.

Northern Health District

All nursing outpost hospitals have had a busy year. One outpost supervisor attended the public health course at university. She will be returning to the north shortly. One nurse who is at present on a midwifery course at Maternity Centre in New York and Johns Hopkins Hospital, Baltimore, will join the staff on finishing.

Public health nurses at Uranium and Lac la Ronge are having a very busy and interesting time.

The northern nursing supervisor has had to relieve in an outpost for several months, due to the absence of one nurse.

Nursing Staff

Recruitment of nurses with the high degree of ability suitable for public health work is a continuous problem. Placement of nurses in rural districts is also difficult. It is possible that some compensation may have to be offered if we are to staff some of the more isolated districts.

Total staff as of March 31, 1960	148
Appointments during the year	43
Resignations	33
Total staff as of March 31, 1961	158

(This includes nurses on educational and other leave).

Allocation of Staff as of March 31, 1961

Total	158
Nursing Division	
Director	1
Nursing consultants	3
Public health nurses in areas outside regions	4
Northern Health District	
Supervisor of Northern Health District	1
Supervisors of outposts	4
Public health nurse I	2
Health Regions	
Regional nursing supervisors (public health nurses III)	11
Assistant to regional nursing supervisors (public health nurses II)	6
Public health nurses I	104
University leave	9
Other leave	13

Qualifications of Staff

The qualifications of the staff including those on leave, March 31, 1961 were as follows:

Total	158
Masters degree in public health nursing	2
Bachelor of Science (major in public health nursing)	9
Bachelor of Nursing, certificates in public health and nurse-midwifery	2
Bachelor of Arts and certificate in public health nursing	1
Certificate in public health nursing and administration	3
Certificate in public health nursing and nurse-midwifery	1
Certificate in public health nursing	49
Health visitor and nurse-midwifery certificates	1
Teaching and supervision and certificate in public health nursing	1
Teaching and supervision diploma	2
Queen's nurse and nurse-midwifery certificates	3
Queen's nurse, health visitor and nurse-midwifery certificates	1
Nurse-midwifery certificate	6
Registered nurses without special training	77

University Training under Dominion-Provincial Grant

Twelve nurses completed university courses in June 1960. Of these, two were appointed following the course.

Fourteen nurses are at present at university, five of whom will be appointed following the course. Courses being taken are:

Master of Arts	1
Bachelor of Science in Nursing	1
Certificate in public health nursing	12

Administrative and Nursing Consultant Report

Seventy-one visits were made, by nursing consultants and the director, to health regions.

The consultants are available, upon the request of the regional medical health officer and nursing supervisor, to visit the region, to help with nursing staff problems, to assist with educational programs and occasionally to help in staff training.

Routine consultant visits to regions are made to arrange for field experience for nurses taking the public health course at the university. This includes planning with the medical health officer, supervisor and guide nurse for a satisfactory program of observation and participation for the student.

During the year, 16 students were given experience in the spring, and 11 in the early fall.

To help the field guides in understanding the needs of the students, conferences were also arranged in which field guide nurses met with the associate professor of public health nursing, University of Saskatchewan, and the consultant concerned, in which the needs of the students and the facilities for experience were discussed.

The consultants of this division and that of Child and Maternal Health, also arranged and conducted a workshop of two weeks' duration for public health nurses who are not in a position to attend university. Eighteen nurses attended and reports indicate that their interest and understanding of public health has increased considerably. This is the second time we have conducted this type of workshop and it is felt that it has filled a definite need.

Several sections of the public health nurses manual have been completed during the year.

Conferences

An annual conference was held for one day following the Canadian Public Health Association Convention. All nursing staff attended.

Conferences with regional nursing supervisors were held in Regina, following the joint conference with the branch director and medical health officers.

Community Health Lectures

Lectures in community health were given by nursing consultants to students in schools of nursing at Regina and Saskatoon. In all other schools of nursing, these lectures were given by the regional nursing supervisor of the region concerned.

Time Study

A time study of one week was carried out by all public health nurses last spring. Much of interest concerning use of nursing time was brought to light. It is hoped that similar studies may be carried out in the coming year.

The Division of Health Services is a combined service which... The purpose of the study was to determine the use of nursing time... The study was conducted over a period of one week... The results of the study are as follows...

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NUTRITION SERVICES

The Nutrition Division is a consultant service whose chief aim is to show the population in general the role that good nutrition plays in the well-being of persons of all ages. The Nutrition Division makes available to all age groups information and assistance in the habits of good eating. In order to reach as many people as possible, mass media as the press, radio, television and group meetings are used.

The director of this division works closely with the regional nutritionists in health regions. She also works in close conjunction with the regional staff, other government departments and various other organizations and departments outside the government.

Staff

As in previous years there has been a severe shortage of staff and so recruiting efforts are a continual duty. After November 30th this division was under a severe handicap for the director retired and a successor was not immediately available.

It is the aim of this division to provide each health region with a nutritionist, so that more concentrated services may be offered and thus make the population more aware of good nutrition practices. However, this has not been possible and only six out of eleven health regions had the services of a regional nutritionist at some time. These regions include Swift Current, Weyburn-Estevan, Regina Rural, Rosetown-Biggan, Prince Albert and North Battleford. Two new nutritionists were recruited and orientated. Marriage claimed the resignation of one nutritionist and one other left the service for other reasons.

Public Health Staff

In order to consult directly with the regional nutritionists, medical health officers, regional nursing supervisors or other personnel with regard to the regional nutrition programs to initiate new programs and discuss problems, the director made 26 visits to health regions and districts during the year under review.

When there is no regional nutritionist in a health region, the director attempts to provide service to the staff. Conferences for nurses were presented in three different health regions. Eight Public Health Nurses and four Regional Medical Health Officers were given orientation regarding services and materials offered by this division. Requests for nutrition information, talks, literature and animal feeding experiments were filled by the division for regions not having a regional nutritionist. The school lunch report cards were also evaluated for these regions. A reference file continued to be maintained for the use of the staff.

The division as usual worked on a consultive basis with other divisions within the department especially with Nursing Services, Child and Maternal Health, Health Education and Dental Health. Activities included advising on nutrition materials and lectures and setting up an exhibit for the fairs and surveys.

Other Government Departments and Agencies

The Nutrition Division desires to provide consultant service beyond public health divisions to other government departments and agencies. This area of the program is continually increasing. The radio talk series was continued for the Department of Agriculture. These talks were used by 11 radio stations throughout the province. The Department of Travel and Information used these talks as releases to all newspapers in the province. Assistance was given in the form of materials for the preparation of a film on egg quality.

The "Healthful Eating" Project, a joint project of Women's Services of the Department of Agriculture and Nutrition Division was discontinued. In place of this project, homemakers' clubs were offered a variety of projects that would involve the regional nutritionists. Response to this was satisfactory.

A press release was also prepared for the "Farm Light and Power" Newspaper.

The Physical Restoration Division requested diet counselling for seven patients, who required reduction of body weight.

The Department of Education was contacted regarding the school lunch situation in the province. This matter was to be discussed with other members of the Education Department and a meeting to follow at a later date.

Considerable time was spent at the Teachers' College conducting the first animal feeding experiment. This was a worthwhile project as evidenced in the autumn by the number of first-year teachers requesting a nutrition feeding experiment for their classroom. Two experiments were conducted in the province by the director of this division. A good amount of nutrition literature was distributed to the Teachers' College and teachers in the province. As in past years two lectures on Meal Planning and Budgeting were presented to the postgraduate class of the School of Nursing, University of Saskatchewan (class of approximately 25). At Regina College, the director presented a 10-hour course on normal nutrition to the student nurses at the Centralized Teaching Program (enrolment of 152).

Two lectures on "Normal and Therapeutic Nutrition" were presented to a Red Cross Home Nursing class of approximately 25 members.

At the University of Saskatchewan, the College of Home Economics and the University Hospital, Dietary Department were contacted as in previous years.

A nutrition display was prepared and set up at the provincial exhibition. This was a joint project of the Departments of Health Education, Fitness and Recreation and Education in the province.

The Regina City Health Department was contacted and a meeting held regarding assistance and materials available from the nutrition division.

Nutrition Materials

The following materials were prepared and distributed by the division during this fiscal year: the booklet "Good Eating" was reprinted and a new cover designed and a revision of "Infant and Child Feeding" was done.

Several films were previewed and other teaching aids were reviewed.

Surveys

The Nutrition Survey on the school of Metis children at Pine House and of the school children at Pelican Narrows, both in the Northern Health District started in 1958 was continued and completed. A five-day food record was planned and completed by the children at Pine House. This was analyzed. A paper was presented on the Pine House Nutrition Survey at the meeting of the Canadian Paediatric Society by Dr. S. C. Best.

A second phase to the Dental Survey conducted on the school children of Moose Jaw in June of 1959, was planned and carried out in May, 1960. The main objective of this survey was to learn about the nutritional background of selected groups of children included in the original survey. Personal interviews were arranged with the parents.

A survey was conducted to find out what the actual situation is in the province with regard to school lunches and to show what factors need emphasis in this phase of our teaching. A statistical report was compiled and distributed. This survey is being continued and similar reports will be prepared and comparisons made.

Conferences

During the year eight conferences of public health interest were attended. Among these were the Canadian Public Health Association, Field Staff, Nutritionists, Directors, Senior Staff, Regional Medical Health Officers and Regional Board Conferences.

The Pre-convention Course in Nutrition, the Canadian Home Economics Convention, the Dominion-Provincial Nutritionists Conference and the Canadian Council on Nutrition were the conferences of federal nature that were attended by the director. Various other meetings of a professional nature were attended.

SANITATION SERVICES

The bulk of the Sanitation Division's work is concerned with urban waterworks, sewage treatment and disposal and pollution control. Technical advice on engineering problems is also given to all health regions.

With the organization of the last remaining health area, Saskatoon Rural, at the end of the fiscal year, the division had no more responsibility for general environmental sanitation.

The division also takes a major part in the administration of the regulations governing milk pasteurization.

Personnel

During the year the staff consisted of the director, two engineers, four milk sanitarians and three sanitary officers and two clerk-stenographers. Three of the milk sanitarians and one of the engineers was employed under a federal health grant. The engineer resigned in September 1960 to continue studies for a doctorate degree. He was not replaced up to the end of the fiscal year.

Training Program

The refresher course for certified sanitary officers, established by the University of Saskatchewan in 1959-60 was repeated in this year. Twelve sanitary officers attended.

The annual training school for water and sewage plant operators was discontinued but was replaced by a correspondence course made available by the Western Canada Water and Sewage Conference. The enrolment in this course to the end of the fiscal year was 28.

Waterworks and Sewerage

New Construction

In the construction season of 1959 more municipalities installed waterworks and/or sewerage systems than in any single year previously. In the construction year 1960, the number of new systems exceeded those of the previous year by about 100 per cent. Twenty-eight municipalities constructed waterworks and/or sewerage systems during the year under review. Those installing both systems are — Chaplin, Davidson, Macklin, Preeceville, Esterhazy, Gull Lake, Mossbank, Redvers, Imperial, Kinistino, Nokomis.

In addition the town of Watson commenced construction of waterworks and sewerage but due to a late start, work was not completed before freeze-up in 1960.

Waterworks systems were constructed at — Broadview, Elrose, Luse-land, Star City, Cabri, Leader, Montmartre.

These municipalities had installed a sewerage system at one time or another in previous years.

Annual reports in the past have referred to the large number of urban municipalities operating a sewerage system without benefit of a waterworks system. During the year seven such municipalities corrected this situation by installing a waterworks system. However, they were replaced by eight new municipalities which provided sewerage systems only. Thus, the number of municipalities operating a sewerage system without a waterworks system increased and totalled 18, as compared with 16 in the previous year. The municipalities which installed sewerage systems only in 1960 are—Avonlea, Holdfast, Ogema, Stoughton, Vanguard, Beechy, Milden, Pangman, Val Marie.

Construction Approval Certificates

The construction of urban waterworks and sewerage systems, and extensions, alterations or improvements to such systems, requires ministerial approval. Applications for approval submitted to and processed by the division totalled 250 for an estimated construction value of approximately \$14,700,000. In the past year the number of applications was 221.

A municipality contemplating a major capital expenditure for waterworks or sewerage must obtain authorization for the expenditure from the Local Government Board and, in addition, a vote on a local money bylaw must be successfully carried by the burgesses. Before the Local Government Board can authorize a vote the project must have been approved by the Minister of Public Health, at which stage complete engineering plans and specifications are not available. Consequently, the legislation permits the issuing of a provisional certificate. Although this provisional certificate does not authorize construction it does indicate approval of the general design of the proposed works. During the year 56 of these provisional certificates were issued for an estimated construction value of approximately \$5,250,000.

Water Supply

The problem of water supply continues to plague many municipalities. However, more study, especially on ground water problems, is being given by several government agencies which will no doubt be of increasing value as time goes on. On the other hand, it is known that ground water is limited in quantity and in no case is likely to meet full requirements for the future. The quantity of surface water varies from season to season and as it appears that a cycle of dry years is likely to return in the near future, municipalities dependent on a surface supply are becoming concerned. In fact, two municipalities for the past two years have had to resort to overland pumping of surface water to augment, at considerable expense, their own storage reservoirs. Ultimately, it is likely that transportation of water by long distance pipelines will have to be adopted even though expensive. It is important too, that further study be given to the demineralization of water so that use can be made of known existing supplies which otherwise are not usable.

Urban Modernization Program

The program of providing financial assistance to municipalities in connection with waterworks and sewerage systems, formulated in the previous fiscal year, went into operation in 1960-61. In the first year of operation the fund available was rather limited but nine municipalities

were given financial assistance, six installed waterworks and sewerage, and three which already had a sewerage system were enabled to provide a waterworks system.

There has been an increased awareness on the part of urban residents of the need and importance of a modernization program. This is reflected by the large number of municipalities proceeding with waterworks and sewerage, as mentioned previously. It may be noted that the size of the municipality now adopting a modernization program is smaller in population than was the case several years ago. There are only three municipalities with a population in excess of 1,000 which do not have modern facilities. However, in the population range of 500 to 1,000 there are still 35 without either a waterworks or a sewerage system. A large number of these will likely proceed with modernization in 1961-62. In the population range 400 to 500 there are 36 municipalities without waterworks or sewerage out of a total of 48.

The total of urban municipalities with a waterworks and a sewerage system is now 73 as compared with 54 reported in 1959-60.

Engineering Services

During the year the division conducted 19 preliminary engineering surveys for municipalities contemplating the installation of waterworks and sewerage.

Preliminary designs, reports and cost estimates were completed for the following — Punnichy, Rose Valley, Viscount, St. Louis, Arborfield, Invermay, Choiceland, White Fox, Paradise Hill, Young, Lucky Lake, Debden, Tugaske, Cadillac, Eyebrow, Norquay, Jansen, Pelly, Pennant.

When a municipality contemplates the installation of waterworks and/or sewerage it is customary to hold a ratepayers meeting immediately prior to a vote on the money bylaw involved. The engineers attended 29 such meetings. In addition they made 80 inspections of water and sewage treatment plants and construction projects. Only two surveys were made in connection with stream pollution, but several field trips were made in connection with algae control at resort areas.

Fluoridation

There are now 17 towns where artificial fluoridation of the communal water supply is being carried out. They are — Assiniboia, Canora, Eston, Kindersley, Moose Jaw, Preeceville, Rosthern, Swift Current, Weyburn, Chaplin, Kamsack, Melville, Montmartre, Prince Albert, Saskatoon, Tisdale, Wynyard.

The population now receiving the benefit of fluoridated water is approximately 192,000.

Water Analyses

All water analyses, conducted by the Provincial Laboratories are processed by the Division of Sanitation and interpretation, where necessary, is provided by the engineers.

Milk Quality Control

Field Activities

There were 38 milk pasteurizing plants in operation during the year. A total of 606 inspections were made by the milk sanitarians. These inspections are part of the consultative service provided by the department.

A noticeable change has taken place at milk pasteurizing plants in that there is a trend to the adoption of paper packaging rather than the use of glass bottles. Likewise, there is a trend toward bulk milk tanks on the dairy farms and bulk pickup trucks. It is anticipated that in the near future milk cans will be practically eliminated and all farm milk will be handled in bulk, picked up and transported by tank trucks.

Dairy farm inspections, as well as routine tests conducted on raw milk received at milk pasteurizing plants, are one of the important duties of the milk sanitarians. Dairymen are looking more and more to our milk sanitarians for advice and assistance in all their dairy operations. During the fiscal year 13,082 field tests on raw milk were made and dairy farm inspections totalled 1,248.

Milk Quality

There has been a noticeable improvement in the quality of raw milk supplied to milk processing plants but the mastitic milk problem continues to be a source of concern. There appears to be no major improvement in this respect. On the other hand, several surveys conducted during the year involving some 2,860 individual samples of milk indicate that the general quality of raw milk is of a reasonably high standard, both bacterially and from the point of view of antibiotics. However, the surveys disclosed that there is 'Q' Fever in a few of the herds supplying milk to pasteurizing plants. The presence of 'Q' Fever was not suspected prior to this time, and although it does not appear to be extensive the situation is being watched very closely.

Urban and Rural Sanitation

In view of the fact that the Saskatoon area was the only district under the jurisdiction of the division the total number of sanitary inspections was considerably reduced over previous years.

The sanitary officers made a total of 3,322 inspections:

Total	3,322
Water, milk and food supplies	620
Public places	1,194
Waste disposal	974
Camps, resorts and swimming pools	63
Schools and institutions	88
Communicable disease	2
Miscellaneous	381

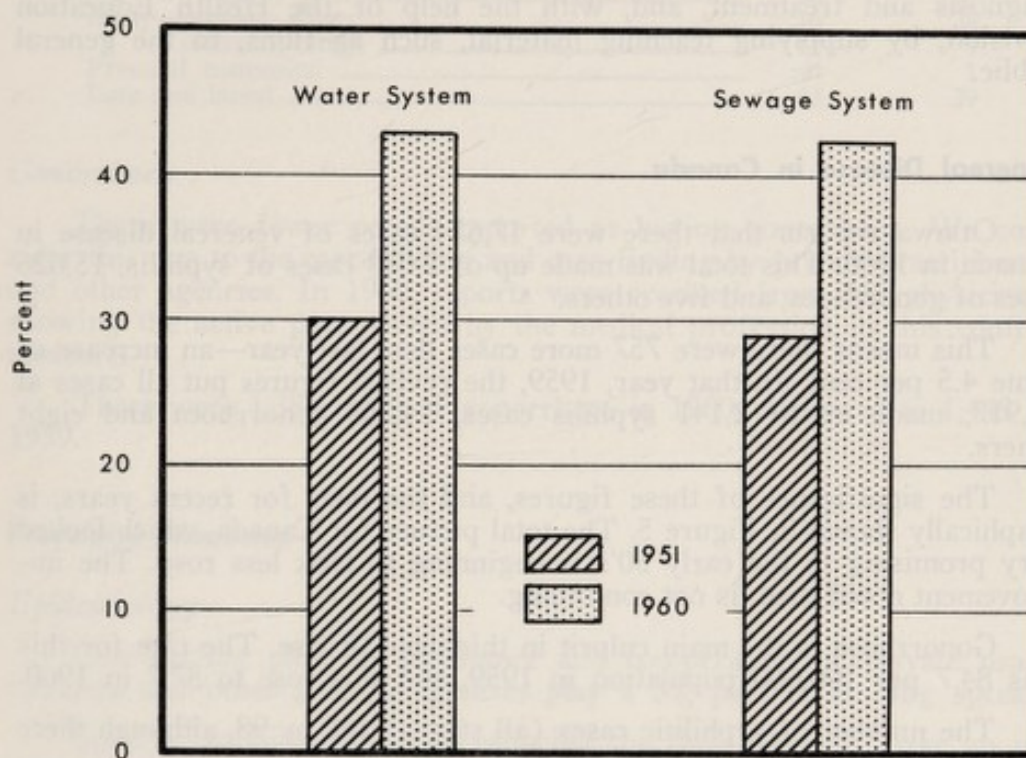
A total of 477 plumbing permits were issued and the value of permit fees was \$2,306. Plumbing inspections made by the division staff totalled 635.

During the year 106 butcher and 7 beef ring slaughter house licences were issued. The amount of fees collected was \$544. Up to the present, slaughter house and beef ring licenses are issued by the division for the entire province.

Other activities included the granting of public eating establishment certificates and tourist camp permits.

The milk sanitarians and district sanitary officers addressed a total of 102 municipal and public meetings.

FIGURE 4. PERCENTAGE OF TOTAL POPULATION SERVED BY WATER AND SEWAGE SYSTEMS, SASKATCHEWAN, 1951-1960



VENEREAL DISEASE CONTROL SERVICES

The division attempts to control the spread of venereal disease in Saskatchewan by three measures.

1. By providing facilities for the diagnosis and treatment of people suffering from venereal disease, or who have been exposed to it.

2. By keeping accurate records on the ebb and flow of the different types of the disease, so that the program can be suitably adapted.

3. By providing up-to-date information to practising doctors on diagnosis and treatment, and, with the help of the Health Education Division, by supplying teaching material, such as films, to the general public.

Venereal Disease in Canada

Ottawa reports that there were 17,674 cases of venereal disease in Canada in 1960. This total was made up of 2,043 cases of syphilis, 15,626 cases of gonorrhoea, and five others.

This means there were 757 more cases than last year—an increase of some 4.5 per cent. In that year, 1959, the revised figures put all cases at 16,917, made up of 2,141 syphilis cases, 14,768 gonorrhoea and eight others.

The significance of these figures, and the ones for recent years, is graphically shown in Figure 5. The total picture for Canada, which looked very promising in the early 50's is beginning to look less rosy. The improvement noted then, is not continuing.

Gonorrhoea is the main culprit in this over-all rise. The rate for this was 84.7 per 100,000 population in 1959, and this rose to 87.7 in 1960.

The number of syphilitic cases (all stages) fell by 98, although there was an increase (of 75) in early syphilis.

The primary and secondary stages are those considered to be early.

The various rates per 100,000 population are :

	<i>Syphilis</i> <i>(all stages)</i>	<i>Syphilis</i> <i>(primary and</i> <i>secondary stages)</i>	<i>Gonorrhoea</i>
1959 _____	12.3	2.2	84.7
1960 _____	11.5	2.6	87.7

Venereal Disease in Saskatchewan

The province had 1,470 cases of venereal disease in 1960. There were 1,538 cases in 1959—a decrease of 68 cases. This decrease is not too significant, as there was a big jump in early syphilitic infections. This latter was due to an outbreak in the northern part of Saskatchewan. The

infection had been imported from out-of-province, and subsequently spread by promiscuous women who became infected. Rates per 100,000 population for Saskatchewan are:

	<i>Syphilis</i> (all stages)	<i>Syphilis</i> (primary and secondary stages)	<i>Gonorrhoea</i>
1959	10.0	2.9	160.5
1960	9.6	5.2	152.0

Syphilis

A breakdown by type is given for 1959 and 1960:

	1959	1960
Total (all stages)	90	87
Early—primary stage	16	38
secondary stage	11	9
Prenatal congenital	nil	1
Late and latent	63	39

Gonorrhoea

There were fewer people reported as having gonorrhoea. We consider this due to the case-holding and case-finding by private practitioners and other agencies. In 1960, reports were received from 248 physicians, showing the active part played by the medical profession in this control measure.

There were 1,383 cases of gonorrhoea in 1960, compared to 1,448 in 1959.

Preventive Measures

Epidemiology

Case-finding plus the assistance and co-operation of private practitioners and other medical agencies play a big part in limiting spread.

Specific antibiotics help in reducing the time taken to make an infected person non-infective. Potential sources of infection have thus a shorter span of time in which to spread disease.

Information supplied by doctors helped in locating 288 contacts. Other medical agencies, including venereal disease clinics, gave information which unearthed a further 499 contacts.

These 787 contacts were examined with these results:

Positive	498
(Syphilis—21; Gonorrhoea—477)	
Non specific infection	18
Negative	264
Result unknown	7

Premarital serological tests numbered 12,535 with 12 showing positive reactions. Of these 12, four were connected with previously reported syphilis cases, six were connected with newly reported syphilis cases, and in two there was no further information. In three of the six new cases, the diagnosis was confirmed by the *Treponema Pallidum* Immobilization test.

The investigation and follow-up of people showing positive reactions from Standard Tests of Serology, discovered ten cases of syphilis, none of whom had been previously reported. These were made up of three early syphilis (one primary and two secondary), three latent syphilis and four neurosyphilis. Not included in this group are those whose diagnosis was later confirmed by the Treponema Pallidum Immobilization test, or those who had positive Premarital Standard Tests of Serology.

Follow-up of people showing positive tests for gonorrhoea resulted in 86 gonorrhoea cases being reported on notification cards. All these had been previously unreported.

Last year 272 physicians reported cases, and 56 of these were either new to the province or had not reported before. The parallel figures in 1960 were 248 and 45.

Consultative Services

Advice is given by telephone and correspondence, regarding diagnosis, treatment and post-treatment care. Many requests for advice and information of the Treponema Pallidum Immobilization Test (T.P.I.) were received from doctors and medical agencies.

For statistics on this test, see under "Diagnosis and Treatment".

Education

New physicians entering the province to practise were supplied with information and materials connected with venereal disease control procedure. They were also provided with special articles of interest on diagnosis and treatment, including information about the Treponema Pallidum Immobilization Test.

Lectures were given to nursing students. These were supplemented by films and pamphlets.

With the help of the Health Education Division a venereal disease education program was continued among the public. Letters asking for literature and information are continually being received, as are letters enquiring about venereal disease and its treatment. These are answered either from this division or from the Division of Health Education, whichever is the more appropriate in each case.

Diagnosis and Treatment

Clinical Services

Full-time clinics were maintained during the year, one each at Regina, Saskatoon, Prince Albert and Moose Jaw. Each of these is staffed by a part-time medical director and full-time nurse. Examination and treatment are free of charge.

Admissions and visits were:

	1959	1960
Admissions	1,526	1,605
Visits	3,162	3,987

The total cost of operation of the clinics in 1960 was approximately \$21,000. Clinic facilities were also provided to the Prince Albert jails and the Regina jail.

The Prince Albert jails, which are serviced by our own venereal disease nursing personnel show these figures:

	1959	1960
Admissions	1,492	1,633
Visits	1,694	1,800

Additional Services

The Red Cross Outpost at Green Lake was again used to provide free examination and treatment for the residents in that area. This service was started in July 1954 as Green Lake is some 30 miles from the nearest physician. This plan, which has proven, and is proving satisfactory, has the approval of the medical health officer involved.

Costs of this plan for 1960 are shown near the end of this report.

Special Diagnostic Procedures

The Laboratory of Hygiene, Department of National Health and Welfare, Ottawa, continued to carry out T.P.I. tests for this division. This test can detect the difference between a biological (false) positive and a specific luetic reaction.

The fact that this test is available is becoming widely known among the physicians in the province, and it is being used to a greater extent where the diagnosis of syphilis is in doubt. False positive and doubtful reactions from standard tests can thus be clarified.

There were 133 specimens from selected cases forwarded to Ottawa in 1960, but 18 of these were unsatisfactory or toxic on arrival. The remaining 115 included two repeat tests.

The 113 specimens examined gave 82 negative and 31 positive results. This means over 70 per cent of the examinations were negative, showing there are a large number of false positives obtained by standard tests. These false positives arise from a variety of causes other than syphilitic infection.

The 31 positive T.P.I. tests consisted of 15 cases of previously reported syphilis and 16 previously unreported cases.

Drugs

Both the aqueous and oil suspension types of Procaine Penicillin were issued during 1960. These at the moment are the drugs of choice in the treatment of venereal disease, and are practically the only medications used. However, in rare instances of penicillin-resistance and/or chronic cases of gonorrhoea and non-specific urethritis, chloramphenicol, oxytetracycline, chlortetracycline and dihydrostreptomycin combinations may be used.

The cost of drugs of all types issued in 1960 was \$1,136.32. Last year \$947.15 was the cost.

Hospitalization

In 1960 expenditure for hospitalization of venereal disease patients was nil. In 1959, two patients were hospitalized at a cost of \$414.49.

Payment to hospitals for cell counts of spinal fluid in 1960 was also nil.

Payment for Treatment of Cases and Examination of Contacts

Physicians are paid for these services, with the aid of federal grants.

Examination and treatment of 165 infected people, living outside areas where there were free government clinics, and unable to bear costs themselves, cost \$1,262 in reimbursement to physicians.

On a like basis, the examination of 27 reported contacts, also residing outside the free clinic areas, cost \$168.50. Physicians are paid for the examination of contacts regardless of the latter's financial status.

Payments to Canadian Red Cross Society, Green Lake

The Canadian Red Cross Society was paid \$51 for the treatment of 25 cases at the Red Cross Outpost, Green Lake, Saskatchewan.

Expenditures for Venereal Disease Control

Costs of the program for the past two years were

	<i>Costs</i>	<i>Federal Grant</i>
Fiscal year 1959-60	\$67,653.45	\$28,858.00
Fiscal year 1960-61	\$73,340.94	\$33,840.36

FIGURE 5. REPORTED CASES OF VENEREAL DISEASES, CANADA, 1951-1959

Rate per one hundred thousand population

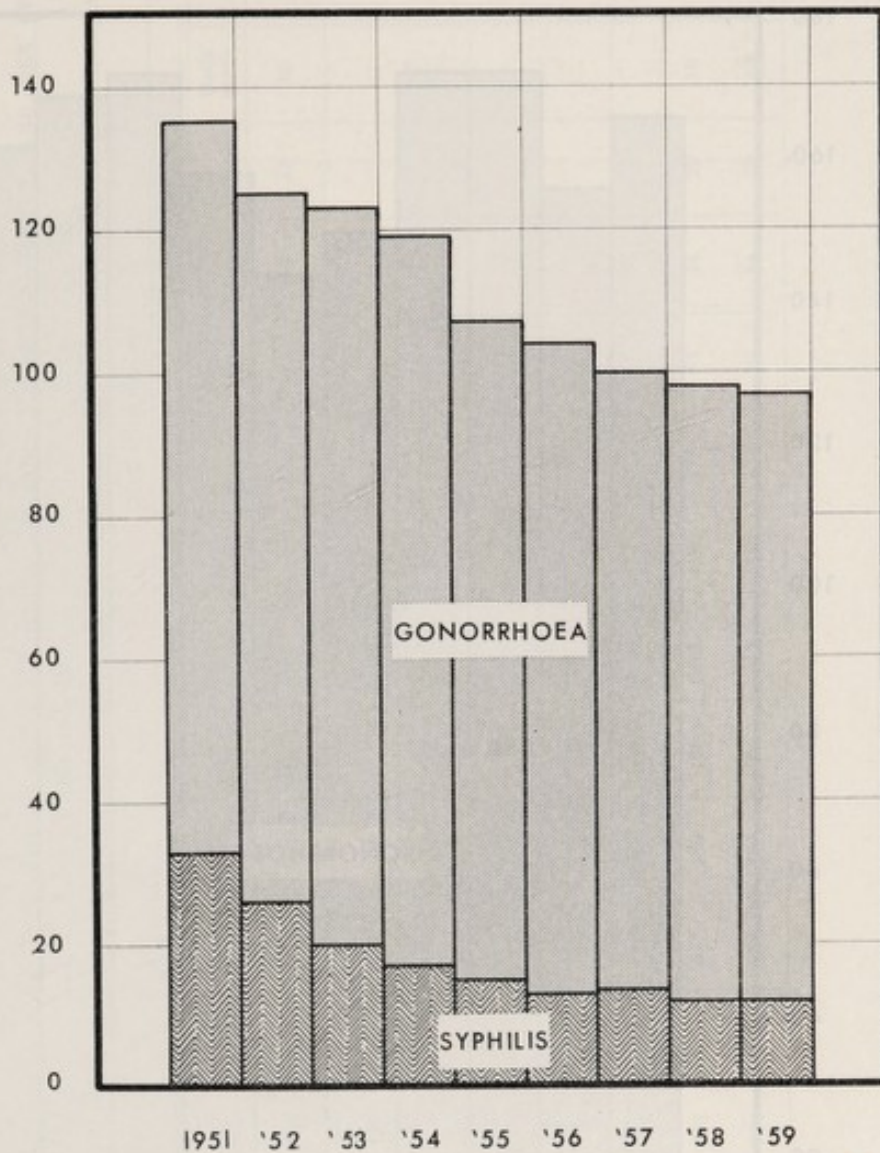


FIGURE 6. REPORTED CASES OF VENEREAL DISEASES, SASKATCHEWAN, 1951-1960

Rate per one hundred thousand population

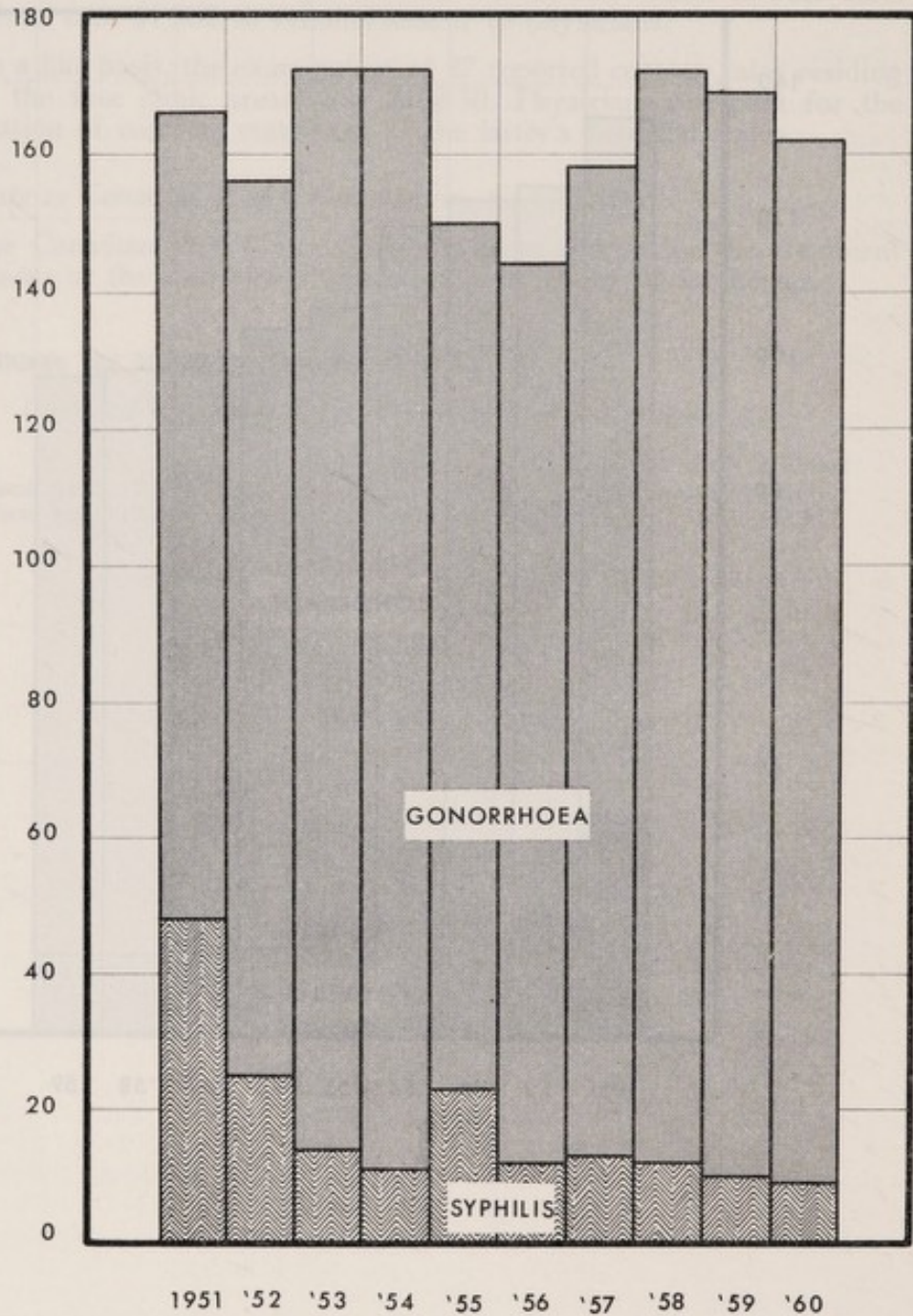


TABLE 11. REPORTED CASES OF VENEREAL DISEASE BY TYPE AND STAGE OF VENEREAL DISEASE, REPORTING AGENCY, AND SEX OF PATIENT, SASKATCHEWAN, 1960

Type of venereal disease	All agencies			Reporting agency											
	Both sexes		Female	Physicians			Clinics			Institutions			Armed forces		
	Both sexes	Male		Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female			
All venereal diseases.....	1,470	1,043	427	727	521	206	646	457	189	87	55	32	10	10	....
All syphilis.....	87	52	35	50	32	18	33	19	14	4	1	3	....	....	....
Acquired early.....	47	34	13	23	17	6	23	16	7	1	1	....	....	....	....
Primary.....	38	30	8	18	13	5	19	16	3	1	1	....	....	....	....
Secondary.....	9	4	5	5	4	1	4	....	4	....	....	....	....	....	....
Acquired latent and late.....	39	18	21	26	15	11	10	3	7	3	....	3	....	....	....
Cardiovascular.....	1	....	1	1	....	1	....	....	....	....	....	....	....	....	....
Neurosyphilis.....	7	7	....	7	7	....	....	....	....	....	....	....	....	....	....
Latent.....	27	8	19	14	5	9	10	3	7	3	....	3	....	....	....
Tertiary, other.....	2	2	....	2	2	....	....	....	....	....	....	....	....	....	....
Type undetermined.....	2	1	1	2	1	1	....	....	....	....	....	....	....	....	....
Prenatal congenital.....	1	....	1	1	....	1	....	....	....	....	....	....	....	....	....
Chancroid.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gonorrhoea.....	1,383	991	392	677	489	188	613	438	175	83	54	29	10	10	....
Ophthalmia neonatorum.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other.....	1,383	991	392	677	489	188	613	438	175	83	54	29	10	10	....

TABLE 12. REPORTED CASES OF VENEREAL DISEASE BY TYPE AND STAGE OF VENEREAL DISEASE, AND AGE GROUP OF PATIENT, SASKATCHEWAN, 1960

Type of venereal disease	All ages		Age group																				
	Both sexes	Male	Female	Under 1 year			1-4			5-14			15-19			20-29			30 and over			Not stated	
				Both sexes	M	F	Both sexes	M	F	Both sexes	M	F	Both sexes	M	F	Both sexes	M	F	Both sexes	M	F		
All venereal diseases.....	1,470	1,043	427	1	1	1	1	4	10	262	116	146	711	545	166	389	312	77	92	66	26		
All syphilis.....	87	52	35	1	1	1	1	3	1	9	1	8	31	19	12	33	24	9	10	6	4		
Acquired early.....	47	34	13	1	1	1	1	1	1	4	1	3	22	17	5	16	12	4	5	4	1		
Primary.....	38	30	8	1	1	1	1	1	1	3	1	2	18	14	4	13	12	1	4	3	1		
Secondary.....	9	4	5	1	1	1	1	1	1	1	1	1	4	3	1	3	1	3	1	1	1		
Acquired latent and late.....	39	18	21	1	1	1	1	3	1	5	5	5	9	2	7	17	12	5	5	2	3		
Cardiovascular.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Neurosyphilis.....	7	7	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Latent.....	27	8	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Tertiary, other.....	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Type undetermined.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Prenatal congenital.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Chancroid.....	1,383	991	392	1	1	1	1	2	9	253	115	138	680	526	154	356	288	68	82	60	22		
Gonorrhoea.....	1,383	991	392	1	1	1	1	2	9	253	115	138	680	526	154	356	288	68	82	60	22		
Ophthalmia neonatorum.....	1,383	991	392	1	1	1	1	2	9	253	115	138	680	526	154	356	288	68	82	60	22		
Other.....	1,383	991	392	1	1	1	1	2	9	253	115	138	680	526	154	356	288	68	82	60	22		

TABLE 13. REPORTED CASES OF SYPHILIS AND GONORRHOEA AND ANNUAL RATES PER 100,000 POPULATION, SASKATCHEWAN 1956-1960

Type of venereal disease	1956	1957	1958	1959	1960
	Number of cases				
Both venereal diseases.....	1,266	1,387	1,529	1,538	1,470
Syphilis.....	108	115	105	90	87
Early (primary and secondary).....	29	35	31	27	47
Latent and late.....	76	78	74	63	39
Prenatal congenital.....	3	2	....	....	1
Gonorrhoea.....	1,158	1,272	1,424	1,448	1,383
	Annual rate per 100,000 population				
Both venereal diseases.....	143.8	157.8	172.2	170.5	161.5
Syphilis.....	12.3	13.1	11.8	10.0	9.5
Early (primary and secondary).....	3.3	4.0	3.5	3.0	5.1
Latent and late.....	8.6	8.9	8.3	7.0	4.3
Prenatal congenital.....	0.4	0.2	....	....	0.1
Gonorrhoea.....	131.5	144.7	160.4	160.5	152.0

TABLE 14. ANALYSIS OF THE EXAMINATION OF VENEREAL DISEASE CONTACTS, SASKATCHEWAN 1959 AND 1960

Item	1959	1960
Total contacts examined.....	813	787
Sources of information re: contacts		
Physicians.....	285	288
Clinics.....	414	418
Institutions.....	.....	4
Health regions.....	2	.....
Public health nurses.....	41	27
Armed forces.....	5	8
Other agencies.....	40	32
Indian health services.....	25	10
Venereal disease control.....	1	.....
Contacts located by:		
Physicians.....	112	107
Clinics.....	171	175
Public health nurses.....	58	41
City medical health officers.....	133	136
Health regions.....	191	198
Armed forces.....	1	2
Other agencies.....	51	57
Venereal disease control.....	8	5
Indian health services.....	88	66
Institutions.....	.....	.....
Results of examination:		
Syphilis.....	10	21
Gonorrhoea.....	525	477
Non-specific.....	19	18
Negative.....	259	264
Unknown.....	.....	7

TABLE 15. AMOUNTS OF DRUGS DISTRIBUTED AND COSTS FOR VENEREAL DISEASE PATIENTS, SASKATCHEWAN, 1959 AND 1960

Type of drug	Amount		Cost	
	1959	1960	1959	1960
All drugs.....			\$ 947.15	\$ 1,136.32
Procaine penicillin in oil (units).....	70,200,000	71,400,000	100.62	102.34
Aqueous procaine penicillin (units).....	1,286,400,000	1,530,000,000	304.29	286.58
Chloromycetin (.25 gm. capsules).....	640	848	204.00	270.30
Sulphathiazole (7½ grs.).....	7,000	2,500	52.92	17.75
Penplus (c.c.'s).....	990	620	106.92	68.13
Gantrisin (tabs.).....		4,000		112.32
Aureomycin (.25 gm. capsules).....	128	288	40.00	76.50
Terramycin (.25 gm. capsules).....	272	512	86.70	163.20
Crystamycin (c.c.'s).....	140	96	31.50	21.60
Rubbing alcohol (gals.).....	4	2	11.00	5.40
Miscellaneous drugs.....			9.20	12.20

TABLE 16. PLACES OF MEETING AND EXPOSURE IN MAJOR CITIES FOR 631 CASES OF VENEREAL DISEASE, SASKATCHEWAN, 1960

Place of meeting	Meeting place only		Meeting and exposure (including marital)		Place of exposure only	
	Number of cases	Per cent	Number of cases	Per cent	Number of cases	Per cent
Total.....	631	100.00	160	100.00	631	100.00
Hotels and motels.....	43	6.81	18	11.25	76	12.04
Beverage room in hotels.....	23	3.64	.....	.....	.....	.....
Rooming houses and apartments.....	12	1.90	8	5.00	25	3.96
Other (including private dwellings).....	72	11.41	18	11.25	186	29.48
Bootleggers premises (prostitute).....	9	1.43	3	1.87	3	0.48
Cafes.....	93	14.74	.....	.....	.....	.....
Dance halls.....	28	4.44	.....	.....	.....	.....
Pickup-automobiles (including taxis).....	2	0.32	.....	.....	194	30.74
Pickup-street, etc.....	178	28.21	.....	.....	.....	.....
Outside.....	.....	.....	.....	.....	26	4.12
Marital.....	.....	.....	75	46.88	.....	.....
Marital (common-law).....	.....	.....	38	23.75	.....	.....
Not stated.....	171	27.10	.....	.....	121	19.18

PROVINCIAL LABORATORIES

The Provincial Laboratories make tests on a wide variety of specimens submitted by health departments and physicians striving to prevent, diagnose, or treat illness. They also provide laboratory services to other departments of government as specialized facilities permit.

The value of such a central laboratory service has long been recognized. The first legislature of the province in 1905 acceded to the standing request of the College of Physicians and Surgeons of the North West Territories to establish a pathological laboratory to help them combat the scourges of diphtheria, tuberculosis, typhoid fever and pneumonia. The identification of serious, mild, or inapparent cases of the disease was helpful in treatment and essential to any control measures designed to slow the spread of the disease.

Over the years the Public Health Laboratory has come to play a similar role in the prevention and treatment of a wide variety of diseases. Symptoms overlap for many diseases, and are often modified or concealed by vaccines and nonspecific drugs. Recognition of cases and successful treatment commonly require accurate diagnoses that hinge on laboratory tests. Though many hospital laboratories have been established throughout the province, there remain many tests that, because of novelty, rarity, complexity or cost, can best be maintained at a central laboratory. The Public Health Laboratory supplements whatever tests and facilities are available in the hospitals. They also serve as a reference and standards laboratory for clinics and hospitals which may seek advice or submit specimens for confirmation of their results.

No effort is spared to make the service as useful as possible to the physicians. To ease the specimen-packaging nuisance, the laboratories provide physicians each year with more than 125,000 leak-proof mailing outfits for submitting specimens. To speed the service, the laboratory contracts for two direct mail deliveries each day from the Post Office, makes a daily pickup from the bus depot, and maintains service on Saturdays and all statutory holidays. The great majority of specimens are examined and reported the day they are received. Over 94.6 per cent of all diagnostic tests in 1960-61 were made without charge so there are very few cost deterrents.

Appreciation for this service is evidenced by the continued increase in demand. Not only have the number of specimens again increased over the previous year, but the number and complexity of tests required on each specimen has increased. Thus 6.4 per cent more specimens were received in 1960-61 than in 1959-60, but some 21.8 per cent more work-units were required. The work-units referred to are the Dominion Bureau of Statistics units calculated to each represent ten minutes of labor in the laboratory.

<i>Examinations and services</i>	<i>Specimens</i>		<i>Examinations</i>		<i>Units</i>	
	<i>1959-60</i>	<i>1960-61</i>	<i>1959-60</i>	<i>1960-61</i>	<i>1959-60</i>	<i>1960-61</i>
Total	177,651	189,085	290,627	315,633	665,761	810,834
Infectious diseases	114,298	116,062	151,725	162,514	315,562	392,845
Haematology	1,189	1,029	1,614	1,578	4,418	4,223
Chemistry	22,237	28,771	32,840	41,333	166,602	220,998
Sanitary (milk and water)	19,338	20,696	66,107	71,026	100,326	109,287
Dairy	8,355	8,729	15,845	16,348	33,110	34,269
Animal diseases	12,234	13,798	22,496	22,834	45,743	49,212

It will be noted that the clinical diagnostic services represented by microbiology, haematology, and chemistry consumed nearly 74 per cent of the energies of the Laboratory in the year under review. Approximately 50 per cent of this diagnostic work originated from patients seen in physicians' offices, the remainder from patients in hospital.

In order to keep the medical profession informed of the scope and extent of outbreaks of infectious disease in Saskatchewan, and to also report on special problems in the prevention of communicable disease, a laboratory-centered epidemiology service was introduced in October 1960. Based on the weekly reports from all bacteriological laboratories in the province on evidence of infectious disease, a periodic bulletin is issued to every physician in Saskatchewan. Field investigations are carried out of epidemics and surveys made to study special problems of particular interest in the prevention of infectious disease such as investigations of hepatitis, diphtheria, typhoid fever, Q fever, cross infections in hospitals, or as the surveillance of the oral polio-vaccination study at Prince Albert, the study of efficacy and side effects of quadruple vaccines in students and of gamma globulin in the suppression of the spread of hepatitis. Aid is given upon request to medical officers of health requiring special laboratory assistance to diagnose or contain outbreaks of communicable disease or solve unusual problems.

Microbiology

There are a number of reasons why it may be desirable to recover an infectious agent from a patient. It may be important to the patient and physician in that treatment may be more specific and effective when the causative agent and its habits are known. For example, when disease-producing bacteria are recovered, their unpredictable vulnerability to each of a variety of antibiotics can be quickly determined in the laboratory. It may also enable the physician to give sounder advice to the convalescent when the cause of the illness is known. Identification of the agent may be important to contacts of the patient and the community at large if special measures be needed to protect them, as, for example, in the case of diphtheria or typhoid fever. Finally, such identifications may permit a more accurate epidemiological record of the prevalent causes of disease and the need for new, or worth of, any existing, specific preventive measure. An example of the latter would be the need to establish the cause of poliomyelitis-like illnesses in patients vaccinated with the Salk vaccine or Sabin oral vaccine.

For one or more of the above reasons, physicians in 1960-61 submitted 116,062 specimens to be tested for evidence of disease-agents crudely grouped in the table below.

<i>Agents sought for</i>	<i>Specimens</i>	<i>Examinations</i>	<i>Units</i>
Total	116,062	162,514	392,845
Syphilis	68,713	90,339	70,291
Gonorrhoea	6,661	6,669	9,417
Septic sore throat	11,807	11,842	59,245
Rheumatic fever	4,154	5,176	18,654
Tuberculosis	559	1,114	6,087
Pyogenic and systemic infections	10,830	22,693	72,835
Bacterial meningitis	188	360	1,291
Bacterial enteritis	7,484	13,785	49,271
Virus infections	4,005	8,392	90,280
Mycotic infections	1,184	1,648	14,100
Parasitic infections	477	496	1,374

Exclusion tests for syphilis were the most common. Some 12,767 of these were submitted in compliance with the Marriage Health Act which requires a certificate from a physician that the betrothed has been examined, a blood test carried out, and does not suffer from syphilis in a communicable form. Another 15,000 specimens originate from prenatal examinations as a double check to protect the newborn from congenital syphilis. Another large number of specimens were submitted from patients admitted to hospital with obscure illnesses. Probably less than 10,000 specimens originated from patients with symptoms remotely suggestive of syphilis. However, the symptoms of this disease are so variable and may mimic so many other diseases, laboratory tests are often the only way to rule out the possibility of the disease. The sensitivity and specificity of the tests used are carefully controlled with all antigens supplied and standardized by the laboratory of Hygiene, Department of National Health and Welfare.

More laboratory evidence of gonorrhoea was found in 1960-61 than in the preceding year. Some 940 of the 6,749 specimens submitted in 1960-61 from suspected cases of gonorrhoea yielded positive findings. This is an increase from the 801 positives found on 5,988 specimens submitted in 1959-60. Though there are good reasons to believe the incidence of this disease may be increasing, the evidence here reported may represent only an increase in the proportion of cases from whom specimens are sent for confirmation. Each year many cases are diagnosed and reported to the department without laboratory confirmation.

Septic sore throats provoked the submission of 11,807 specimens. Beta-hemolytic streptococci were identified in 2,032 of these. Three unrelated outbreaks of diphtheria at Chitek Lake, Prince Albert, and Regina accounted for a large number of specimens from which 22 virulent diphtheria organisms were recovered. In all, there were 14 cases of diphtheria with one death to serve as a powerful reminder of the need to maintain immunization at a high level.

One of the most feared complications of repeated infections by streptococci is that the patient may become sensitized to the organism and develop rheumatic fever. Serological tests related to the detection of new patients or assessment of known patients on prophylactic penicillin, accounted for the majority of the 4,154 specimens submitted out of concern for this disease.

A total of 559 specimens of sputa, pleural fluids, spinal fluids, urines, joint fluids, and tissues were submitted to culture for tubercle bacilli. The majority of specimens from patients with typical symptoms are sent directly to Sanatoria for examination so it was not surprising that tubercle bacilli were recovered from only 8 of the 559 specimens.

The 202 spinal fluids submitted from suspected cases of meningitis yielded 4 isolations of pneumococci, 3 isolations of *H. influenzae*, 1 isolation of listeria and 1 isolation of meningococcus.

There were numerous outbreaks of diarrhoea and dysentery about the province but usually only a few cases were involved in each outbreak. From the 7,484 specimens of stools and urines received, a total of 312 pathogens were recovered representing 204 new cases. There were 107 case-isolations of *Shigella*, 51 case-isolations of *Salmonella*, and 46 case-isolations of pathogenic coliforms in stools of infants. Most of the latter were due to a strain of *Escherichia coli* 0119 B14 H6, although 10 other serotypes were also represented. In recent years, the majority of recognized *Shigella* infections occurred in patients in the Saskatchewan Hospitals or Training School. However, in 1960-61, there were more confirmed cases of *Shigella* infection in people outside of institutions than were found amongst patients in institutions. Thus there were 58 confirmed isolated cases of *Shigella Sonnei* in 1960-61 in non-institutionalized people as compared to 22 cases in 1959-60. This may indicate a considerable spread of this pathogen throughout the province.

Only one case of typhoid fever developed in the year and it was readily linked to a carrier. There were 50 other isolations of a number of species of *Salmonella*, one of them *Salmonella Manhattan* being isolated in Saskatchewan for the first time.

Seven of the larger hospitals were supplied with diagnostic antigens and antisera for conducting Widal tests. A total of 12,850 milliliters of antigen and 3,440 milliliters of antiserum were distributed for this purpose.

The virus section of the laboratory was exceptionally busy during the past year. In addition to conventional serological tests, the laboratory relies on developing chick embryos, newborn mice, and cell cultures of HeLa, amnion, or monkey kidney to signal the presence of virus. Some 4,005 specimens of throat washings, spinal fluids, bloods, stools, and tissue were received to search for virus or serological evidence of virus. From these, the laboratory made 32 case-isolations of coxsackie virus, 5 of poliomyelitis virus type 1, 23 of poliomyelitis virus type 3, 7 of influenza virus, 3 of herpes simplex, 9 of adenovirus, and 13 others still unidentified. Serological evidence of virus infections was obtained from many more specimens.

The laboratory co-operated in the demonstration at Prince Albert of the value and safety of oral poliomyelitis vaccine. An essential prerequisite to this study was assurance that the risk would be very small that wild poliomyelitis viruses hibernating in the community might rise up to cause some cases of paralytic disease within 30 days of vaccination. This assurance could only be gained by sampling the stools of a large cross section of the population to determine how many people were reservoirs for wild poliomyelitis virus. Examination of 1,100 stools collected in the month preceding the trial revealed that only one of the individuals sampled harbored a wild poliomyelitis virus, so the demonstration was carried out. The demonstration was a great success from every standpoint and, as predicted by laboratory results, no mishaps occurred to mar it.

A total of 527 pathogenic fungi were isolated from the 1,184 specimens submitted of skin scrapings, hair, toenails, fingernails, swabs or tissues. As in previous years, the great majority of the isolations were *Candida albicans*, a yeast like organism which often thrives when

bacteria have been suppressed by prolonged exposure to antibiotics. Agents that cause such diseases as ringworm or athlete's foot were recovered from 21 specimens.

Evidence that parasitic infections rarely occur in Saskatchewan residents was afforded by recovery of parasites from only 23 of 450 specimens submitted. Confirmed were 2 cases of whipworm, 3 roundworm, 1 pork tape worm, 4 pinworm, 1 liver fluke, 1 amoebic dysentery, and 14 infections due to *Giardia lamblia*.

Haematology

Blood films are accepted for examination from centres without technician service or where confirmation is desired of their findings. With the continual improvement of laboratory facilities in hospitals, fewer specimens are referred each year for this service.

Chemistry

Chemical examinations of body fluids and excreta often provide an explanation for symptoms or confirmation of diagnosis. Such tests are particularly useful to confirm the diagnosis or guide the management of such ailments as diabetes, nephritis, hepatitis, pancreatitis, coronary thrombosis, hormone excesses or deficiencies, or other faulty metabolism. The chemistry section endeavours to provide any assays which a physician believes might be helpful. Many of these tests are not available elsewhere in the province.

The provincial analyst provides medico-legal examinations on specimens of viscera submitted by coroners and law enforcement agencies, where it is necessary to rule out the possibility of homicide in otherwise unexplained deaths. Other examinations for law enforcement agencies are those for alcohol in blood or in police-seized beverages, and purple dye used to mark tax-free motor fuels.

An outline of the demand for these services is set out below:

<i>Specimen</i>	<i>Specimens</i>	<i>Examinations</i>
Total	28,764	41,333
<i>Blood</i> (bilirubin, cholesterol, sugar, urea, protein-bound-iodine, minerals, phosphatase, lactic dehydrogenase, transaminase, etc.)	24,235	32,150
<i>Cerebrospinal fluid</i> (sugar, protein, chlorides)	303	622
<i>Breast milk</i> (fat, protein, sugar)	72	72
<i>Gastric fluid</i>	39	39
<i>Urine</i> (sugar, acetone, protein, ketosteroids, hormones, heavy metals, drugs)	2,746	4,058
<i>Feces</i> (fat, urobilinogen, etc.)	197	197
<i>Medico-legal and Law Enforcement</i>		
alcoholic beverages	293	293
gasoline seizures	54	54
tissues for poisons	543	3,415
miscellaneous	282	433

Sanitary Examinations

Chemical and bacteriological tests of drinking water and milk are provided as a means of testing the cleanliness and safety of communal or private supplies. Bacteriological tests are made for evidence of coliform bacteria such as abound in the intestinal tract of man or warm-blooded animals. Themselves harmless, these bacteria might be accompanied by other agents which can cause serious disease, hence coliform bacteria are

relied on as a danger signal. Chemical tests are made for measure of excessive minerals or trace elements in water, and for fat and non-fat solids in milk. Two samples of milk are received each week from every creamery in the province and a number of samples of water each month from each distribution system. All milk samples and a majority of water samples are submitted by sanitary officers or milk sanitarians. An appreciable number of waters are sent in directly by farmers and cottagers. The farm modernization program of the Department of Agriculture stimulates a large number of specimens as farmers seek to improve their water supply system.

Many assays are required for measure of nitrate and fluoride content in drinking waters. Rural well waters are routinely tested for nitrate and fluoride ions that newborn infants may escape the risk of excessive nitrates or inadequate fluorides. Sanitary officers screen most samples in the field, and relay to the laboratory only those samples which have apparent significant amounts of either nitrate or fluoride. A Dominion-Public Health Grant assists the laboratory with means to provide such tests. Excessive nitrates in the water used to make formulae for an infant may cause methaemoglobinaemia. Deficient fluorides in the diet of growing children may cause teeth to be less decay-resistant than they should be. Excessive amounts of fluoride would also be objectionable, but no natural waters in Saskatchewan have ever been found to contain such an objectionable amount.

Outfits for demonstrating the cleanliness of utensils, cutlery, and counters of public eating establishments were provided to health regions and city health departments. Some 24,300 vials of media and sterile swabs were provided for this effective educational practice.

An outline of the sanitary examinations made is set out below.

<i>Waters</i>	<i>Specimens</i>	<i>Exam- inations</i>	<i>Milk, cream and ice cream</i>	<i>Specimens</i>	<i>Exam- inations</i>
Total	13,639	43,739	Total	7,057	27,287
Coliforms		18,245	Coliforms		5,848
Dissolved solids		10,072	Plate count		6,024
Nitrates		9,783	Phosphatase		4,472
Fluorides		2,324	Specific gravity ..		2,951
Hardness, alkalinity..		1,463	Total solids		2,951
Iron		488	Butterfat		4,012
Manganese		271	Milk fat		1,029
Iodine		283			
Other miscellaneous..		810			

Dairy Section

This section of the laboratory is supported by a grant from the Department of Agriculture. Its function is to provide examinations to guide the manufacture of creamery butter of good keeping quality. This is important because such butters commonly must be stored for a long period before being consumed. A daily sample of butter from every commercial churn operating in the province is eligible for yeast and mold tests to confirm that practices employed either eliminated these "spoilors" or kept them to a very low harmless level. In all, some 7,401 pats of butter were tested for yeast and mold, while another 1,228 specimens of butter were submitted to other quality control tests such as acidity or alkalinity tests. The dairy section also carries out the sanitary examination of dairy products as detailed in an earlier table.

Animal Pathology

A service to aid the diagnosis of diseases of animals which might infect humans is provided by this section with the aid of a Dominion Health Grant. Specimens are accepted from veterinarians, milk sanitarians, wild-life conservation officers, and farmers. The pathologist of the Department of Agriculture stationed in the adjacent laboratory provides a gross examination of carcasses, viscera, or other specimens, and relays those which warrant bacteriological study to this section. The information or findings are pooled to meet the needs of both the Department of Public Health and the Department of Agriculture.

In addition to bacteriology service for any infectious disease, a major effort is made to provide examinations to enable dairy farmers and milk sanitarians to improve the quality of raw milk. By-products of mastitis infection are most undesirable, whether they be bacteria and pus or antibiotic residues excreted after intramammary treatment. All commercial raw milks in the province are periodically checked for mastitis-causing organisms, antibiotic residues, Q fever antibodies and Brucella antibodies. Special tests may be made of quarter milk samples to help locate infected quarters in animals of a herd where a sincere effort is made to practise good husbandry.

An outline of the work of this section is set out below:

<i>Service</i>	<i>Specimens</i>	<i>Examinations</i>
Total	13,798	22,834
Raw milk	11,992	
Leucocytes (smear)		2,121
(Danish)		1,511
Culture		10,961
Antibiotic residues		796
Brucellosis (Ring test)		2,531
Q fever (Luoto test)		2,371
<i>Other diagnostic service</i>		
Cultures and sensitivities	1,238	1,743
Parasites	25	49
Q fever	521	521
Miscellaneous	22	230

Associated Laboratories

The laboratories of the Saskatchewan Hospitals at Weyburn and North Battleford are administratively responsible to the respective hospitals, but they provide sufficient regional and local public health examinations to warrant inclusion here of their reports. The Provincial Laboratories maintain one technician in the laboratory at North Battleford to help provide sanitary examinations of milk and an emergency bacteriological service to residents of that area.

An outline of service provided is set out below:

<i>Type of examination</i>	<i>Saskatchewan Hospital Weyburn</i>	<i>Saskatchewan Hospital North Battleford</i>
Total examinations made	14,074	19,899
Haematology	7,232	8,954
Urinalysis	2,397	1,689
Biochemistry	3,692	4,158
Diagnostic bacteriology	35	2,029
Sanitary examinations of water	106	1,977
Sanitary examinations of milk	612	1,092
Examinations requested of other laboratories	1,114	1,328

PSYCHIATRIC SERVICES

The Year in Review

The Psychiatric Services Branch, in dealing with the problem of mental disorder throughout the province, started the year with the mental hospitals at North Battleford and Weyburn, with a combined rated capacity of 2,070 beds; one institution for the mentally retarded with a rated capacity of 1,109 beds at Moose Jaw; two psychiatric wards in general hospitals at Regina and Moose Jaw with a combined rated capacity of 56 beds; five full-time mental health clinics and 15 part-time clinics. During the year one part-time clinic became a full-time clinic and four part-time clinics were added to provide at the end of the year a total of six full-time mental health clinics and 18 part-time clinics.

The psychiatric ward and out-patient clinic at the University Hospital supported by, but not under the direction of the branch, also contributed 39 in-patient beds and care to 762 out-patients.

In 1960 the daily average in-patient population was 3,237 at the two mental hospitals, 1,128 at the institution for the retarded, 50 at the two psychiatric wards under the branch and 35 at the University Ward giving a total daily average in the province of 4,450 in-patients.

Admissions to the mental hospitals increased by 8.5 per cent and the number of patients in these hospitals at the end of the year increased by 0.62 per cent. Admissions to the psychiatric wards increased by 8.9 per cent and the number of patients seen at the mental health clinics increased by 25 per cent.

In the in-patient treatment programs, the trend away from psychosurgery and insulin shock towards milieu and drug therapies has continued with a definite tendency towards a greater use of ataractic drugs.

The training course for psychiatric nurses at the three institutions produced another 91 graduates in the 1960-61 academic year. The introduction of the block system of academic instruction last year is being amplified to include the three years of the course and an attempt is being made to reduce the academic part of the course to two years in keeping with the trend across the country in general nursing schools.

Further progress is being made in the co-operation between in-patient and out-patient facilities. Further interest by the public in the matter of mental health and psychiatric treatment has been evidenced by the increased attendance on open house days at the institutions, the organized visiting of patients under the auspices of the Canadian Mental Health Association and the increased voluntary assistance given to the "White Cross" centres for discharged patients operated by the Canadian Mental Health Association.

A start was made on the regional Psychiatric Centre at Yorkton and service facilities to provide heat, laundry and food services for the psychiatric patients have been completed in the new Yorkton Union Hospital. However, for various reasons, the continuation of the construction of the Centre has been postponed.

During the 1960-61 session, the Legislature passed a new Mental Health Act which will provide a similar form of admission to that used in general hospitals, better protection of the rights of individuals and will remove some of the discrimination against the mentally disordered.

During the latter part of the year arrangements were made to take over the Prince Albert Sanatorium for the use of mentally retarded patients. It is planned to place there 350 patients from the Saskatchewan Training School, Moose Jaw whose intellectual level is such that an independent existence in the community is unlikely but who do not require the specialized and constant care needed by the lowest levels of the mentally retarded nor the intensive training required by the higher levels.

The Psychiatric Research Unit continues its investigations of psychiatric problems. Corroboration of a number of the Unit's findings in the biochemical field is being made by investigators in Europe and the United States.

The Future

The problems of providing adequate psychiatric services to the people of Saskatchewan are centred about the acquisition of adequate numbers of professional staff of good quality and the provision of appropriate facilities for a modern program. These two factors are closely interrelated and, because of the increased competition of the other provinces and the United States, if the latter are not provided, the former will not be required.

The statement that one in twelve of the population will require in-patient psychiatric care at some time during his life is still valid and gives an index of the magnitude of the problem and which can only be solved by greater efforts and more appropriate facilities.

MENTAL HOSPITAL SERVICES

Saskatchewan Hospital North Battleford

The Saskatchewan Hospital North Battleford provides services to the northern half of the province. Admissions jumped from 706 in 1958 to 761 in 1959. The trend toward increasing admissions continued in 1960 although not as sharply as in the preceding year. Admissions in 1960 totalled 770, nine more than in 1959. Patients admitted for the first time increased from 451 to 474, readmitted patients decreased from 306 to 296. There were 600 discharges, 171 deaths and two patients transferred elsewhere. The total separations of 773 compares with 761 in 1959.

The total number of patients in hospital at December 31, 1960 was 1,697, a decrease of 10 over 1959. The average daily patient population was 1,715 compared with 1,719 in 1959.

Treatment

The foregoing statistics make it apparent that treatment procedures have been improved sufficiently to bring about a very small decrease

in the number of patients in the hospital despite an increasing admission rate. The boarding-out program in which patients are placed in approved homes in the community continued to be a boon both to the patients involved and the hospital in general but the number of patients so placed was limited to 43 by a ceiling on the funds approved for this purpose. Psychopharmaceutical drugs continued to be used extensively and have proven very beneficial in conjunction with attempts to produce a therapeutic atmosphere within the hospital. An average of 606 patients were receiving psychopharmaceutical drugs at any given time during 1960. A new program for alcoholics has included individual and group therapy, psychodrama and, selectively, the use of lysergic acid diethylamide. Elderly female patients are admitted to a 13-bed ward which permits intensive treatment and enhances their chances for a brief stay in hospital followed by effective rehabilitation. With the assistance of a mental health grant and a generous contribution from the Saskatchewan Branch of the Canadian Mental Health Association, a domestic type housekeeping unit was installed. This makes possible four week training programs for female patients with the view of reabling them in household endeavours.

The last nine patients located in basement wards have been removed to other areas of the hospital.

The average age of the patients continues to increase as does the average of new admissions. At December 31, 1960 there were 524 patients in hospital who were over 70 years of age. Forty-nine per cent of the patients were over 60 years of age, 323 were either semi-bedridden or bedridden.

The difficulty in maintaining even close to a full complement of professional staff and therapeutic disciplines such as psychiatry and occupational therapy militated against further improvements in the treatment program.

Staff

Four specialists in psychiatry departed from the hospital for various reasons and were replaced by two specialists, a resident and a physician. The nursing service was improved through the appointment of assistant supervisors on the wards. Two registered occupational therapists were available for a few months as they worked their way around the world taking temporary positions periodically. Forty-seven psychiatric nurses received diplomas and 13 of these were also registered with the Saskatchewan Registered Nurses Association. The in-service postgraduate course in ward management and supervision graduated 40 nurses. The residency training program continued with three members of the medical staff gaining credit for having successfully completed a year of training.

There was a considerable strain on the staff due to the decreasing number of patients capable of self care and of contributing to the operation of the hospital as a whole. This resulted in the necessity of contracting certain industrial operations on the one hand and the need for additional nursing staff to exercise bed care on the other. It was necessary to convert some student psychiatric nursing positions to General Duty Personnel in order to facilitate cleaning and other manual jobs formerly conducted by patients.

Facilities

Multiple and various alterations and repairs were accomplished by the maintenance staff:

A concrete retaining wall was erected behind the new wing of the psychogeriatric unit to prevent a landslide of the adjacent hill.

The consolidation of the walls of the sewage lagoon with stone riprap was necessary to guard against erosion due to wave action.

The pipeline system to water the increasingly popular golf course was completely renovated.

The research laboratory was considerably remodelled to provide for more efficient working facilities.

Flooring in the auditorium of the main building and in the dayroom of ward 6-B which had been repeatedly repaired throughout its 46 years of existence were completely renovated.

The dayrooms in four wards were completely refurnished and the refurnishing of the Nurses' Home commenced last year, was also completed.

Through the endeavours of the Department of Public Works the roadway from the town of Battleford to the Psychogeriatric Building was hardsurfaced, one cottage (staff dwelling) was renovated and approximately 20 per cent of this hospital's office furniture underwent much needed replacement.

The dairy and gardening operations presently maintain their worth but will have to be further mechanized in the near future or be exposed to further reductions in scope. Hog and poultry raising have both been curtailed because of a shortage of patient help. The able bodied young patients are engaged in more therapeutic activities and the duration of their stay in hospital tends to be short.

Attention is being given to effecting structural changes and repairs over large areas of the hospital.

Saskatchewan Hospital Weyburn

The Saskatchewan Hospital Weyburn serves the southern half of the province insofar as mental hospital care is concerned. There were 1,574 patients in hospital at December 31, compared with 1,544 at December 31, 1959. New admissions rose by 40 to 438 and readmissions increased from 249 to 316. An increasing emphasis on the treatment of alcoholics in all probability accounts for some of the fluxuation in the re-admission rate. This figure has tended to be unpredictable from year to year.

Admissions of patients over 60 years of age now constitute nearly one-third of all admissions and 726 people, nearly half the hospital population, are now over 60. The percentage of patients over 60 years of age has risen from 28 per cent to 47 per cent in five years. The aged psychotic are now *the* mental hospital problem. One hundred and seventy mentally retarded people still remain hospitalized at Weyburn.

Treatment

Two more wards now follow the open door policy. Volunteer visiting and the many activities which go with it continue in a satisfactory

manner. Ward activities are increasing and a good deal of new supplies have been added to make it easier for staff to arrange suitable diversional activities.

The continuing reorganization of some parts of the personal structure has had a beneficial effect on the treatment program. The improvement in the patients milieu has been distinctly noticeable from year to year. However, it is unlikely that much more can be done through the better utilization of staff. Increased expenditures on the patient's physical surroundings and on new staff will be required to keep the therapeutic program from going backwards. The new sick ward on the male side provides for much better physical care of physically ill patients and the old male sick ward has been extensively renovated and is now used for old feeble but still ambulant men. The treatment of elderly women is made very difficult by overcrowding.

The social workers travelled 128,500 miles in 1960. They held approximately 3,800 interviews and certified 17 new homes as suitable for boarding-out patients. Their attendance at mental health clinics totalled 55, the total number of patients boarded out was 46. Seventeen of these were discharged into the community after a trial period in an approved home.

Staff

The loss of several senior medical staff through resignation and illness caused some problems. The recruitment situation insofar as nurses and unskilled and relatively unskilled employees was concerned, was extremely good. The annual percentage turnover has been dropping as follows: 1957—37.8 per cent; 1958—26.1 per cent; 1959—25.87 per cent; 1960—23.8 per cent. The drop for nurses over the same period has been from 29.7 per cent to 19.18 per cent. The number of graduate nurses below the ward supervisor level has increased from 119 in January 1958 to 172 in December 1960.

The Physical Plant

The very beneficial changes on the male side for the physically ill and elderly have been described above. The staff area on the top floor of the remodelled southeast section was completed. One ward was completely renovated, redecorated and to a considerable extent redesigned. Special isolation rooms were built for both male and female tuberculosis patients. In many rooms the hardwood floors were removed and replaced by tile over lightweight aggregate. Additional interviewing room space was provided in one of the corridors.

The power plant is functioning well and the necessary changes which had been under way for quite some time will be completed in 1961. The filtration plant facilities are not great enough to cope with peak loads in the summer and negotiations to increase the filter capacity are currently going on between the Department of Public Works and the city of Weyburn. It is necessary in these peak periods to supplement the water supply by the use of the city wells. The heavy spring runoff resulted in the deterioration of the spillway and the diversion channel and extensive repairs were required. The spillway should be replaced. Complete weather station equipment has been installed in the filtration plant by the Federal Department of Transport.

A new fire hydrant line was installed. This will provide for greater safety and will facilitate the care of the grounds.

The present laundry is proving inadequate. Some of the machinery is obsolete. The available patient help continues to decrease causing a real manpower shortage. The greater proportion of elderly, bedridden people adds to the strain of the laundry.

The farm produced an abundant crop. A full year's supply of brome-alfalfa was grown on the plots adjacent to the hospital. Much baled dry straw was stockpiled, and 17,500 bushels of oats and 2,000 bushels of barley were grown. The health and production of animals continues to be satisfactory.

Extensive work was done on the grounds. A considerable number of dead trees were removed and undergrowth cleaned. It was impossible to properly care for the lawns due to new construction and the installation of a new hydrant and watering system. A considerable amount of gravel was used for road maintenance pending much needed paving. A lighting program on the grounds is required.

SERVICES TO THE RETARDED

Saskatchewan Training School, Moose Jaw

The Saskatchewan Training School, Moose Jaw provides accommodation for 1,109 mentally retarded people in all age groups. During 1960, it was the only centre offering in-patient care to the mentally retarded in the province with the exception of a small privately operated community in Rosthern. There are an estimated 27,000 people of deficient intelligence in Saskatchewan. There are 500 children and adults on the waiting list despite the fact that Saskatchewan provides facilities for proportionately more than other Canadian provinces.

The rate of turnover continued to be slow since only patients of relatively higher intelligence level can be trained with the objective of rehabilitation into the community.

The total separations from the Training School, compiled by totalling deaths, transfers and discharges, was 51—11 higher than 1959. The increase was almost totally the result of a higher number of discharges. This reflects the increased emphasis on social work services in the community. There were 61 new admissions, five patients entered the Training School as transfers from other provincial institutions and eight former patients were readmitted. The considerably higher than usual rate of admissions (there was a total of 42 in 1959) was due to the family care (boarding-out) program which accommodated 34 patients at December 31, 1960.

The end of the fiscal year saw plans being made for the transfer of approximately 350 patients to the building being vacated by the Saskatchewan Tuberculosis League in Prince Albert. It is expected that this number of patients will be transferred in July 1961. This will, to a considerable extent, relieve the burden on the community since the Training School in Moose Jaw will be able to admit an equal number. Unfortunately those who will be transferred to Prince Albert will be in the I.Q. 25 - 50 range and a great many of the urgent cases in the community are people of lesser intelligence who require specialized accommodation.

Treatment and Prevention

In addition to the Training School's customary program of providing academic and technical training to those who are able, industrial training to considerable numbers and the continued emphasis on occupational therapy, there were several new departures during 1960. The very significant progress in the family care program referred to above, and which began only in 1959, is capable of further development as funds are provided.

Considerable attention has been paid to helping those parents who have retarded children in their homes. To this end, a seminar was held which was attended by parents and by representatives from interested groups such as the Saskatchewan Association for Retarded Children, the Harrow DeGroot School and others. One group of people has been given training to assist in home care, day relief programs. Many patients were admitted on a temporary basis during the summer in particular, when accommodation was available due to the camping program. These temporary admissions serve two extremely useful purposes. Firstly, they give the parents a chance for a rest and perhaps a holiday. Secondly, they provide the Training School with an opportunity to assess the child fully and to make recommendations to the parents which will help when a child returns home. The services also have been provided to some parents in times of illness or other emergency.

Medical students attended for a series of lectures and demonstrations. Teacher groups at the university extension courses have been attending for practical experience in teaching the retarded.

Group and individual therapy have increased and have stimulated interest both among patients and staff.

The scout and cub group is now being run by members of the staff on a voluntary basis in the evenings. The guides and brownies continue to be under the leadership of volunteers from the city.

The Women's Auxiliary to the Training School continues to give very active support in handicraft classes, donations for camp, large play equipment, visits and birthday parties.

Three hundred and fifty patients took part in the camping program at Long Lake. There was also an increase in day camping and several patients went to Camp Easter Seal.

Several industrial projects were undertaken with middle-grade patients. They enjoyed this a great deal and it affords them the opportunity of earning some spending money. It is notable that many patients who otherwise exhibit little or no initiative take part in such programs and have shown improvement in motivation and in physical well-being.

The psychological research program continues with support from a National Health Grant. The first report has been submitted for publication.

Staff

Economic conditions and the general high level of unemployment have exerted their influence and it has not been difficult to maintain almost a full quota of staff. The number of resignations has dropped

and it has been possible to select only the best from many applicants for openings. There is still a shortage of people with special skills such as occupational therapists and physiotherapists.

The training program for psychiatric nurses provided instruction to 165 students in the three year course. Twenty-eight students received their diplomas. The local postgraduate course in ward management and supervision graduated 21 nurses. Three staff members are attending postgraduate courses at university.

Facilities

The improving and installing of good ventilation has continued. This work on the adult infirmary has been completed and work has now started on the tunnels in the stores and the Parkview area. It is also necessary to provide ventilation for the high tension cable under the power house. Heating improvements have continued with the installation of a vacuum return pump on the Parkview male side. One ward was rezoned and increased radiation installed.

Considerable painting, repair and electrical work has been done throughout the plant. The patients' picnic grounds were improved and the summer camp site also received attention. Power was brought in, the buildings on the camp site were rewired and additional kitchen equipment was installed.

The kitchen facilities at the institution were improved with the defrosting unit installed on the deep freeze, replacement steam kettles installed, and increased storage provided in the walk-in refrigerators.

Fire fighting equipment was adjusted to meet standards.

Sun shades were built and erected on two buildings and rebuilt on the south side of the hospital and administration building. Additional storage facilities were provided for some wards, the garage and the electrician shop. Lighting in the stairwells was changed for easier service. The recreation hall exterior was completely caulked.

Landscaping plans for the institution are progressing very slowly. Some trees were planted and a small area was planted in grass. An installation of an adequate water system is essential to adequate progress in this area. Increased parking facilities are required.

PSYCHIATRIC WARDS IN GENERAL HOSPITALS

Munroe Wing

The Munroe Wing operates under the authority of the Mental Hygiene Act and by reason of an agreement between the Department of Public Health and the Board of Governors of the Regina General Hospital. It is a 31 year old, open-door psychiatric unit. There are 14 male and 19 female beds for in-patients. The number of day-patients treated at any given time is limited by the available dining area.

The Munro Wing provides short-term treatment for all types of voluntary psychiatric patients. The average length of stay in 1960 was 28.7 days. The treatment includes physical methods, psychotherapy, social interaction, furthermore, social workers are available for improvement of the social situation of the patient in the community and with the relatives.

Nineteen-sixty was the first full year during which the Munroe Wing and Regina Mental Health Clinic functioned as a unit. The combined staff includes six psychiatrists (three of them residents), one psychologist (one was away on a grant), two social workers (three for a few months, the vacancy was not filled for the remainder of the year) and one speech therapist for the first eight months only. The Munroe Wing also had 11 supervising nurses.

The total number of admissions was 353, which is 36 less than the previous year. The drop was mainly due to the weather (long harvesting season) each year during this period there is a drop in admissions, particularly males. Only 17 patients were transferred to Saskatchewan Hospital Weyburn, because they required a longer period of treatment. This is five less than in 1959. Unfortunately many patients who could have been treated at Munroe Wing could not be accommodated because of lack of available beds at Munroe Wing and were sent directly to the Saskatchewan Hospital Weyburn. During the year there were 12 male and 11 female patients treated as day-patients.

During the year, four psychiatric residents (two for six months each) received training at Munroe Wing and 125 nursing students were trained in psychiatric nursing. One Regina General Hospital interne was here for training in December.

The Canadian Mental Health Association continued its visits to Munroe Wing and some of the Munroe Wing patients took part in White Cross activities.

Some improvement in facilities is required if the average length of stay per patient is to be further decreased.

Psychiatric Ward, Moose Jaw

On July 1st, 1956, by order of the Lieutenant Governor in Council, the third floor of the Memorial Wing of the Union Hospital was declared a Psychopathic Ward for the purposes of the Mental Hygiene Act. The ward's function is to provide facilities for the observation, diagnosis and treatment of all classes of mental illness. The functions and operations of the Mental Health Clinic are closely integrated with those of the Psychiatric Ward, thus providing continuing treatment and after-care of patients where necessary. This integrated program is designed for the treatment and maintenance of patients within their own community to prevent prolonged hospitalization, prevent chronicity due to socio-cultural factors and the transfer of patients to distant mental hospitals. The effectiveness of this program in relationship to admissions to mental hospitals can be gauged by the following statistics. Admission to the Psychiatric Ward from August 1st, 1956 to December 31st, 1960 totalled 1,023 patients. During the same period of time 70 patients, a total of 6.8 per cent, were transferred to a mental hospital.

During the year 1960-61 there were 285 admissions, an increase of 10.89 per cent over the previous year. The average daily census was 19.82 and the length of stay 23.85 days. A total of 15 patients were transferred to mental institutions in 1960-61. The readmission rate remains high. This can be expected in view of the general policy of treating all forms of psychiatric disorders and of keeping patients in their own community environment in order to prevent isolation through prolonged detention in hospital. The percentage of patients admitted who were 55 years and over continues to be high. This group accounted for 28.07 per cent of the total admissions for 1960. However, this figure is a drop of 2.28 per cent over the previous year. Beds have always been available for emergency admissions and only on rare occasions has a general waiting list been necessary.

Four psychiatrists, a psychologist, two psychiatric service workers, an occupational therapist, and a staff of graduate nurses and nursing students combined in-patient and out-patient therapy into an effective therapeutic program. A resident psychiatrist continued training in this setting and 62 nursing students from three general hospitals received training in psychiatric nursing. One nurse was seconded on bursary to McGill University for training in teaching and administration. Visiting clergy, members of A.A. and other related agencies contributed to both the training and treatment facilities. In order to increase the efficiency of the graduate nursing staff, an in-service educational program was initiated. This program consisted of lectures once a month by visiting specialists in the fields of medicine and psychiatry. These lectures were also attended by the graduate nursing staff of all departments of the Union Hospital and have proved very successful.

Milieu therapy as applied through nursing teams, group therapy, occupational, recreational and educational groups, art therapy, and psychodrama, plays a major role in the therapeutic program. Established psychotherapeutic and physical methods of treatment form the backbone of therapy. Patients were kept in contact with their homes, families, and affairs while under treatment. The day-patient concept continued to expand and has been particularly successful in the maintenance of chronic patients in the community. Through the courtesy of the superintendent, the facilities of the Saskatchewan Training School were made available to the patients. A ceramic class was started by the occupational therapist.

The "open door" philosophy has been maintained and patients whose condition was considered satisfactory were allowed to visit at home, shop and attend service. Effective nursing has eliminated any need for physical restraints of any kind. In the research area a study of anti-depressants was completed and the results will be published in the near future. Lysergic Acid treatment was given to 16 alcoholics during the year and the efficacy of this approach is under study. Four papers by the medical staff were published during the year.

Psychiatric Ward, University Hospital, Saskatoon

The number of patients admitted during the year was 665. Three hundred and sixty-eight of these were first admissions. The average daily census was 35.07.

The teaching program continues for both medical undergraduates and graduates, and student nurses.

COMMUNITY SERVICES

Regina Mental Health Clinic

The Regina Mental Health Clinic is operated under the authority of Section 37(a) of the Mental Hygiene Act. It provides diagnostic, consultant and therapeutic out-patient service to the city of Regina and the southeastern part of the province. It also screens most candidates for admission to Munroe Wing. This latter function can be carried out only partially because of the vacancies which exist at different times in the combined staffs of Munroe Wing and Mental Health Clinic.

A total of 748 patients were seen in 1960. Four hundred and sixteen of these were children, a figure which reflects the increased emphasis in that area. The work load increased considerably in view of the fact that the patients seen increased by 72 over 1959 and also because with children it is necessary to see the parents and often the teachers.

The clinic provided consultations to the Department of Social Welfare, the Family Service Bureau, the Catholic Welfare Society, the Regional Health Officers, the City Mental Health Division, Embury House, Saskatchewan Boys' School, Dales House, the City Police and the Regina jail in addition to the medical practitioners who are the primary source of referrals.

The speech therapist resigned in August and was not replaced. There is a great demand for the services of speech therapists who can contribute a great deal to the over-all effectiveness of a clinic. One psychologist was away taking postgraduate training.

Space is a problem. It would be very desirable to have adequate room for play therapy and more facilities for psychological research and an office with a one-way screen for training purposes.

Moose Jaw Mental Health Clinic

The clinic provides consultative, therapeutic and preventive services on an out-patient basis to the residents of Moose Jaw and district. It is closely integrated with the functions and operations of the psychiatric ward and acts as an admission, discharge, and follow-up unit. The same professional staff serves both units, facilitating better communication and continuity of treatment. Each year there is an increasing demand for treatment on an out-patient basis. From August 1st, 1956 to December 31st, 1960 a total of 2,877 patients were seen at the clinic.

For the year 1960, a total of 753 patients were referred; an increase of 15.6 per cent over the preceding year. There has been a steady increase both in the number of new cases and in the number of former cases referred for treatment. Patients are referred through the family physician, from the Department of Social Welfare and Rehabilitation, local clergy and Magistrate's court.

Group psychotherapy sessions utilizing art therapy as a media to promote a therapeutic atmosphere continued weekly throughout the year. Close supervision and support was provided for the more chronic patients in the community through a home visiting program conducted by the social worker attached to the clinic. Elderly patients in local hospitals, homes for the aged and nursing homes received the benefits of psychiatric consultation and treatment at regular intervals. By this method, many

elderly people were maintained in the community and cut down admission to mental hospitals. During the year, the psychiatric staff acted as consultants to the Saskatchewan Training School and treated selected patients.

Greatly increased emphasis was placed during the year on the part which the staff would play in the assessment and treatment of childhood emotional disorders. A "child guidance centre" type of approach was employed and the close assistance of medical practitioners, teachers and other interested groups was obtained.

Mental Health Clinic — Swift Current

This clinic, which serves an area roughly equal to the Swift Current Health Region, saw a total of 324 patients during the year. Two hundred and thirty-one were patients for the first time at the clinic and 93 were people returning for further assessment and/or treatment. The staff consisted of the director, one social worker and two stenographers. It was not possible to fill the vacant psychologist position.

The staff continued to be highly mobile, a necessity in a large, sparsely populated area. This policy of providing a community service, including home visits where required, continues to be successful and is now considered to be beyond the experimental stage. Close collaboration with family physicians, a readiness to provide a practical service, and the tendency to refer patients soon after the onset of an illness has resulted in a marked decline in the number who have to go to mental hospitals.

Mental Health Clinic — Prince Albert

Services provided to the Prince Albert area were modelled on the Swift Current experience and the results are equally favourable. There is very close liaison with the Saskatchewan Hospital North Battleford, with the general practitioners in the northeast of the province, and with all community resources.

A total of 388 patients were seen in 1960. Three hundred and one were new patients and 87 "previous" patients.

There was a full complement of staff throughout the year. However, the area is a very large one, quite heavily populated for Saskatchewan, and it has been necessary to be quite selective in choosing patients for treatment and in selecting the type of treatment most practical under the circumstances. The staff has been highly mobile and have to date managed to maintain services to the part-time clinics which were established in 1959. Consultations were also provided to the Prince Albert jail and the penitentiary.

Mental Health Clinic, Yorkton

This clinic opened in July 1960 under the leadership of Dr. F. Grunberg who had previously directed the pilot project in Swift Current. His staff consisted of two social workers and two stenographers. No psychologist was available. The objectives were to make out-patient psychiatric consultations and treatment available throughout the Yorkton Health Region and to prepare the way for a community psychiatric centre which is planned for the area.

A very heavy caseload immediately followed the opening of the clinic. Two hundred and sixty-one new patients were seen in less than six months.

The director and both social workers were engaged several evenings weekly addressing community groups on the functions of the clinic, what might be expected from community psychiatry, and the role which people could play as individuals and in groups. The groundwork was successfully laid for more comprehensive services.

The MacNeill Clinic, Saskatoon

This well established clinic experienced a further increase of referrals in 1960. Four hundred and ninety-eight new patients were seen as compared with 422 in 1959. The number of patients who returned to the clinic after having been seen in a previous year was 331, an increase of 69 over the previous year. Children constituted nearly half of the new patients referred and almost two-thirds of those carried over from the previous year. There are waiting lists for psychotherapy, speech therapy and remedial reading.

The staff consists of the psychiatric director, a resident psychiatrist, a full-time and part-time reading therapist, a psychologist, a speech therapist, a social worker and an occupational therapist. There is a very close liaison with the school system and with groups providing assistance to special groups such as the retarded, physically handicapped and the delinquent. The speech therapist provides consultative services to the Saskatchewan Training School in Moose Jaw and to other voluntary and public agencies requesting assistance.

The sources of referral of patients were as follows: medical practitioners, 346; social agencies, 38; forensic sources, 6; mental hospitals and the Saskatchewan Training School, 27; health region or school doctor, 24; Physical Restoration Centre and Saskatchewan Council for Crippled Children and Adults, 57. The numbers of interviews for reading therapy more than doubled over 1959 and reached a total of 4,742.

Psychiatric Out-Patient Clinic, University Hospital, Saskatoon

This clinic is operated by the same staff as operate the psychiatric ward of the University Hospital.

As in the case of the ward, it is used as a teaching facility for undergraduates in the medical school and for the training and supervised experience of graduate doctors seeking specialist qualifications in psychiatry.

Because of the MacNeill Clinic's special interest in child psychiatry, there is a greater proportion of adults in this clinic.

During the year 762 patients were referred to the clinic of which 573 were new and 189 had been seen previously.

Part-Time Mental Health Clinics

The policy of the Psychiatric Services Branch is to make psychiatric services readily available to the public. Such services should be preventive, consultative, and therapeutic. The extensive network of part-time clinics make psychiatric consultations readily available geographically to the bulk of the people in the province. However, there is a limitation in the temporal dimension in that these clinics are held only one day per week or one day per month in any given locality.

Some preventive work is accomplished because the part-time clinics do make it possible to see some patients earlier in the course of the illness or their illnesses. Consultations with various community agencies do have an educational effect. Sometimes a staff member attending a part-time clinic addresses a community group in the evening. However, the time element does limit the preventive aspects also.

The third function, providing therapy, is seldom possible at a part-time clinic except insofar as community resources may be mobilized to assist an ill person. Where more intensive treatment is required, the patient must be referred to a full-time clinic, a psychiatric ward or a mental hospital. This problem has been met by some patients in the northeast who live within driving distance of Melfort, Nipawin and Tisdale. Some of the patients attend all three clinics and by this means it is possible to carry on a continuing therapy program.

There were 18 part-time mental health clinics in operation at the end of the year. The policy has been to make each full-time unit responsible for the surrounding rural district. The part-time clinics are staffed from the full-time facilities. The Saskatchewan Hospital Weyburn has responsibility for clinics in Weyburn and Estevan; the North Battleford Hospital has North Battleford, Kindersley, Biggar and Rosetown; the Regina Mental Health Clinic has the Indian Hospital at Fort Qu'Appelle, Fort San and Grenfell; the Prince Albert Clinic has Melfort, Tisdale and Nipawin; the Moose Jaw Mental Health Clinic has Davidson and Assiniboia; the Swift Current Clinic has Leader, Shaunavon and Maple Creek; the Yorkton Mental Health Clinic has one clinic in Kamsack and others will be added as staff permit.

These part-time clinics saw a total of 953 patients during the year. Six hundred and forty-five of them were referred to a psychiatric agency for the first time in that year.

PSYCHIATRIC RESEARCH

The main research group is housed at the University of Saskatchewan. However, there are also very active units at each of the mental hospitals. There are smaller research projects in some other facilities. The objectives are to study the three psychiatric illnesses which comprise the chief burden to the psychiatric services branch, schizophrenia, senility and alcoholism.

Schizophrenia

Considerable progress was made in uncovering some of the mysteries of schizophrenia. In previous years, some physiological differences between schizophrenic and other patients had been reported. In the year under review, two major additional findings were firmly established in Saskatchewan and will be published in the August issue of the *Journal of Neuropsychiatry* in a special dedication issue featuring Saskatchewan research. This is the first time one unit has contributed every article to one issue of a psychiatric journal.

There is now a clear relationship between the presence in the urine of a chemical substance (of unknown structure) and schizophrenia. This has been found at the Saskatchewan Hospitals at North Battleford and Weyburn and at the University Hospital. The unknown substance (US) is present in three-quarters of all schizophrenics (so far tested) when ill and disappears when they recover. Relapse is often preceded by recurrence of US. Two out of four children under age ten said to be

retarded had the same US. One of these is now making good progress while receiving nicotinamide treatment. So far US has not been found in any normals, but has appeared in one out of 25 surgically stressed patients. About one-quarter of neurotic, depressed and psychopathic patients have US. When tested by a diagnostic card-sorting test, they are more like schizophrenia than are patients without US but with similar diagnosis.

The second finding is a diagnostic card-sorting test for symptoms. Well over 1,000 subjects have been tested. The test is simple, valid and objective, easily administered and scored. It differentiates schizophrenia well from all other groups.

Nicotinic acid and nicotinamide have continued to prove useful adjuncts for treatment of schizophrenia. Two corroborative studies have been completed and will be published; (a) one by Denson at the Saskatchewan Hospital, North Battleford, and (b) one by Robie from New Jersey.

The adrenochrome hypothesis has received support in two areas: (a) psychological activity was corroborated by research workers in Moscow at the Institute of Psychiatry and in Czechoslovakia (Reported at the Third International Congress of Psychiatry, Montreal, 1961); (b) presence in the body corroborated by Dr. M. Altschule, Professor of Medicine, Harvard University; Dr. M. Reiss, Director of Research, Staten Island; and Dr. Gordon, Veterans Administration Hospital, Chicago as well as by Dr. L. Abood, Research Biochemist at the University of Illinois.

Senility

The most promising lead for slowing development of senility is still the finding made by the research group that nicotinic acid lowers cholesterol levels in plasma. Preliminary evidence suggests it also slows the development of senility. Major studies are in progress at the Saskatchewan Hospital, North Battleford and at Jubilee Heights Geriatric Centre, Saskatoon.

Alcoholism

Over 250 alcoholics have received special LSD-25 treatments. The response is better than for similar patients treated by other methods. Various studies are under way at five psychiatric centres comparing effect of therapist, technique, setting and follow-up. The best results seem to follow a program which includes pre-admission work-up, relationship therapy in hospital with LSD-25 and adequate follow-up.

Other Projects

The sociological follow-up study of patients discharged to the community continues. Dr. S. Traub of the University Hospital radiological department received a grant with which to survey the skulls of all patients at the Saskatchewan Hospital North Battleford. The psychologists have been engaged in a large number of projects, as have the biochemists. At Weyburn, an interesting study is nearing completion concerning the development of more desirable social behavior patterns on long-stay wards. Seventeen scientific papers were published from Weyburn alone. At North Battleford an animal laboratory is employed to distinguish the effects of various chemicals and serum on rats. Many other research projects are also in progress there. At the Saskatchewan Training School in Moose Jaw a study was completed which indicated to a much more refined degree than before what performance can be expected of different levels of retarded people under various conditions.

TABLE 17. MOVEMENT OF PATIENT POPULATION OF THE MUNROE WING, REGINA GENERAL HOSPITAL, THE PSYCHIATRIC WARD, MOOSE JAW UNION HOSPITAL, AND UNIVERSITY HOSPITAL, SASKATOON, SASKATCHEWAN, 1960

Movement of patients	Total			Munroe Wing, Regina			Psychiatric Unit, Moose Jaw			University Hospital, Saskatoon		
	Both sexes	Sex of patient		Both sexes	Sex of patient		Both sexes	Sex of patient		Both sexes	Sex of patient	
		Male	Female		Male	Female		Male	Female		Male	Female
In hospital January 1, 1960.....	80	32	48	28	14	14	19	7	12	33	11	22
Admissions during 1960.....	1,303	601	702	353	159	194	285	121	164	665	321	344
First admissions.....	711	347	364	206	106	100	137	65	72	368	176	192
Readmissions.....	589	251	338	146	52	94	148	56	92	295	143	152
Transfers from psychiatric institutions.....	3	3	.....	1	1	.....	.....	.....	.....	2	2	.....
Discharges during 1960.....	1,304	602	702	354	162	192	288	118	170	662	322	340
Returned home, improved.....	994	430	564	283	125	158	234	91	143	477	214	263
Returned home, unimproved.....	124	71	53	43	19	24	27	15	12	54	37	17
Transferred to general hospitals.....	47	22	25	9	5	4	10	5	5	28	12	16
Transferred to mental hospitals.....	124	71	53	17	11	6	15	6	9	92	54	38
Deaths.....	5	4	1	2	2	.....	2	1	1	1	1	.....
Other.....	10	4	6	.....	.....	.....	.....	.....	.....	10	4	6
In hospital December 31, 1960.....	79	32	47	27	11	16	16	10	6	36	11	25
Total number of patient days.....	31,079	.....	.....	10,923	.....	.....	7,254	.....	.....	12,902	.....	.....
Average daily census.....	84.9	.....	.....	29.8	.....	.....	19.8	.....	.....	35.3	.....	.....
Average length of stay (days).....	22.5	.....	.....	28.7	.....	.....	23.9	.....	.....	18.5	.....	.....

TABLE 18. AGE OF PATIENTS ADMITTED TO THE MUNROE WING, REGINA GENERAL HOSPITAL, AND THE PSYCHIATRIC WARD, MOOSE JAW UNION HOSPITAL, SASKATCHEWAN, 1960

Age of patient	Number			Per cent		
	Both sexes	Male	Female	Both sexes	Male	Female
Both institutions						
All ages.....	638	280	358	100.0	100.0	100.0
Under 15.....	6	5	1	0.9	1.8	0.3
15-34.....	194	81	113	30.4	28.9	31.6
35-54.....	276	123	153	43.3	43.9	42.7
55 and over.....	162	71	91	25.4	25.4	25.4
Munroe Wing, Regina						
All ages.....	353	159	194	100.0	100.0	100.0
Under 15.....	3	3	....	0.9	1.9	....
15-34.....	117	55	62	33.1	34.6	32.0
35-54.....	151	68	83	42.8	42.8	42.8
55 and over.....	82	33	49	23.2	20.7	25.2
Psychiatric Ward, Moose Jaw						
All ages.....	285	121	164	100.0	100.0	100.0
Under 15.....	3	2	1	1.0	1.6	0.6
15-34.....	77	26	51	27.0	21.5	31.1
35-54.....	125	55	70	43.9	45.5	42.7
55 and over.....	80	38	42	28.1	31.4	25.6

TABLE 19. DIAGNOSIS OF PATIENTS ADMITTED TO THE MUNROE WING, REGINA GENERAL HOSPITAL, SASKATCHEWAN, 1960

Diagnosis*	Both sexes	Sex of patient	
		Male	Female
All diagnosis.....	353	159	194
Psychoses (300-309).....	167	78	89
Schizophrenic disorders (300).....	61	31	30
Manic-depressive reaction (301).....	36	8	28
Involutional melancholia (302).....	32	15	17
Paranoia and paranoid states (303).....	7	5	2
Senile psychosis (304).....	6	4	2
Presenile psychosis (305).....	1	1	.....
Psychosis with cerebral arteriosclerosis (306).....	8	3	5
Alcoholic psychosis (307).....	5	5	.....
Psychosis of other demonstrable aetiology (308).....	6	4	2
Other and unspecified psychoses (309).....	5	2	3
Psychoneurotic disorders (310-318).....	111	35	76
Anxiety reaction without mention of somatic symptoms (310).....	17	6	11
Hysterical reaction without mention of anxiety reaction (311).....	8	2	6
Phobic reaction (312).....	1	1	.....
Obsessive-compulsive reaction (313).....	3	.....	3
Neurotic-depressive reaction (314).....	64	21	43
Psychoneurosis with somatic symptoms affecting circulatory system (315).....	.....	.....	.....
Psychoneurosis with somatic symptoms affecting digestive system (316).....	6	.....	6
Psychoneurosis with somatic symptoms affecting other systems (317).....	4	2	2
Psychoneurotic disorders, other, mixed and unspecified types (318).....	8	3	5
Disorders of character, behaviour and intelligence (320-326).....	67	42	25
Pathological personality (320).....	19	11	8
Immature personality (321).....	11	4	7
Alcoholism (322).....	27	21	6
Other drug addiction (323).....	.....	.....	.....
Primary childhood behaviour disorders (324).....	1	1	.....
Mental deficiency (325).....	5	3	2
Other unspecified character, behaviour and intelligence disorders (326).....	4	2	2
Epilepsy (353).....	2	1	1
Other.....	6	3	3

* Code numbers according to the *International Statistical Classification of Diseases, Injuries and Causes of Death, 1955*, are shown in parentheses.

TABLE 20. DIAGNOSIS OF PATIENTS ADMITTED TO THE PSYCHIATRIC WARD, MOOSE JAW UNION HOSPITAL, SASKATCHEWAN, 1960

Diagnosis*	Both sexes	Sex of patient	
		Male	Female
All diagnoses.....	285	121	164
Psychoses (300-309).....	150	55	95
Schizophrenic disorders (300).....	63	16	47
Manic-depressive reaction (301).....	23	8	15
Involitional melancholia (302).....	21	8	13
Paranoia and paranoid states (303).....	7	4	3
Senile psychosis (304).....	3	1	2
Presenile psychosis (305).....	3	3	....
Psychosis with cerebral arteriosclerosis (306)....	14	8	6
Alcoholic psychosis (307).....	4	4	....
Psychosis of other demonstrable aetiology (308).....	11	3	8
Other and unspecified psychoses (309).....	1	....	1
Psychoneurotic disorders (310-318).....	81	30	51
Anxiety reaction without mention of somatic symptoms (310).....	7	4	3
Hysterical reaction without mention of anxiety reaction (311).....	8	2	6
Phobic reaction (312).....	2	....	2
Obsessive-compulsive reaction (313).....	....	....	....
Neurotic-depressive reaction (314).....	55	21	34
Psychoneurosis with somatic symptoms affecting circulatory system (315).....	1	1	....
Psychoneurosis with somatic symptoms affecting digestive system (316).....	2	1	1
Psychoneurosis with somatic symptoms affecting other systems (317).....	1	....	1
Psychoneurosis disorders, other, mixed, and unspecified types (318).....	5	1	4
Disorders of character, behaviour and intelligence (320-326).....	43	35	8
Pathological personality (320).....	13	11	2
Immature personality (321).....	2	2	....
Alcoholism (322).....	18	18	....
Other drug addiction (323).....	5	1	4
Primary childhood behaviour disorders (324)....	2	2	....
Mental deficiency (325).....	....	....	....
Other unspecified character, behaviour, and intelligence disorders (326).....	3	1	2
Epilepsy (353).....	6	1	5
Other.....	5	....	5

* Code numbers according to the *International Statistical Classification of Diseases, Injuries and Causes of Death, 1955*, are shown in parentheses.

TABLE 21. DIAGNOSIS OF PATIENTS ADMITTED TO THE PSYCHIATRIC WARD, UNIVERSITY HOSPITAL, SASKATOON, SASKATCHEWAN, 1960

Diagnosis*	In-patient			Out-patient
	Both sexes	Sex of patient		Both sexes
		Male	Female	
All diagnoses.....	698	354	344	573
Psychoses (300-309).....	294	134	160	137
Schizophrenic disorders (300).....	136	55	81	31
Manic-depressive reaction (301).....	44	24	20	72
Involutional melancholia (302).....	37	12	25	13
Paranoia and paranoid states (303).....	6	3	3	3
Senile psychosis (304).....	23	9	14	10
Presenile psychosis (305).....	2	2	....	....
Psychosis with cerebral arteriosclerosis (306).....	12	9	3	....
Alcoholic psychosis (307).....	7	4	3	....
Psychosis of other demonstrable aetiology (308).....	19	13	6	....
Other and unspecified psychoses (309).....	8	3	5	8
Psychoneurotic disorders (310-318).....	195	72	123	184
Anxiety reaction without mention of somatic symptoms (310).....	59	27	32	98
Hysterical reaction without mention of anxiety reaction (311).....	29	8	21	23
Phobic reaction (312).....	7	2	5	2
Obsessive-compulsive reaction (313).....	6	5	1	3
Neurotic-depressive reaction (314).....	59	17	42	12
Psychoneurosis with somatic symptoms affecting circulatory system (315).....	3	1	2	1
Psychoneurosis with somatic symptoms affecting digestive system (316).....	5	3	2	3
Psychoneurosis with somatic symptoms affecting other systems (317).....	2	....	2	8
Psychoneurotic disorders, other, mixed and unspecified types (318).....	25	9	16	34
Disorders of character, behaviour and intelligence (320-326).....	184	136	48	158
Pathological personality (320).....	46	29	17	20
Immature personality (321).....	14	5	9	14
Alcoholism (322).....	99	89	10	28
Other drug addiction (323).....	10	6	4	1
Primary childhood behaviour disorders (324).....	7	2	5	3
Mental deficiency (325).....	4	2	2	28
Other unspecified character, behaviour, and intelligence disorders (326).....	4	3	1	64
Epilepsy (353).....	5	3	2	....
Other.....	20	9	11	94

* Code numbers according to the *International Statistical Classification of Diseases, Injuries and Causes of Death, 1955*, are shown in parentheses.

TABLE 22. MOVEMENT OF PATIENT POPULATION OF THE SASKATCHEWAN HOSPITALS, NORTH BATTLEFORD AND WEYBURN, 1960

Movement of patients	Total		Saskatchewan Hospital North Battleford			Saskatchewan Hospital Weyburn			
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
On the register, January 1, 1960.....	3,494	2,076	1,418	1,868	1,112	756	1,626	964	662
In hospital.....	3,251	1,967	1,284	1,707	1,041	666	1,544	926	618
On trial leave.....	187	81	106	118	51	67	69	30	39
Boarding out.....	56	28	28	43	20	23	13	8	5
Admissions during the year.....	1,534	921	613	770	442	328	764	479	285
First admissions.....	912	569	343	474	279	195	438	290	148
Readmissions.....	612	348	264	296	163	133	316	185	131
Transfers received.....	10	4	6	.....	.....	.....	10	4	6
Discharges.....	1,201	685	516	600	321	279	601	364	237
Transfers to other mental hospitals.....	14	5	9	2	.....	2	12	5	7
Deaths.....	291	178	113	171	104	67	120	74	46
On the register, December 31, 1960.....	3,522	2,129	1,393	1,865	1,129	736	1,657	1,000	657
In hospital.....	3,271	2,008	1,263	1,697	1,046	651	1,574	962	612
On trial leave.....	188	83	105	125	59	66	63	24	39
Boarding out.....	63	38	25	43	24	19	20	14	6

TABLE 23. FIRST ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS BY AGE AND SEX, SASKATCHEWAN HOSPITAL, NORTH BATTLEFORD, 1960

Age group	First admissions	Re-admissions	Transfers in	Discharges	Deaths	Transfers out
Both sexes						
All ages.....	474	296	....	600	171	2
Under 15.....	4	....	....	2	....	....
15-24.....	49	21	....	52	....	....
25-44.....	141	141	....	302	2	2
45-64.....	92	93	....	164	15	....
65-69.....	20	12	....	24	9	....
70 and over..	168	29	....	56	145	....
Male						
All ages.....	279	163	....	321	104	....
Under 15.....	1	....	....	1	....	....
15-24.....	35	15	....	41	....	....
25-44.....	79	77	....	154	2	....
45-64.....	52	47	....	77	10	....
65-69.....	16	5	....	12	5	....
70 and over..	96	19	....	36	87	....
Female						
All ages.....	195	133	....	279	67	2
Under 15.....	3	....	....	1	....	....
15-24.....	14	6	....	11	....	....
25-44.....	62	64	....	148	....	2
45-64.....	40	46	....	87	5	....
65-69.....	4	7	....	12	4	....
70 and over..	72	10	....	20	58	....

TABLE 24. FIRST ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS BY AGE AND SEX, SASKATCHEWAN HOSPITAL, WEYBURN, 1960

Age group	First admissions	Re-admissions	Transfers in	Discharges	Deaths	Transfers out
Both sexes						
All ages.....	438	316	10	601	120	12
Under 15.....	2	....	....	2	....	....
15-24.....	43	13	1	50	2	2
25-44.....	164	145	4	287	4	4
45-64.....	93	119	3	181	15	3
65-69.....	22	13	2	32	10	2
70 and over..	114	26	....	49	89	1
Male						
All ages.....	290	185	4	364	74	5
Under 15.....	2	....	....	2	....	....
15-24.....	30	9	....	33	2	....
25-44.....	122	95	1	185	4	2
45-64.....	58	63	2	100	9	1
65-69.....	12	8	1	21	6	2
70 and over..	66	10	....	23	53	....
Female						
All ages.....	148	131	6	237	46	7
Under 15.....	....	....	....	....	....	....
15-24.....	13	4	1	17	....	2
25-44.....	42	50	3	102	....	2
45-64.....	35	56	1	81	6	2
65-69.....	10	5	1	11	4	....
70 and over..	48	16	....	26	36	1

TABLE 25. FIRST ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS BY DIAGNOSIS, SASKATCHEWAN HOSPITALS, NORTH BATTLEFORD AND WEYBURN, 1960

Diagnosis*	Both institutions						Saskatchewan Hospital North Battleford						Saskatchewan Hospital Weyburn					
	First admissions	Re-admissions	Transfers in	Discharges	Deaths	Transfers out	First admissions	Re-admissions	Transfers in	Discharges	Deaths	Transfers out	First admissions	Re-admissions	Transfers in	Discharges	Deaths	Transfers out
All diagnoses.....	912	612	10	1,201	291	14	474	296	.....	600	171	2	438	316	10	601	120	12
Psychoses (300-309).....	583	422	8	738	250	8	334	210	.....	395	158	2	249	212	8	343	92	6
Schizophrenic disorders (300).....	173	262	7	436	36	8	87	126	.....	220	17	2	86	136	7	216	19	6
Manic-depressive reaction (301).....	51	82	1	117	5	.....	24	37	.....	51	4	.....	27	45	1	66	1	.....
Involitional melancholia (302).....	52	29	.....	76	4	.....	39	19	.....	57	4	.....	13	10	.....	19	.....	.....
Paranoia and paranoid states (303).....	9	3	.....	13	.....	.....	4	.....	.....	5	.....	.....	5	3	.....	8	.....	.....
Senile and presenile psychosis (304-305).....	94	12	.....	9	77	.....	45	3	.....	3	50	.....	49	9	.....	6	27	.....
Psychosis with cerebral arteriosclerosis (306).....	164	20	.....	46	113	.....	105	14	.....	28	70	.....	59	6	.....	18	43	.....
Alcoholic psychosis (307).....	4	2	.....	7	.....	.....	3	1	.....	5	.....	.....	1	1	.....	2	.....	.....
Other and unspecified psychoses (308-309).....	36	12	.....	34	15	.....	27	10	.....	26	13	.....	9	2	.....	8	2	.....
Psychoneurotic disorders (310-318).....	77	46	.....	117	3	.....	47	23	.....	68	2	.....	30	23	.....	49	1	.....
Anxiety reaction (310).....	11	2	.....	14	1	.....	5	.....	.....	8	.....	.....	6	2	.....	6	1	.....
Hysterical reaction (311).....	9	3	.....	11	.....	.....	6	2	.....	8	.....	.....	3	1	.....	3	.....	.....
Phobic reaction (312).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Obsessive-compulsive reaction (313).....	.....	5	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	4	.....	2	.....	.....
Neurotic-depressive reaction (314).....	44	29	.....	65	1	.....	26	15	.....	35	1	.....	18	14	.....	30	.....	.....
Somatization reactions (315-317).....	3	2	.....	5	.....	.....	3	2	.....	5	.....	.....	.....	.....	.....	.....	.....	.....
Other, mixed and unspecified psychoneurosis (318).....	10	5	.....	20	1	.....	7	3	.....	12	1	.....	3	2	.....	8	.....	.....
Disorders of character, behaviour and intelligence (320-326).....	205	123	2	299	10	6	73	52	.....	112	5	.....	132	71	2	187	5	6
Pathological personality (320).....	29	17	.....	90	1	.....	17	11	.....	24	1	.....	12	6	.....	66	.....	.....
Immature personality (321).....	16	8	.....	36	.....	.....	12	4	.....	13	.....	.....	4	.....	.....	23	.....	.....
Alcoholism (322).....	125	77	.....	126	2	1	28	23	.....	54	.....	.....	97	54	.....	72	2	1
Other drug addiction (323).....	8	2	.....	6	.....	.....	3	.....	.....	2	.....	.....	5	2	.....	4	.....	.....
Primary childhood behaviour disorders (324).....	3	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Mental deficiency (325).....	16	14	2	28	7	5	8	9	.....	12	4	.....	8	5	2	16	3	5
Other unspecified character, behaviour and intelligence disorders (326).....	8	4	.....	13	.....	.....	4	4	.....	7	.....	.....	4	.....	.....	6	.....	.....
Epilepsy (353).....	18	11	.....	21	6	.....	8	8	.....	12	1	.....	10	3	.....	9	5	.....
Other.....	29	10	.....	26	22	.....	12	3	.....	13	5	.....	17	7	.....	13	17	.....

* Code numbers according to the International Statistical Classification of Diseases, Injuries and Causes of Death, 1955, are shown in parentheses.

TABLE 26. DIAGNOSIS OF PATIENTS ON REGISTER, SASKATCHEWAN HOSPITAL
NORTH BATTLEFORD, DECEMBER 31, 1960

Diagnosis*	Number			Per cent		
	Both sexes	Male	Female	Both sexes	Male	Female
Total on register, December 31, 1960.....	1,865	1,129	736	100.0	100.0	100.0
Psychosis (300-309).....	1,626	1,014	612	87.2	89.8	83.2
Psychoneurosis (310-318).....	67	11	56	3.6	1.0	7.6
Pathological personality (320).....	10	9	1	0.5	0.8	0.1
Epilepsy (353).....	30	16	14	1.6	1.4	1.9
Mental deficiency (325).....	97	60	37	5.2	5.3	5.0
Other.....	35	19	16	1.9	1.7	2.2
In hospital, December 31, 1960.....	1,697	1,046	651	100.0	100.0	100.0
Psychosis (300-309).....	1,498	944	554	88.3	90.2	85.1
Psychoneurosis (310-318).....	51	9	42	3.0	0.9	6.5
Pathological personality (320).....	9	9	....	0.5	0.9	....
Epilepsy (353).....	22	11	11	1.3	1.0	1.7
Mental deficiency (325).....	88	56	32	5.2	5.4	4.9
Other.....	29	17	12	1.7	1.6	1.8
On trial leave, December 31, 1960.....	125	59	66	100.0	100.0	100.0
Psychosis (300-309).....	95	52	43	76.0	88.1	65.2
Psychoneurosis (310-318).....	16	2	14	12.8	3.4	21.2
Pathological personality (320).....	1	....	1	0.8	....	1.5
Epilepsy (353).....	5	3	2	4.0	5.1	3.0
Mental deficiency (325).....	3	1	2	2.4	1.7	3.0
Other.....	5	1	4	4.0	1.7	6.1
Boarding out, December 31, 1960.....	43	24	19	100.0	100.0	100.0
Psychosis (300-309).....	33	18	15	76.7	75.0	78.9
Psychoneurosis (310-318).....	....	....	....	....	....	....
Pathological personality (320).....	....	....	....	....	....	....
Epilepsy (353).....	3	2	1	7.0	8.3	5.3
Mental deficiency (325).....	6	3	3	14.0	12.5	15.8
Other.....	1	1	....	2.3	4.2	....

* Code numbers according to the *International Statistical Classification of Diseases, Injuries and Causes of Death, 1955*, are shown in parentheses.

TABLE 27. DIAGNOSIS OF PATIENTS ON REGISTER, SASKATCHEWAN HOSPITAL
WEYBURN, DECEMBER 31, 1960

Diagnosis*	Number			Per cent		
	Both sexes	Male	Female	Both sexes	Male	Female
Total on register, December 31, 1960.....	1,657	1,000	657	100.0	100.0	100.0
Psychosis (300-309) and psychoneurosis (310-318).....	1,443	817	626	87.1	81.7	95.3
Epilepsy (353).....	6	6	....	0.4	0.6	....
Mental deficiency (325).....	169	145	24	10.2	14.5	3.6
Other (including pathological personality)....	39	32	7	2.3	3.2	1.1
In hospital, December 31, 1960.....	1,574	962	612	100.0	100.0	100.0
Psychosis (300-309) and psychoneurosis (310-318).....	1,370	786	584	87.1	81.7	95.4
Epilepsy (353).....	5	5	....	0.3	0.5	....
Mental deficiency (325).....	164	141	23	10.4	14.7	3.8
Other (including pathological personality)....	35	30	5	2.2	3.1	0.8
On trial leave, December 31, 1960.....	63	24	39	100.0	100.0	100.0
Psychosis (300-309) and psychoneurosis (310-318).....	55	19	36	87.3	79.1	92.3
Epilepsy (353).....	1	1	....	1.6	4.2	....
Mental deficiency (325).....	5	4	1	7.9	16.7	2.6
Other (including pathological personality)....	2	....	2	3.2	....	5.1
Boarding out, December 31, 1960.....	20	14	6	100.0	100.0	100.0
Psychosis (300-309) and psychoneurosis (310-318).....	18	12	6	90.0	85.7	100.0
Epilepsy (353).....	....	....	....	....	....	....
Mental deficiency (325).....	....	....	....	....	....	....
Other (including pathological personality)....	2	2	....	10.0	14.3	....

* Code numbers according to the *International Statistical Classification of Diseases, Injuries and Causes of Death, 1955*, are shown in parentheses.

TABLE 28. MOVEMENT OF PATIENTS, SASKATCHEWAN TRAINING SCHOOL,
MOOSE JAW, 1960

Movement of patients	Both sexes	Sex of patient	
		Male	Female
On the register, January 1, 1960.....	1,181	590	591
In institution.....	1,119	559	560
On trial leave.....	62	31	31
Admissions during the year.....	74	39	35
First admissions.....	61	33	28
Readmissions.....	8	4	4
Transfers from other institutions in the province.....	5	2	3
Total patients on the register during 1960.....	1,255	629	626
Discharges, transfers and deaths.....	51	26	25
Discharges from institution.....	23	12	11
Discharges while on leave.....	13	8	5
Transfers to other institutions in the province.....	2	....	2
Deaths in institution.....	13	6	7
Deaths while on trial leave.....	....	....	....
On the register, December 31, 1960.....	1,204	603	601
In institution.....	1,127	570	557
On trial leave.....	77	33	44
Average daily census in institution, 1960.....	1,127	564	563

TABLE 29. NUMBER OF PATIENTS ATTENDING FULL-TIME AND PART-TIME MENTAL HEALTH CLINICS, PSYCHIATRIC SERVICES BRANCH, SASKATCHEWAN, 1960

Centres	All patients	Previous patients	New patients
All centres.....	5,018	1,536	3,482
Full-time centres.....	3,303	1,039	2,264
Regina.....	748	221	527
Moose Jaw.....	753	307	446
Saskatoon.....	829	331	498
Swift Current.....	324	93	231
Prince Albert.....	388	87	301
Yorkton (6 months).....	261	....	261
Part-time centres.....	953	308	645
Kindersley.....	81	38	43
Assiniboia.....	30	11	19
Yorkton (6 months).....	30	9	21
North Battleford.....	159	34	125
Weyburn.....	146	70	76
Maple Creek.....	43	19	24
Shaunavon.....	37	17	20
Biggar.....	43	21	22
Rosetown.....	39	13	26
Davidson.....	15	1	14
Estevan.....	123	29	94
Leader.....	18	12	6
Melfort.....	37	7	30
Tisdale.....	53	7	46
Nipawin.....	51	15	36
Kamsack (4 months).....	12	....	12
Grenfell.....	6	....	6
Fort Qu'Appelle and Fort San.....	30	5	25
University out-patient department.....	762	189	573

MEDICAL AND HOSPITAL SERVICES BRANCH

Throughout the 1960-61 fiscal year Medical and Hospital Services Branch of the Department continued its efforts to promote co-operation with other branches of the Department of Health and with health regions. The branch also worked closely with the Department of Social Welfare and Rehabilitation and the director served on a number of interdepartmental committees, such as the Interdepartmental Committee on Rehabilitation.

The over-all objective of this branch is to assist in improving the quality and effectiveness of the medical and hospital services which it supervises and to improve co-ordination of these services with other health activities. In this connection the branch is represented by the director on the Advisory Committee on Alcoholism, the Board of Directors of the Council for Crippled Children and Adults, the Arthritis and Rheumatism Society, the Co-ordinating Council on Rehabilitation, the University Medical Centre Planning Committee, and the Centralized Teaching Program for Student Nurses. The branch has continued to work closely with branches of the Department of Social Welfare, the Saskatchewan Hospital Association, the College of Physicians and Surgeons of Saskatchewan and the Saskatchewan Registered Nurses' Association.

The branch spent a great deal of time preparing material and working papers for the Advisory Planning Committee on Medical Care. The branch director as a member of this committee was also heavily committed in the Committee activities. The Committee received briefs, arranged for public hearings and carried on extensive studies in health insurance.

The branch also took an active part in the work of the Committee on Aging and Long-Term Illness. Several staff members prepared working papers for the committee and took part in regional educational programs. The branch director served as a member of this committee.

Physical Restoration Division

There has been an increase in the recognition of the need for adequate rehabilitation services, and the demands on the Physical Restoration Division and the two Physical Restoration Centres have increased. Although the poliomyelitis caseload is decreasing, the over-all caseload of the Physical Restoration Division has increased. This has been particularly noticeable in the Regina Centre.

The Regina Physical Restoration Centre extended the services provided by their orthopaedic appliance shop and developed an effective program of testing and training in the occupational shop. This was supplemented by the development of a sheltered workshop by the Council for Crippled Children and Adults in Regina.

With an increase in the number of professional and technical staff in the Physical Restoration Division, it has been possible to extend our services to a greater degree into the community. The medical officers of

the division are providing consultation services to general hospitals, to health regions and to regional clinics. Great emphasis has been placed on the development of rehabilitation facilities in general hospitals.

Hospital Services Plan

The announcement during the year that the province of Quebec would embark on a provincial hospital insurance program on January 1, 1961 provided hospital insurance coverage for all Canadians of a kind very similar to the Saskatchewan Hospital Services Plan, first introduced in January 1947. The Advisory Committee on Hospital Insurance to the Minister of National Health and Welfare met twice during the year. The department was represented by the Deputy Minister and the branch director. Saskatchewan also had representation on National Sub-committees dealing with quality of care, research and statistics, accounting and benefits, as well as a number of working parties making recommendations to the Department of National Health and Welfare.

The tax rate for 1960 remained unchanged although it was announced during the year that the tax for 1961 would be increased to \$24 for a single person and \$48 for a family of two or more. At the same time it was announced that a quarterly payment program would be brought into effect and in the latter part of the year 1960, the quarterly instalment premium payment program was first introduced.

Emergency out-patient services were extended as the 24-hour limit was removed and this resulted in a 65 per cent increase in hospital out-patient services over 1959. The population covered by the Hospital Services Plan increased by 11,000 over 1959. It is to be noticed that there was a 3.4 per cent increase in the number of hospital separations and an increase of 1.4 per cent in the number of hospital days provided under the Plan. There was a slight decrease in the average length of patient stay to 9.8 days.

Hospital Administration and Standards

In the field of hospital administration and standards there were two major developments during the year. The first was the establishment of a Hospital Survey Committee with representation from the College of Physicians and Surgeons of Saskatchewan, the Saskatchewan Hospital Association, the Saskatchewan Registered Nurses' Association and the Department of Public Health. An earlier hospital survey was completed in 1951 and appeared as Volume II of the Health Survey Report. It was recommended then that a number of these items should be resurveyed every five years and the Health Services Planning Commission obtained the concurrence of the Minister of Public Health in establishing the Hospital Survey Committee. The broad terms of reference of the Hospital Survey Committee which began its work in October of 1960 were as follows:

- (a) To conduct a survey of the extent and quality of services, facilities and resources now provided or maintained in the province by hospitals coming within the provision of The Hospital Standards Act.
- (b) To determine the province's need for such services, facilities and resources, not only at the present time but in the foreseeable future having regard to trends of population growth

and movement, hospital and other institutional reorganizational developments, and all other factors which may affect or modify such needs.

- (c) To survey the development, extension and functioning of regional hospital councils and the relationship between such councils and other health agencies, including the division of hospital administration and standards of the department of public health, regional boards of health, and union hospital districts.

It was expected that the work of this committee would take approximately one and a half years.

The other major policy development was the announcement by the Department of Public Health of a new capital cost policy for general hospitals in Saskatchewan. This capital cost policy increases the construction grants from \$2,000 per bed or bed equivalent for all hospitals in the province to a proportion of approved costs for different types of hospitals. The maximum grant for base hospitals made by the Saskatchewan Department of Public Health would be \$9,100, for regional hospitals \$6,600, for community hospitals \$3,200 per bed. As well as the provincial grant, hospitals could still qualify for the federal grant. At the same time the Minister of Public Health announced that the principal amount of all existing capital debt of hospitals would be assumed by the province and that depreciation payments on buildings would cease on January 1, 1961. This change in policy has made it possible for some of the major hospital renovation and reconstruction projects to proceed where it would not have been possible for them to finance otherwise.

Medical Services Division

The benefits of the Medical Services Division program remained unchanged. The payment for medical services was increased from 50 per cent to 60 per cent of the College of Physicians and Surgeons schedule of fees. A new schedule of fees was negotiated with the College of Dental Surgeons as well as the Optometric Association.

Regional Medical Care Program

The public medical care program in the Swift Current Health Region began its fourteenth year of operation on July 1, 1960. It continues to be the only program of its kind in the province and the only program covering a total population group in Canada. In general this report covers the calendar year 1960 although it will be noted in the statistical tables appended that the figures for 1959 are the only ones available in some cases.

The number of persons covered by this plan continues to increase and there were 53,169 residents provided with comprehensive health services through the program. The program is administered by the regional board of health and is financed from personal property taxation levied by the board of health under the authority of The Health Services Act. The regional board also acts as a board of health for public health purposes. It receives grants from the province to assist in carrying out its program. These grants represent about seven per cent of total revenue.

In 1960 the rate of personal taxation was changed and was set at \$24 for a single person, \$40 for a family of two and \$50 for a family of three or more. The board also levied a property tax approximately 2.75

mills which represents 25 per cent of the revenue from taxation while the other 75 per cent comes from the personal premium. It is to be noted that the total budget and total revenues of the program increased by nearly 30 per cent over the previous year, most of this coming from the increased personal tax. In spite of the increase in revenues the regional board had a deficit of \$43,661.

Every person residing in the region for 90 days or more is eligible for care unless otherwise entitled to services through some special federal or provincial program. It should be emphasized that eligibility is based on residence and registration and is not dependent upon the payment of the personal property tax. In 1960 there were one or two changes in the general benefit structure although in large measure the benefits remain unchanged. In summary the benefits may be stated as follows:

Medical, surgical and obstetrical care is provided by physicians within the region at their offices, at home or in hospital with the exception of utilization fees charged on home and office calls. These fees are \$3, \$2 or \$1 per call depending upon the type of call and whether it is a night or holiday call.

A full range of diagnostic and treatment services at hospital out-patient departments are paid at a special schedule of fees.

A radiological service is provided by the regional board who employ a radiologist. His responsibilities include the interpretation of x-ray films, the examination of patients referred from all physicians in hospitals within the region. He is also responsible for the supervision of radiological standards in the region's hospitals.

A dental care program with major emphasis on prevention for children under 12 years of age is carried on by dentists operating from three permanent dental clinics.

Fifty per cent of the 1959 schedule of fees is paid for medical and surgical care of patients referred outside of the region where specialists' care is not available within the region. The same amount is also paid for emergency care for persons receiving services outside of the region. In 1959 and several preceding years the region had paid 75 per cent of a 1949 schedule of fees for these out-of-region services.

In 1960 the regional boards contract with the Swift Current Medical Society provided for payment of assessed accounts from physicians at 80 per cent of the 1959 schedule of fees. It will be noted that the costs of physicians services rose from \$702,000 in 1959 to \$864,000 in 1960, an increase of some 23 per cent. The total or per capita costs of most other services showed very little change from 1959.

The following tables show revenues and expenditures and annual rates and costs of services and surgical operations. As well as this, expenditures and per beneficiary costs are shown in tabular form.

TABLE 30. ANNUAL RATE PER 1,000 BENEFICIARIES OF REGIONAL AND NON-REGION PHYSICIANS' SERVICES BY TYPE OF SERVICE, SWIFT CURRENT MEDICAL CARE PROGRAM, SASKATCHEWAN, 1955-1959

Type of service	1955	1956	1957	1958	1959
All physicians' services.....	4,398.7	4,105.4	4,471.9	4,594.0	4,395.0
Physicians' calls.....	3,690.9	3,463.7	3,756.3	3,793.8	3,810.7
Office.....	1,945.2	1,815.8	1,976.1	2,034.0	2,102.8
Home.....	185.1	190.9	238.5	225.7	235.3
Hospital.....	1,560.6	1,457.0	1,541.7	1,534.1	1,472.6
Surgical operations.....	279.8	263.6	272.2	269.9	252.9
Major.....	65.0	63.3	66.8	76.7	76.7
Minor.....	214.8	200.3	205.4	193.2	176.2
Confinements.....	29.6	28.0	26.6	28.0	26.9
Diagnostic procedures*....	305.5	253.4	323.3	409.1	212.6
Laboratory.....	17.5	8.5	9.7	13.3	11.1
X-ray.....	2.0	9.0	8.4	11.2	10.9
Other†.....	286.0	235.9	305.2	384.6	190.6
Special services.....	92.9	96.7	93.5	93.2	91.9
Surgical assistant.....	20.5	19.6	19.5	21.4	20.2
Anaesthetist.....	57.4	60.4	61.8	63.8	62.8
Consultant.....	14.3	12.6	6.9	2.9	3.0
X-ray interpretation....	0.7	4.1	5.3	5.1	5.9

* Beginning in 1952, payments from the pooled funds for diagnostic procedures performed in physicians' offices were (with a few exceptions) discontinued.

† Besides E.K.G.'s, B.M.R.'s, allergy tests and gastric analysis previously included, this category in 1955 was expanded to cover special treatments, physical examinations, and unstated procedures.

TABLE 31. NUMBER AND COST OF REGIONAL PHYSICIANS' SERVICES BY TYPE OF SERVICE, SWIFT CURRENT MEDICAL CARE PROGRAM, SASKATCHEWAN, 1959

Type of service	Number of services		Cost of services		
	Number	Annual rate per 1,000 beneficiaries	Assessed cost	Per cent	Average amount paid per beneficiary
All physicians' services.....	215,570	4,173.9	\$ 952,701	100.0	\$ 12.27
Physicians' calls.....	188,857	3,656.7	433,047	45.4	5.57
Office.....	106,161	2,055.5	211,540	22.2	2.72
Home.....	11,952	231.4	30,946	3.2	0.40
Hospital*.....	70,744	1,369.8	190,561	20.0	2.45
Surgical operations.....	12,298	238.1	303,462	31.9	3.91
Major.....	3,469	67.2	239,886	25.2	3.09
Minor.....	8,829	170.9	63,576	6.7	0.82
Confinements.....	1,373	26.6	101,560	10.7	1.31
Diagnostic procedures.....	9,057	175.4	27,911	2.9	0.36
Laboratory.....	186	3.6	192	....	....
X-ray.....	67	1.3	831	0.1	0.01
Other†.....	8,804	170.5	26,888	2.8	0.35
Special services.....	3,985	77.1	80,481	8.4	1.04
Surgical assistant.....	892	17.3	22,138	2.3	0.29
Anaesthetist.....	2,933	56.7	56,774	5.9	0.73
Consultant.....	155	3.0	1,549	0.2	0.02
X-ray interpretation....	5	0.1	20	....	....
Mileage.....	....	....	6,240	0.7	0.08

* Excludes calls to operative cases paid for on an inclusive fee basis.

† Besides E.K.G.'s, B.M.R.'s, allergy tests and gastric analysis previously included, this category has been expanded to cover special treatments, physical examinations, and unstated procedures.

TABLE 32. NUMBER AND COST OF NON-REGION PHYSICIANS' SERVICES BY TYPE OF SERVICE, SWIFT CURRENT MEDICAL CARE PROGRAM, SASKATCHEWAN, 1959

Type of service	Number of services		Cost of services		
	Number	Annual rate per 1,000 beneficiaries	Assessed cost	Per cent	Average amount paid per beneficiary
All physicians' services.....	11,417	222.1	\$ 99,300	100.0	\$ 1.33
Physicians' calls.....	7,956	154.0	17,699	17.8	0.24
Office.....	2,441	47.3	4,366	4.4	0.06
Home.....	204	3.9	507	0.5	0.01
Hospital*.....	5,311	102.8	12,826	12.9	0.17
Surgical operations.....	762	14.8	48,795	49.1	0.65
Major.....	493	9.6	45,859	46.2	0.61
Minor.....	269	5.2	2,936	2.9	0.04
Confinements.....	16	0.3	1,090	1.1	0.01
Diagnostic procedures.....	1,921	37.2	17,701	17.8	0.24
Laboratory.....	385	7.5	572	0.6	0.01
X-ray.....	496	9.6	3,904	3.9	0.05
Other†.....	1,040	20.1	13,225	13.3	0.18
Special services.....	762	14.8	13,762	13.9	0.19
Surgical assistant.....	153	3.0	3,866	3.9	0.05
Anaesthetist.....	310	6.0	8,276	8.4	0.12
Consultant.....	1	.....	10	.....	.....
X-ray interpretation....	298	5.8	1,610	1.6	0.02
Mileage.....	.....	.....	.....	.....	.....
Other services.....	.....	.....	253	0.3	.....

* Excludes calls to operative cases paid for on an inclusive fee basis.

† Besides E.K.G.'s, B.M.R.'s, allergy tests and gastric analysis previously included, this category has been expanded to cover special treatments, physical examinations, and unstated procedures.

TABLE 33. NUMBER AND RATES OF REGIONAL AND NON-REGION SELECTED SURGICAL OPERATIONS, SWIFT CURRENT MEDICAL CARE PROGRAM, SASKATCHEWAN, 1959

Type of operations	Regional		Non-region	
	Number	Annual rate per 1,000 beneficiaries	Number	Annual rate per 1,000 beneficiaries
All surgical operations.....	12,298	238.1	778*	15.1
Amputation of extremities.....	34	0.7	.....	.....
Appendectomy.....	301	5.8	5	0.1
Biopsy of cervix.....	34	1.4†	.....	.....
Blood transfusions.....	314	6.1	.....	.....
Cauterization of cervix.....	260	10.6†	.....	.....
Cholecystectomy.....	94	1.8	15	0.3
Circumcision.....	596	22.0‡	8	0.2‡
Conjunctiva operations.....	12	0.2	.....	.....
Corneal operations.....	366	7.1	.....	.....
Cystocele and rectocele.....	30	1.2†	.....	.....
Cystoscopy.....	81	1.6	.....	.....
Dilatation and curettage.....	350	14.2†	17	0.3†
Dilatation of urethra.....	73	1.4	.....	.....
Haemorrhoidectomy.....	124	2.4	2	.....
Herniotomy.....	177	3.4	11	0.2
Hysterectomy.....	65	2.6†	8	0.2†
Hysteropexy.....	37	1.5†	.....	.....
Laparotomy (exploratory).....	16	0.3	.....	.....
Lumbar puncture.....	63	1.2	.....	.....
Phlebectomy.....	42	0.8	2	.....
Proctoscopy, sigmoidoscopy.....	511	9.9	.....	.....
Prostatectomy.....	.....	.....	34	0.7
Reduction of fracture.....	909	17.6	22	0.4
Skin grafting.....	21	0.4	.....	.....
Suture of wound or injury.....	1,072	20.8	.....	.....
Thyroidectomy.....	16	0.3	1	.....
Tonsillectomy and adenoidectomy.....	596	11.5	9	0.2

* Including 16 confinements.

† Based on female beneficiaries only.

‡ Based on male beneficiaries only.

TABLE 34. EXPENDITURES AND AMOUNTS PER BENEFICIARY FOR MEDICAL OUT-PATIENT, X-RAY, AND DENTAL SERVICES, SWIFT CURRENT MEDICAL CARE PROGRAM, SASKATCHEWAN, 1953-1960

Type of service	1953	1954	1955	1956	1957*	1958	1959	1960	
				Expenditures					
Total.....	\$ 645,329	\$ 640,205	\$ 660,822	\$ 686,256	\$ 823,091	\$ 866,483	\$ 863,677	\$1,030,868	
Medical services.....	502,400	502,430	513,909	535,096	670,393	715,739	702,043	864,148	
Region.....	461,500	460,000	475,000	500,000	604,426	633,623	633,529	788,556	
Non-region.....	40,900	42,430	38,909	35,096	65,967	82,116	68,514	75,592	
Out-patient services.....	71,817	68,792	66,632	67,141	72,070	69,499	73,962	75,826	
Region.....	71,500	68,524	66,437	66,937	71,591	†	†	†	
Non-region.....	317	268	195	204	479	†	†	†	
Radiology services.....	17,786	18,672	20,184	24,287	24,187	26,141	27,516	29,831	
Dental care.....	52,827	49,812	58,298	59,732	56,441	55,104	60,156	61,063	
Regional dental services.....	49,727	47,941	55,599	57,373	53,245	49,720	54,752	52,940	
Practising dentists.....	3,100	1,871	2,699	2,359	3,196	5,384	5,404	8,123	
Other.....	500	500	1,800	.....	.....	.....	.....	.....

	Amount per beneficiary										Estimated number of beneficiaries					
	\$	13.57	\$	13.55	\$	13.66	\$	13.91	\$	16.53		\$	16.97	\$	16.72	\$	19.39
Total.....																
Medical services.....		10.57		10.63		10.62		10.85		13.46		14.02		13.59		16.25
Region.....		9.71		9.73		9.82		10.14		12.14		12.41		12.27		14.83
Non-region.....		0.86		0.90		0.80		0.71		1.32		1.61		1.32		1.42
Out-patient services.....		1.51		1.46		1.38		1.36		1.45		1.36		1.43		1.43
Region.....		1.50		1.45		1.37		1.36		1.44		†		†		†
Non-region.....		0.01		0.01		0.01		‡		0.01		†		†		†
Radiology services.....		0.37		0.40		0.42		0.49		0.49		0.51		0.53		0.56
Dental care.....		1.11		1.05		1.20		1.21		1.13		1.08		1.17		1.15
Regional dental services.....		1.05		1.01		1.15		1.16		1.07		0.97		1.06		1.00
Practising dentists.....		0.06		0.04		0.05		0.05		0.06		0.11		0.11		0.15
Other.....		0.01		0.01		0.04		.....		.....		.....		.....		.....
		47,538		47,262		48,380		49,303		49,797		51,058		51,647		53,169

SOURCE: Financial Statements, Health Region No. 1, 1953-1960.

* "Amount per beneficiary" has been adjusted since the publication of the 1957-58 Annual Report because of a change in the estimated number of beneficiaries from 50,345 to 49,797.

† Figures not available.

‡ Less than one cent.

PHYSICAL RESTORATION SERVICES

Regina Physical Restoration Centre

The keynote of the 1960-61 program was an increased range of volume and services rendered. An increased number of patients were treated at the centre and there was a substantial increase in services provided outside the Physical Restoration Centre mainly in general hospitals and geriatric centres.

Medical Services

Services Provided at the Centre

The services rendered to the Geriatric Centre were substantially strengthened by the recruitment of a specialist in physical medicine. This had been particularly valuable in relation to the development of a program for adults, handicapped by injuries and chronic disease and in assisting the geriatric program.

The valuable services previously given by orthopaedic, paediatric, medical and radiological consultants have been continued. Occasional extra clinics in neurology, neurosurgery, urology and plastic surgery have been held and the need for further services in these areas and in the particular field of amputees has been foreseen.

A Medical Advisory Committee to the Physical Restoration Centre has been initiated consisting of the medical director, specialist in physical medicine, a representative from the College of Physicians and Surgeons of Saskatchewan, a representative of the medical staff of the Regina General Hospital and of the Regina Grey Nuns' Hospital, the medical directors of each hospital and representatives of the city general practice and rural general practice.

Medical Services Consultants and Clinics

	<i>Consultants and clinics</i>
Total	13
Orthopaedics	2
Paediatrics	2
Physical medicine	1
Radiology	1
Dentist and orthodontist	1
General practitioner	1
Internal medicine	1
Other	4

Services Provided Outside the Centre

Both the medical director and the specialist in physical medicine have rendered service in the Regina General Hospital. These have taken the form of consultations on individual patients at the invitation of the

attending physician and in assisting in the general direction of the physiotherapy department and the rehabilitation program. This type of service could be made available to other hospitals.

The specialist in physical medicine also provides services to the geriatric centres in Regina, Wolseley and Melfort. The medical director attended some of the mobile clinics operated by the Saskatchewan Council for Crippled Children and Adults.

Both the medical director and the specialist in physical medicine serve on various committees of the Co-ordinating Council for Rehabilitation.

Professional Services

It seemed clear that a further increase in caseload, particularly a caseload of patients with good rehabilitation potential, would require further increases in staff. The physiotherapy department operated a full program and rendered some services to mobile clinics and several more physiotherapists could be utilized if available. The recruitment of a remedial gymnast proved a valuable acquisition to the program, particularly in relation to the aftercare of injuries and the geriatric treatment program. In the occupational therapy department there have been promising developments in relation to home economics and rehabilitation of handicapped housewives.

In the prevocational area the operation of the occupational shop was expanded and a significant service was rendered when the first sheltered work activity operated in Regina by the Saskatchewan Council for Crippled Children and Adults, a book repair and a book binding project, was actually started in the Physical Restoration Centre.

The speech therapy department remained under very heavy pressure making it necessary to restrict treatment to the most needful individuals.

In the field of rehabilitation nursing, the need for more detailed supervision of the in-patient program, combined with the need to carry services to the community, lead to the establishment of the new position "rehabilitation service worker" in addition to the position of rehabilitation nurse.

In relation to the range and volume of work required, the Social Service Department, Physical Restoration Centre, was under great pressure and suffered from general underdevelopment of services required to establish the handicapped in the community.

The school program operated by the Physical Restoration Centre continued to provide satisfactory education for physically handicapped children with minimal brain damage. It is apparent that in the Physical Restoration Centre, as elsewhere, the education problems of the brain damaged child required intensive study.

Treatment Programs — Handicapped Children

Poliomyelitis

Although poliomyelitis review clinics were well attended there was a noticeable tendency for the amount of time devoted to this subject to be reduced. Many children handicapped during the poliomyelitis epidemics in the decade 1945-55 have now reached the end of the growth period

with a decrease in the amount of intensive supervision required to prevent and reduce deformity. It may be significant in the past year that nearly all recent cases of paralytic poliomyelitis were seen in small Indian children.

Cerebral Palsy

Cerebral palsy continued to provide the largest problem and to occupy a great deal of staff time. Evaluation of the results of treatment was difficult while the slow rate of change in patients treated made it a problem to integrate this program with other aspects of rehabilitation.

Other

Among other conditions treated in children, one of particular importance was spina bifida where results can be improved by a very intensive and time consuming program of bowel and bladder training.

Adult Patients

Injury

Patients suffering from the results of injury were mainly referred from the Workmen's Compensation Board although some others were also treated. In this program the development of gymnasium and occupational shop activities were particularly significant.

Paraplegia

An increasing number of patients with paraplegia have been treated mostly under the paraplegia program. The management of these patients emphasized the need for meticulous supervision of nursing care.

Neurology

Many cases of multiple sclerosis and other chronic neurological diseases were referred for advice and treatment. Although only limited help could usually be offered, this sometimes increased the individuals independence in his home, which often had the effect of emphasizing the need for supporting social and vocational services.

Hemiplegia

Hemiplegia, usually the result of cerebral vascular accident, provided many patients, while some promising results were obtained it was apparent that a swifter and more effective rehabilitation could be obtained if treatment were commenced soon after the onset.

Geriatric

A number of elderly patients with various conditions were treated sometimes with significantly good results indicating that age need not necessarily be a bar to effective rehabilitation.

Staff Education

The medical director undertook an intensive study tour of rehabilitation services in Britain and the eastern United States during July and August 1960.

A physiotherapist undertook a three month's course in London on the Bobath method of treatment in cerebral palsy.

The occupational therapy supervisor undertook a course of study in the neurophysiological aspects of occupational therapy in Philadelphia.

Two bracemakers received training in New York at the Institute for the Crippled and Disabled.

Community Relations

In the field of rehabilitation the work of the Physical Restoration Division could not be separated from the activities of other agencies. Co-operative endeavour with the Saskatchewan Council for Crippled Children and Adults, the Handicapped Civilians' Association, the Multiple Sclerosis Society, The Red Cross, The Parents' Group of Handicapped Children and many service clubs occupied a great deal of staff time, most of which was outside the hours of normal duty. The Regina Physical Restoration Centre in fact was becoming a major focal point for recreational activities amongst handicapped people. The Handicapped Civilians' Association met more frequently and operated a wheelchair basketball team. The Homemaker's Group met regularly both for mutual help and advice and for social purposes. A Cub Scout Group for handicapped boys met weekly and the Multiple Sclerosis Society held regular meetings. The Red Cross — Y.M.C.A. swimming program was well attended by patients from the Physical Restoration Centre, with assistance from some members of staff. Many service clubs gave personal and group services to handicapped patients in the Rehabilitation Ward, activities of great importance in maintaining community contacts for handicapped people. Generous press coverage had been of particular importance in making the needs of the handicapped known in the community. It is perhaps worthy of note that some press work had been provided by a handicapped person.

Problems

The Physical Restoration division served the following functions:

1. A treatment centre for acute and chronic cases of physical disability.
2. A school for handicapped children.
3. A vocational assessment centre.
4. A day hospital and occupation centre.
5. A disposal site for chronically disabled people.

Rehabilitation Ward — Regina Centre — Provincial Geriatric Centre

Cases admitted	262
Cases separated	284
Cases remaining in hospital at year end	26 ¹
Days of care for separations	15,157 ²
Days of care provided during year	14,375
Average days stay per separation	53.36
Total days divided by admissions	54.85
Total days divided by separations	50.62

¹ Days of care accrued in respect to these 26 cases were 2,063.

² "Days for separation" differ from "total days of care during the year" in that all days of care for separations are included in the former, although some of the care may have been given in preceding years, while the latter includes only the care given during the past fiscal year, including care received by patients remaining in hospital at the year end.

Many of the problems in the field of rehabilitation were those of effective use of existing resources and co-operation between different agencies and it was necessary for the Physical Restoration Division to give continued and increased support to the type of co-operative effort initiated by the Co-ordinating Council for Rehabilitation in Saskatchewan.

Average cost of services provided (based on daily active patient caseload)

	1959-60	1960-61
Average treatment cost per patient per day (excluding ward care)	\$4.34	\$5.38
Average treatment cost per patient per day (including ward care)		7.75
Per unit of treatment	1.52	2.26 ¹

Orthopaedic Appliance Shop Activity

	Number of patients served	Number of new units constructed	Charges—nominal cost of work completed
1960-61	642	200	\$5,716.75

New cases admitted to Regina Physical Restoration Centre by diagnosis

Year	Total	Cerebral palsy	Polio- myelitis	Paraplegia	Cerebral vascular accident	W.C.B. reference	Other
1960-61	187	19	16	5	37	15	95

Separations from Regina Physical Restoration Centre

	1959-60	1960-61
Total	61	25
Assessed not accepted	8	1
Transferred and other agency	13	2
Home care and nursing home	9	3
Family doctor	7	2
Further education	13	6
Employment	11	3
Not rehabilitated	—	5
Deceased	—	3

¹ Includes administration costs, capital expenditure on equipment and incidentals but excludes building costs and water and power.

TABLE 35. NUMBER OF PATIENTS ON CASELOAD REGISTER, PHYSICAL RESTORATION CENTRE, REGINA, SASKATCHEWAN, FISCAL YEARS, 1954-55 TO 1960-61

Patient status and year	Regina Centre			
	Total	Cerebral palsy	Polio-myelitis	Other
All patients				
1954-55.....	646	197	437	12
1955-56.....	654	196	427	31
1956-57.....	696	213	433	50
1957-58.....	719	210	445	64
1958-59.....	991	326	490	175
1959-60.....	999	343	486	170
1960-61.....	1,027	323	470	234
Hospital in-patients				
1954-55.....	41	9	29	3
1955-56.....	36	4	29	3
1956-57.....	21	5	8	8
1957-58.....	43	11	14	18
1958-59.....	80	18	16	46
1959-60.....	164	49	38	77
1960-61.....	139	42	18	79
Hospital out-patients				
1954-55.....	56	23	33	....
1955-56.....	58	29	26	3
1956-57.....	81	36	33	12
1957-58.....	80	27	32	21
1958-59.....	116	59	13	44
1959-60.....	216	108	46	62
1960-61.....	244	92	34	118
Home exercise program patients				
1954-55.....	549	165	375	9
1955-56.....	560	163	372	25
1956-57.....	594	172	392	30
1957-58.....	596	172	399	25
1958-59.....	795	249	461	85
1959-60.....	619	186	402	31
1960-61.....	644	189	418	37

TABLE 36. FIRST VISITS OF PATIENTS
TO REGINA PHYSICAL RESTORATION
CENTRE, FISCAL YEARS 1954-55 TO 1960-61

Type of patient and year	Regina Centre
All patients	
1954-55.....	633
1955-56.....	666
1956-57.....	717
1957-58.....	764
1958-59.....	444
1959-60.....	952
1960-61.....	1,151
Poliomyelitis	
1954-55.....	487
1955-56.....	473
1956-57.....	477
1957-58.....	487
1958-59.....	236
1959-60.....	487
1960-61.....	451
Cerebral palsy	
1954-55.....	144
1955-56.....	181
1956-57.....	212
1957-58.....	238
1958-59.....	112
1959-60.....	293
1960-61.....	473
Other	
1954-55.....	3
1955-56.....	2
1956-57.....	12
1957-58.....	39
1958-59.....	96
1959-60.....	172
1960-61.....	227

Saskatoon Physical Restoration Centre

A number of internal modifications were made on the premises of the Saskatoon Physical Restoration Centre which improved facilities and services offered. One particular improvement was the establishment in the occupational therapy office and interview room.

During the year of 1960-61, 124 new patients were admitted to the services of the centre. These were divided into 38 post-poliomyelitis patients, 11 cerebral palsy patients and 75 patients with other types of disabilities.

The staff establishment was unchanged from last year. At the end, there were four vacant permanent positions, one physiotherapist II, two physiotherapists I and one occupational therapist I.

Medical Services — Consultants and Clinics

The following specialists assisted in the services:

Orthopaedic consultants	4
Paediatricians	1
Physical medicine specialists	3
Radiologists	nil
Other	4

Again this year, the medical director of the centre convened ten cleft palate clinics. The cleft palate team reviewed 28 patients and evaluated 18 new cases. A further increase in the number of cleft palate clinics will be required to meet changing conditions. In addition, two weekly clinics (post-poliomyelitis and cerebral palsy) were held regularly and diagnostic clinics were held periodically during the year. As a result of transfer of certain patients from St. Paul's Hospital to other hospitals, no further assistance was required from our physiotherapy staff in that hospital.

During the past years, some members of the staff of this centre assisted with the mobile clinics sponsored by the Saskatchewan Council for Crippled Children and Adults at such points as Prince Albert, Melfort, Tisdale and Humboldt. In addition to this, some members of our staff also served on two rehabilitation nursing re-teaching programs at Rosetown and Humboldt.

The following tables indicate patient services and costs.

Finance

Based on active patient caseload

	1959-60	1960-61
Per diem per patient	\$4.04	\$3.83
Per unit per treatment	\$2.77	\$2.58

TABLE 37. FIRST VISITS OF PATIENTS
TO PHYSICAL RESTORATION CENTRE,
SASKATOON, FISCAL YEARS
1954-55 TO 1960-61

Type of patient and year	Saskatoon Centre
All patients	
1954-55.....	597
1955-56.....	623
1956-57.....	701
1957-58.....	820
1958-59.....	407
1959-60.....	452
1960-61.....	437
Poliomyelitis	
1954-55.....	397
1955-56.....	405
1956-57.....	427
1957-58.....	438
1958-59.....	190
1959-60.....	182
1960-61.....	199
Cerebral palsy	
1954-55.....	94
1955-56.....	96
1956-57.....	107
1957-58.....	134
1958-59.....	88
1959-60.....	90
1960-61.....	91
Other	
1954-55.....	106
1955-56.....	122
1956-57.....	167
1957-58.....	248
1958-59.....	129
1959-60.....	180
1960-61.....	147

TABLE 38. NUMBER OF PATIENTS ON CASELOAD REGISTER, PHYSICAL RESTORATION CENTRE, SASKATOON, FISCAL YEARS 1954-55 TO 1960-61

Patient status and year	Total	Saskatoon centre		
		Cerebral palsy	Polio-myelitis	Other
All patients				
1954-55.....	512	136	328	48
1955-56.....	539	138	338	63
1956-57.....	662	137	356	169
1957-58.....	792	165	380	247
1958-59.....	811	161	365	285
1959-60.....	783	167	345	271
1960-61.....	586	145	304	137
Hospital in-patients				
1954-55.....	15	1	14	....
1955-56.....	4	....	4	....
1956-57.....	2	....	2	....
1957-58.....	4	....	4	....
1958-59.....	2	....	2	....
1959-60.....	7	....	7	....
1960-61.....	....	....	....	....
Hospital out-patients				
1954-55.....	50	18	25	7
1955-56.....	63	22	24	17
1956-57.....	61	15	28	18
1957-58.....	79	19	32	28
1958-59.....	71	18	20	33
1959-60.....	102	28	36	38
1960-61.....	119	40	40	39
Home exercise program patients				
1954-55.....	447	117	289	41
1955-56.....	472	116	310	46
1956-57.....	599	122	326	151
1957-58.....	709	146	344	219
1958-59.....	738	143	343	252
1959-60.....	674	139	302	233
1960-61.....	467	105	264	98

Division Office

Enabling legislation was revised in 1960, to allow the Minister of Public Health to charge patients for certain services. This change preceded the inauguration of a nominal cost brace and appliance service. The service was available from June 1, 1960 through two appliance shops. One shop served northern area patients from Saskatchewan Council for Crippled Children and Adults in Saskatoon; the other served southern patients from the Regina Physical Restoration Centre. In addition, a limb service was gradually being developed. The nominal cost feature was made possible by the use of National Health Grant funds.

An illustrated division brochure was developed with the assistance of the directors of the two centres. It was made available to prospective patients and interested physicians.

Late in the year, certain administrative changes were adopted which gave the administrative director responsibilities for vocational, educational and some administrative duties in the Regina centre. He was to be responsible to the medical director of the centre. Simultaneously, occupational shop programs were extended to serve particularly Workmen's Compensation Board clients.

National Health Grant funds assisted training 11 undergraduate students in physical therapy, occupational therapy or combined physical and occupational therapy. Four 1960 graduating students were placed in hospitals or in the physical restoration centres.

The division office continued to support such rehabilitation committees and organizations as the Training Selection Committee (Schedule 'R') and the Co-ordinating Council on Rehabilitation.

Paraplegia Services

The director, Department of Rehabilitation Medicine, University Hospital, Saskatoon, continued to serve as chairman of the screening and management committee. The committee experienced a gradual increase in the numbers of patients requiring service and also in the severity of disability presented.

Paraplegia Services — to March 31, 1961

Total caseload as of April 1, 1960		59	
Patients in hospital as of April 1, 1960	9		
Patient on home care during year	1		
Patients readmitted during year	6		
	—	16	16
New patients admitted to program during year:			
Hospital	19		
Physical Restoration Centre	4		
	—	23	23
		—	—
Total active cases treated during year		39	
Total all cases during year			98
Deaths during year	3		
Moved out of province	4		
	—		
Less sum of lines 2, 3, 4, 8 & 9			23
Total caseload as of March 31, 1961			75
			—

Paraplegia Services

Diagnoses of active cases according to etiology

Total	39
Spinal cord injury (traumatic paraplegia or quadriplegia)	18
Poliomyelitis	11
Multiple sclerosis	1
Infections (extra-dural)	1
Post-meningitis	1
Thoracic disc protrusion	1
Acquired vascular disease of spinal cord	1
Congenital anomalies	4
Guillain-Barre syndrome	1

SASKATCHEWAN HOSPITAL SERVICES PLAN

A provincial government program of hospital care insurance has been in operation on a province-wide basis in Saskatchewan since January 1, 1947. The program is known as the Saskatchewan Hospital Services Plan. The Plan provides protection against hospitalization costs to residents of the province on payment of an annual tax known as the hospitalization tax. Benefits of the program are contingent on prior payment of the tax as well as on medical necessity for hospital care. There are no exclusions because of age or pre-existing physical conditions.

A main objective of the Plan is to remove the financial deterrent to necessary hospital care in individual cases by distributing the total cost of hospitalization over the whole population of the province. This principle is reflected in the arrangement for covering costs. The Plan is financed in part from the proceeds of a personal tax, which is levied annually on a family basis. The balance of its cost is met from general funds of the province. Since April 1, 1950, the general funds have included a one-third share of revenue from a sales tax levied under authority of The Education and Hospitalization Tax Act. For a period of two and one-half years, that is since July 1, 1958, an agreement between the Government of Canada and the province under the Hospital Insurance and Diagnostic Services Act (Canada) has been in effect. The agreement provides for federal sharing of the cost of the province's general hospital care. These contributions, however, are made to the province's Consolidated Fund, and therefore are not recorded as transactions of the Saskatchewan Hospitalization Fund.

Operations of the Plan are regulated by the provisions of The Saskatchewan Hospitalization Act. At its inception and until April 1, 1950, the Plan was administered by The Health Services Planning Commission. Since that date, however, it has functioned as a division of the Medical and Hospital Services Branch of the Department of Public Health.

Coverage

From its beginning on January 1, 1947, to June 30, 1958, most persons who had resided in Saskatchewan for a period of six months were required to participate in the Plan. Certain classes of persons, however, were excluded from the Plan's operations, other classes became beneficiaries at their option, and others were covered by the Plan through payment of the hospitalization tax by provincial or municipal governments. Persons provided with complete hospital care under a number of federal and provincial programs were excluded from the Plan's operation throughout that period. Residents of the sparsely settled far northern area of the province, known as the Northern Saskatchewan Administration District, were excluded from the Plan during 1947, but from January 1, 1948, to June 30, 1958, they were permitted to participate on a voluntary basis. During the eleven and one-half years ended June 30, 1958, voluntary participation was also permissible for Indians who had lived apart from

Indian reserves for a period of 18 months. Since its inception, the Plan has covered social assistance recipients through payment of the hospitalization tax on their behalf by the municipal or provincial agencies responsible for their welfare.

On July 1, 1958, when federal cost sharing of provincial hospital care insurance programs began, a number of regulation changes were made with respect to the Plan's coverage. The waiting period for newcomers to the province was reduced from six months to three months on that date. At the same time, the Plan's regulations were amended to provide for coverage of Indians living on reserves, and those who have been away from reserves for less than 12 months, through payment of the hospitalization tax on their behalf by the Government of Canada. At that time, also, regulations were established which required participation of Indians who had lived apart from reserves for 12 months or more. A further amendment to regulations provided for coverage of recipients of the War Veterans' Allowance through payment of the tax on their behalf by the Government of Canada. Voluntary participation for residents of the Northern Saskatchewan Administration District continued to the end of 1958. Since January 1, 1959, however, regulations have required that residents of that area become beneficiaries of the Plan on the same basis as applies to the population in general.

From July 1, 1958, newcomers to the province have been eligible to participate in the Plan following completion of three months' residence, and have been taxed on a *pro rata* basis from the first day of the fourth calendar month following establishment of residence. When the required tax is paid before expiration of three months' residence, coverage is provided immediately upon completion of that three month period. If the tax is not paid by that date, the Plan's protection does not become available until one month after it is paid. On departure from the province to reside elsewhere, coverage is provided for a period of three months after residence is established outside Saskatchewan. On receipt of refund applications after residence is established elsewhere, the Plan makes proportionate refunds to former residents dating from the first day of the fourth month following the month residence is established in the new location.

Hospitalization Tax

Throughout the 14 years of the Plan's operation, the bulk of annual hospitalization tax has been collected by the cities, towns, villages, rural municipalities and local improvement districts of the province. Provincially operated hospitalization tax collection offices, however, have been established in the cities of Moose Jaw, Prince Albert and Regina. In the Northern Saskatchewan Administration District, except for incorporated areas where municipal corporations are collectors and for a few mine sites where mining companies have been appointed collectors for their employees, the Department of Natural Resources is the collector. Commissions are paid to collectors at rates which are fixed annually. Commission rates paid during 1960 were three per cent on the first \$100,000 collected, and two and one-half per cent on amounts above that figure.

The Act ordinarily provides that all arrears of taxes must be paid, as well as the required amount of tax for the current period, before the

Plan's coverage becomes available. Earlier coverage may be provided, however, in cases where settlement of arrears of taxes on an instalment basis has been approved by the Board of Revenue Commissioners. Arrears of taxes means unpaid hospitalization taxes levied in respect of any or all of the five years immediately preceding the current year.

For 1960, hospitalization tax rates were as follows:

For each self-supporting person or a spouse (including a widowed, divorced or separated person) _____	\$17.50
For each person who reached the age of 18 years before January 1, 1960 _____ (except unmarried dependents under 21 years before January 1, 1960, who were attending educational institutions or training at a school of nursing and sons and daughters dependent on parents for maintenance by reason of physical or mental infirmity)	\$17.50
Dependents who had not reached the age of 18 years before January 1, 1960, were not taxable.	
Dependents who were exempt from taxation were required to be shown as beneficiaries on family hospital services cards.	
The family tax for a family head, his spouse and his non-taxable dependents was _____	\$35.00

The 1961 tax rate for a self-supporting person or a spouse (including a widowed, divorced or separated person) was set at \$24, with a family tax of \$48 required for a family head, his spouse and his non-taxable dependents. No changes were made in the age limits or classification of persons designated as non-taxable dependents.

Due dates for payment of the hospitalization tax are established by regulations to provide for payment one month in advance of the benefit period. When payment is not made by due date, the Plan's benefits do not become available until one month after the required payment is made.

The tax for 1960 was payable by November 30, 1959, if the total tax was \$17.50; if more than that amount, at least \$17.50 was payable by November 30, 1959, and the balance by May 31, 1960. Full payment of the tax by November 30 provided coverage under the Plan for all of 1960. Payment of the first instalment by November 30, ensured coverage for the first half of the tax year, and payment of the second instalment by May 31 for the last six months of the year. This arrangement in effect required taxpayers assessed at the single rate to pay the 1960 tax in one payment, while family taxpayers could elect to pay the tax for that year in two instalments.

For the 1961 tax year, regulations were established to provide for payment of the 1961 family tax on a quarterly bases, and the single-person tax on a semi-annual basis. The assessed tax could be paid in a lump sum by November 30, 1960. Where the assessed tax was \$24, at least \$12 was due by November 30, 1960, and the balance by May 31, 1961. Where it is assessed on a family basis (\$48), at least \$12 was due by November 30, 1960, \$12 by February 28, 1961, an additional \$12 by May 31, 1961, and the remaining \$12 by August 31, 1961.

An infant born to a mother who is a beneficiary is automatically covered by the Plan without registration for the period to which the mother's tax payment applies. Newborns are not registered with family units until the following year.

Benefits

Subject to medical necessity for hospital care the Plan pays, on behalf of beneficiaries who are admitted as in-patients, for most services which are normally provided by the hospitals concerned. These conditions have maintained throughout the years 1947—1960. Apart from the addition of a few drugs, the list of services provided to in-patients has remained virtually unchanged. The list includes payment for public ward accommodation (including meals, special diets and general nursing care), use of operating, case and emergency rooms, surgical dressings and casts, x-ray and physiotherapy treatments, anaesthetic drugs and equipment, and most drugs in general use. Services of doctors and nurses not employed by hospitals, extra charges for private and semi-private ward accommodation, patent medicines, a few of the newer and more expensive drugs, and all drugs not administered within hospitals are excluded. Also excluded are services rendered on a purely diagnostic basis. Moreover, hospital care provided in the treatment of arthritis or rheumatism in institutions associated with mineral springs or spas is not a benefit.

No limit has been placed at any time on the amount of in-patient care which a beneficiary may obtain at the Plan's expense from Saskatchewan hospitals, as long as the attending physician indicates that continued hospitalization is necessary.

During the 13-year period ended December 31, 1959, the Plan's coverage of hospital in-patient care obtained outside Saskatchewan was subject to a number of changes concerning the amount of care in a year and the amount paid for each day of care. Payments for out-of-province care were made only for in-patient services which are included as benefits in Saskatchewan hospitals. Out-patient services were excluded entirely. These two conditions were continued in 1960. During 1960, the out-of-province coverage available to participants in the Plan was as follows:

(a) For beneficiaries temporarily absent from the province:

1. *In Canada*—payment for any period of in-patient general ward care during the year, subject to there being medical necessity for such care:

—when care was obtained in a province or territory to which the federal government makes contributions for hospital insurance, payment was made at the per diem rates payable by the provincial or territorial authority.

—when care was obtained in a province or territory not participating with the federal government in hospital insurance, payment was made at daily rates not exceeding \$15 for adults and children and \$5 for newborn babies.

2. *Outside Canada*—payment for a maximum of 60 days of in-patient care during the year at the level of hospital services provided in Saskatchewan, subject to there being medical necessity for such services. Payment for such care could not exceed an average maximum of \$15 a day for adults and children and \$5 a day for newborn babies.

- (b) For beneficiaries who left Saskatchewan to establish residence elsewhere:

Payment was made to or on behalf of a beneficiary who had left the province and did not intend to return on the same basis as provided to beneficiaries temporarily absent from the province, except that payment could not be made in respect of hospital care received after three months from the date on which residence was established outside Saskatchewan.

All out-patient services were excluded from the Plan's benefits during the years prior to 1956. Effective January 1, 1956, however, tissue pathology services provided by Saskatchewan hospitals on an out-patient basis were added to the benefit schedule. Emergency treatment (excluding private physician's services) rendered on an out-patient basis by Saskatchewan hospitals to beneficiaries within 24 hours of injury became a benefit on July 1, 1958. The 24-hour limit was removed at the beginning of 1960. Out-patient services for which payment may be made by the Plan also are subject to medical necessity for such services. All other out-patient services (including those rendered on a purely diagnostic basis, drugs not included as benefits under the in-patient program and all drugs taken away for use at home) continue to be chargeable to beneficiaries.

Hospitalization Experience (In-patient Care)

In all previous annual reports the term "discharged cases" has been used to describe the basis of most analyses on the distribution of hospital care. For statistical purposes "discharged cases" have included deaths in hospital and transfers to other hospitals. Following a number of meetings of the Federal Advisory Committee on Hospital Insurance and Diagnostic Services, its subcommittee on Quality of Care, Research and Statistics in 1960 recommended that provincial plans for statistical purposes use the term "separations" to describe this category of hospital cases. That term consequently is used in this report. In comparing 1960 hospitalization experience with that of earlier years, as published in previous reports, therefore, "separations" should be considered synonymous with "discharged cases". In this report, unless otherwise stated, experience on in-patient use of hospital facilities refers to separations and days of care received by such cases.

From the beginning of 1947 until July 1, 1958, the Plan covered only in-patient care provided by Saskatchewan public general hospitals. Since the latter date it has covered care provided by the geriatric centres at Regina, Saskatoon and Melfort. The care provided by these special hospitals is not reflected in the general hospital experience reviewed in this report, although the volume of care provided by the three institutions is shown separately at the end of this section.

Table 39 compares the Plan's volume of care for the years 1947, 1951, 1956, 1959 and 1960. As indicated previously, this volume excludes care provided by the three geriatric hospitals which provide care at the Plan's expense. It will be seen that 1960 volume for adults and children, in terms of separations, increased by 5,797 over 1959 experience, and days of care increased by 26,157. This experience reflects an increase of 3.1 per cent in separations and 1.4 per cent in related patient-day volume. Over the same period, the Plan's covered population increased by 1.3 per cent.

TABLE 39. VOLUME OF HOSPITAL CARE COVERED BY THE SASKATCHEWAN HOSPITAL SERVICES PLAN, 1947, 1951, 1956, 1959 AND 1960

Year	Hospital cases*		Patient days		Average days of stay		
	Admissions	Separations	Days for separations†	Total days of care during year‡	Per separation	Total days divided by admissions	Total days divided by separations
Adults and children							
1947.....	125,510‡	121,951	1,221,453	1,309,288	10.0	10.4	10.7
1951.....	155,119	154,848	1,715,232	1,721,629	11.1	11.1	11.1
1956.....	168,076	168,147	1,744,592	1,732,456	10.4	10.3	10.3
1959.....	186,330	186,479	1,857,539	1,850,371	10.0	9.9	9.9
1960.....	192,112	192,276	1,883,696	1,878,816	9.8	9.8	9.8
Newborns							
1947.....	20,706‡	20,415	187,092	188,430	9.2	9.1	9.2
1951.....	19,725	19,729	169,062	168,664	8.6	8.6	8.5
1956.....	22,323	22,352	165,597	165,777	7.4	7.4	7.4
1959.....	23,712	23,739	165,592	165,209	7.0	7.0	7.0
1960.....	23,744	23,725	162,126	162,597	6.8	6.8	6.9

* Cases in hospital at December 31, 1960, and days of care accrued in respect of such cases were as follows:
Adults and children 4,356 cases, 83,879 days,
Newborns 392 cases, 2,677 days.

† "Days for separations" differ from "Total days of care during year" in that all days of care for "separations" are included in the former, even though some of the care may have been given in preceding years, while "Total days of care during year" cover all care provided to Saskatchewan Hospital Services Plan beneficiaries during a given year, including care received by patients remaining in hospital at the year-end.

‡ Includes beneficiaries in hospital when the Plan commenced operations on January 1, 1947.

The average hospital stay for adults and children, based on separations and related patient days, decreased from 10.0 days in 1959 to 9.8 days in 1960. During the first few years of the Plan's operation, the average stay rose from 10.0 days in 1947 to a high of 11.1 days in 1951. Following introduction of the Plan's present system of payment to Saskatchewan hospitals in 1951, the average dropped gradually to the present level of 9.8 days.

Factors having an effect on the Plan's volume of care from year to year are changes in morbidity experience, increases in total covered population, changes in the age-sex distribution of covered population, the addition of categories of residents previously excluded from the Plan's operations, and hospital bed capacity in the province.

Table 39 also compares the Plan's volume of newborn care for the years shown. Separations in 1960 showed a decrease of 14 cases from the experience of the previous year, while patient-day volume dropped by 3,466 days. The average stay for newborn separations decreased from 7.0 days in 1959 to 6.8 days in 1960. Over the 14 years the Plan has been operating, the average stay for newborns has decreased gradually each year from the high of 9.2 days in 1947 to the present level of 6.8 days.

The Plan's total volume of care, including that provided to cases remaining in public general hospitals in the province at December 31 but excluding care in geriatric hospitals, is also shown in Table 39. The volume for adults and children increased by 28,445 patient days as between the years 1959 and 1960, and for newborns decreased by 2,612 patient days.

Hospitalization rates for each of the years 1947 to 1960 are shown in Table 40. The Plan's hospitalization rates in terms of separations increased sharply over the first three years of operation. In terms of patient days per 1,000 population, rates increased rapidly over the first four years. Since 1949, separations per 1,000 beneficiaries have ranged from 199 to 214, and patient days per 1,000 beneficiaries from 2,043 to 2,201. While the case rate of 214 per 1,000 in 1960 is the highest yet experienced, the 1960 patient-day rate of 2,094 per 1,000 was exceeded in six earlier years.

Many factors are involved in hospitalization rate variations from year to year, including age and sex distribution of covered population, diagnoses involved with hospitalized cases, and participation in the Plan by groups considered "high-risk" categories. With regard to the last factor, it should be noted in observing recent hospitalization rates that Indians on reserves and War Veterans' Allowance recipients have been participating in the Plan since July 1, 1948. Rates for those two federal government categories are considerably higher than for the province's population as a whole.

TABLE 40. HOSPITALIZATION RATES* PER 1,000 BENEFICIARIES, SASKATCHEWAN HOSPITAL SERVICES PLAN, 1947-1960

Year	Hospital cases		Patient days	
	Admissions	Separations	Separations	Total days of care during year
1947.....	161	156	1,565	1,678
1948.....	178	178	1,875	1,920
1949.....	200	200	2,048	2,095
1950.....	204	203	2,197	2,235
1951.....	199	199	2,201	2,209
1952.....	205	205	2,175	2,155
1953.....	206	206	2,139	2,094
1954.....	204	204	2,084	2,045
1955.....	201	201	2,049	2,051
1956.....	202	202	2,099	2,085
1957.....	211	211	2,120	2,093
1958.....	206	205	2,043	2,063
1959.....	210	210	2,091	2,083
1960.....	214	214	2,094	2,088

* Excluding newborns.

Hospitalization rates for 1959 and 1960, excluding newborn care, are shown by age and sex in Tables 41 and 42.

TABLE 41. SEPARATIONS* PER 1,000 BENEFICIARIES BY AGE AND SEX, SASKATCHEWAN HOSPITAL SERVICES PLAN, 1959 AND 1960

Age in years	Both sexes		Male		Female	
	1959	1960	1959	1960	1959	1960
All ages.....	210	214	166	171	257	259
0-1.....	353	389	393	432	310	344
1-4.....	159	175	171	189	146	160
5-14.....	118	122	120	125	116	119
15-24.....	215	214	104	103	326	326
25-44.....	218	219	103	102	333	336
45-64.....	205	206	176	181	238	233
65-69.....	306	296	289	295	327	297
70+.....	468	479	476	479	458	480

* Excluding newborn care.

TABLE 42. PATIENT DAYS* PER 1,000 BENEFICIARIES BY AGE AND SEX, SASKATCHEWAN HOSPITAL SERVICES PLAN, 1959 AND 1960

Age in years	Both sexes		Male		Female	
	1959	1960	1959	1960	1959	1960
All ages.....	2,091	2,094	1,846	1,845	2,352	2,359
0-1.....	3,424	3,587	3,789	3,988	3,030	3,162
1-4.....	1,118	1,247	1,182	1,309	1,049	1,181
5-14.....	683	704	708	732	657	675
15-24.....	1,414	1,385	787	753	2,040	2,020
25-44.....	1,662	1,652	903	885	2,422	2,421
45-64.....	2,564	2,469	2,243	2,245	2,923	2,718
65-69.....	4,743	4,565	4,567	4,549	4,963	4,585
70+.....	8,555	8,693	8,756	8,510	8,291	8,932

* In respect of separations. Newborns excluded.

The Plan's 12 leading causes of hospitalization for adults and children in 1960 are shown in Table 43, together with 1959 experience for the same diagnoses. Diagnostic classes are those of the International Classification of Diseases, Injuries and Causes of Death, 1955 Revision.

TABLE 43. LEADING DIAGNOSES OF HOSPITAL PATIENTS, SASKATCHEWAN HOSPITAL SERVICES PLAN, 1959 AND 1960

List numbers*	Diagnosis	Separations†		Per cent of separations		Separations per 1,000 beneficiaries	
		1959	1960	1959	1960	1959	1960
	All causes.....	186,479	192,276	100.0	100.0	210.0	214.0
C43	Deliveries, complications of pregnancy, childbirth and puerperium	32,675	32,591	17.5	17.0	36.8	36.2
BN47-50	Accidents, poisonings and violence..	14,836	15,510	8.0	8.1	16.7	17.2
C29	Acute pharyngitis and tonsillitis and hypertrophy of tonsils and adenoids.....	11,522	11,915	6.2	6.2	13.0	13.2
C31	Pneumonia.....	8,610	10,181	4.6	5.3	9.7	11.3
C42	Diseases of genital organs.....	9,102	9,367	4.9	4.9	10.2	10.4
C25	Arteriosclerotic and degenerative heart disease.....	5,511	5,698	3.0	3.0	6.2	6.3
C32	Bronchitis.....	5,325	5,683	2.9	3.0	6.0	6.3
C12	Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues.....	4,720	4,908	2.5	2.6	5.3	5.5
C35	Diseases of stomach and duodenum, except cancer.....	4,536	4,752	2.4	2.5	5.1	5.3
C38	Diarrhoea and enteritis.....	3,552	4,259	1.9	2.2	4.0	4.7
C39	Diseases of gall bladder and bile ducts.....	4,125	4,089	2.2	2.1	4.6	4.5
C36	Appendicitis.....	4,297	4,009	2.3	2.1	4.8	4.5
	All other.....	77,668	79,314	41.6	41.0	87.6	88.6

* Classified according to *International Statistical Classification of Diseases, Injuries, and Causes of Death, 1955 Revision, Vol. 1, pp. 383-385.*

† Excluding newborns.

Since July 1, 1958, the Plan has covered care provided to beneficiaries by the geriatric hospitals at Regina, Saskatoon and Melfort. Prior to that date coverage was restricted to care provided by public general hospitals. The chronic care provided by the three geriatric hospitals, however, is not represented in the statistical experience presented earlier in this section of the report. The following is a brief review of the chronic cases covered in the three institutions.

Although primarily concerned with geriatric services, the Regina Geriatric Centre also provides nursing care to persons in the hospital who have been admitted for treatment by the Regina Physical Restoration Centre, which adjoins the geriatric centre. Patients treated by the Physical Restoration Centre range in age from the very young to very old.

During 1960 a total of 491 patients were separated from the three geriatric centres after having been provided with a total of 91,999 patient days of care. A total of 259 patients, representing 53 per cent of total separations for the three institutions, were under 50 years of age. Of these nearly two-thirds were under 20 years of age, reflecting the services provided by the Physical Restoration Centre at the Regina institution. Patients under 50 years of age accounted for 22 per cent of the total of 91,999 patient days attributable to separations. Patients 65 years of age and over (183 cases) accounted for 37 per cent of total separations and 66 per cent of the related patient-day total. Nearly half (43 per cent) of the separated cases 65 years of age or over involved deaths. The average stay for separated cases 65 years of age and over was 334 days. In separations for this age group, there were 87 males who experienced an average stay of 303 days, and 96 females with an average stay of 363 days.

Payments by the Plan to the three institutions during 1960 amounted to \$1,096,531.

Hospitalization Experience (Out-patient Services)

Prior to January 1, 1956, all out-patient services were excluded from the Plan's schedule of benefits. Effective that date the Plan began to pay for tissue pathology services provided on an out-patient basis. Since July 1, 1958, it has been paying for out-patient services provided by Saskatchewan hospitals in the course of providing treatment after injuries. From July 1, 1958, to the end of 1959 such coverage was restricted to treatment obtained within 24 hours of injury. At the beginning of 1960 the 24-hour time limit was removed, and the Plan began to cover follow-up services related to the initial service. The emergency treatment program covers all necessary hospital services, including x-ray, laboratory services and use of operating room. Private physicians' services are excluded. Drugs not included as benefits under the in-patient program, and all drugs taken away from hospital for use at home, are not covered.

During 1960 the Plan experienced a 65.2 per cent increase in volume of out-patient services over 1959 experience. Emergency treatment of injuries increased from 29,952 in 1959 to 40,905 in 1960. Follow-up services involved with treatment of injuries totalled 12,718 in 1960, services which were not covered by the program in the previous year.

The Plan pays Saskatchewan hospitals \$5 for each out-patient admission involved with the emergency treatment program.

The tissue pathology program involves use of hospital out-patient facilities in procuring tissue for pathological examination, and for subsequent examination of such tissue by hospital pathology laboratories. It does not cover fees for private physicians' services involved in removing tissues either in hospital out-patient departments or in physicians' offices or clinics. At the end of 1960 there were ten public general hospitals in the province operating pathology departments. From January 1, 1956, to the end of 1959, the Plan paid for tissue pathology services at \$2 for each tissue specimen taken on an out-patient basis, and \$4 for each specimen examined by a pathology laboratory. During 1960 hospitals were paid \$5 for each of those services.

Cost of Operations

Table 44 shows the Plan's total expenditure, hospitalization expense and administration expense for the years 1947, 1951, 1956, 1957, 1958, 1959 and 1960.

TABLE 44. SASKATCHEWAN HOSPITAL SERVICES PLAN EXPENDITURE*, 1947, 1951, 1956, 1957, 1958, 1959 AND 1960

Year	Total expenditure			Hospitalization expense			Administration expense		
	Amount	Per cent	Per capita	Amount	Per cent	Per capita	Amount	Per cent	Per capita
1947.....	\$ 7,560,763	100.0	\$ 9.68	\$ 6,963,258	92.1	\$ 8.92	\$ 597,505	7.9	\$ 0.76
1951.....	14,010,912	100.0	17.97	13,430,802	95.9	17.22	580,110	4.1	0.75
1956.....	22,347,533	100.0	26.89	21,617,217	96.7	26.01	730,316	3.3	0.88
1957.....	24,553,642	100.0	29.66	23,757,006	96.8	28.70	796,636	3.2	0.96
1958.....	28,723,035	100.0	33.18	27,874,337	97.0	32.20	848,698	3.0	0.98
1959.....	32,588,183	100.0	36.68	31,783,824	97.5	35.78	804,359	2.5	0.90
1960.....	34,579,657†	100.0	38.44†	33,734,136†	97.6	37.50	845,521	2.4	0.94

* Figures for the years prior to 1960 have been adjusted to include retroactive increases in hospital rates of payment.

† May be increased by retroactive hospital rate changes effected after the date of this report.

Additional information respecting covered population, hospitalization experience and cost of operation for each of the years 1947 to 1960 may be obtained from separately published annual reports of the Saskatchewan Hospital Services Plan.

HOSPITAL ADMINISTRATION AND STANDARDS

Since local governing authorities have autonomy in respect to the construction, maintenance and operation of public general hospitals throughout Saskatchewan, the staff of the division of hospital administration and standards functions mainly to counsel these authorities. This assures that the general public admitted to hospital receive a good standard of care at reasonable cost.

The work of the division is planned to that end, authority being derived from The Hospital Standards Act and regulations thereunder, and also from The Union Hospital Act. Of 165 hospitals in the province 111 are union hospitals.

Inspecting and Counselling

Supervised by a medical director, representatives of many of the disciplines related to hospital activity make up the staff complement—hospital administration, accounting, nursing, dietetics, medical technology, pharmacy, medical records, to name a few.

For administrative purposes, the province is divided into eastern and western portions and divisional personnel are assigned to provide counselling service on a team basis under the supervision of senior staff. This applies to medical technology, nursing, dietetics and accounting.

Staff members representing pharmacy, case records and union hospital district activity, function on a province-wide basis.

Divisional staff offer guidance on such matters as planning construction projects; the purchase and installation of equipment; the development of hospital bylaws and medical staff rules and regulations; personnel policies; preparation of budgets; general administration. They process all applications and claims for hospital construction grants.

The medical technologists also function as instructors and supervisors for the training of combined technicians, for service in the small public general hospitals. This program has been administered by the division continuously since 1947. Financed by federal monies, under the National Health Grants program, 19 students graduated during the year, bringing the total number graduated since the inception of the program to 170.

Financial and statistical data is collected and analyzed. This information is used to set equitable rates of payment for individual hospitals, and for cost sharing purposes under the Hospital Insurance and Diagnostic Services Act (federal). The financial and statistical data from which equitable rates of payment to hospitals are determined, are obtained from the uniform accounting system used in Saskatchewan hospitals. A staff of field auditors check completeness and accuracy of hospital accounting records. These auditors also assist in "on the job" training of new hospital personnel who may be unfamiliar with hospital accounting and the uniform accounting system. The information provided

by hospitals through the accounting system is collated and processed. From this information, reports, tables and charts are prepared which are used by the Hospital Rate Board in assessing hospital operations, determining rates of payment to hospitals and for federal cost sharing purposes.

Members of the field staff of this division made 1,032 visits to hospitals, travelling 169,742 miles in the process. The inspection and counselling services provided are shown in Table 45.

Regional Hospital Councils

The department has encouraged the development of hospital councils on a regional basis, with each council becoming a body corporate under authority of The Hospital Standards Act. Each council has an executive officer responsible to do such things as are deemed necessary by each council to improve the services and the efficiency of operation of the participating hospitals.

Each council develops its own work program and submits a budget to the department for review and approval. Costs for the approved program are apportioned among the member hospitals and recovered from the Saskatchewan Hospital Services Plan.

Continuing this past year was a project undertaken by the Northwest Regional Hospital Council, financed by federal funds, in respect to centralizing accounting and statistics for those of its member hospitals wishing to participate. Although it is not possible at this time to evaluate all aspects of this program, the general reaction is that it will be of benefit to the participating hospitals, educationally and administratively.

There are four such hospital councils in operation involving 69 hospitals, with council staff and activities centralized at the following urban centres:

Humboldt:

Quill Plains Regional Hospital Council—11 hospitals

North Battleford:

Northwest Regional Hospital Council—20 hospitals

Prince Albert:

North Central Regional Hospital Council—18 hospitals

Swift Current:

Southwest Regional Hospital Council—20 hospitals

The geographical location of member hospitals, is shown in the map on page 142.

Hospital Construction and Accommodation

With the number of beds available for general hospital care higher for the province than the Canada-wide average, hospital construction has had as its main objective the replacement of non-acceptable beds, plus improved service facilities and accommodation for staff, rather than the provision of additional beds.

Accommodation in general hospitals is computed on a calendar year basis. On December 31, 1960, 165 general hospitals, geriatric centres, Indian Health Services hospitals and nursing stations were in operation (Table 46). Measured capacity totalled 6,841 beds with 7,439 beds actually set up and in use.

All hospital wards in the province are now rated on the basis of standards established by the federal government.

Health Services Units

Provincial government assistance towards construction costs of general hospitals has been provided since 1945. This assistance has been matched in most instances by equivalent federal grants since 1948. During the fiscal year ending March 31, 1961, provincial grant payments for construction totalled \$1,059,706.18 apportioned as follows:

General hospital construction	\$1,041,128.53
Staff residences	7,835.98
Health centres	10,741.67

The following table shows the individual breakdown of projects involved and amounts of provincial grants paid during the 1960-61 fiscal year.

*Provincial construction grants paid
during the fiscal year, 1960-61*

	<i>Amount paid</i>
Total	\$ 1,059,706.18
Carrot River Union Hospital	19,333.33
Dinsmore Union Hospital, Nurses' Residence	3,300.00
Fillmore Union Hospital	12,461.66
Kipling Union Hospital	11,380.00
La Ronge Hospital Association	24,479.84
Leader Union Hospital	97,466.66
Loverna (Red Cross Society)	420.00
Lucky Lake Union Hospital	1,160.00
Melfort Union Hospital	41,716.50
Melville St. Peter's Hospital	81,743.33
Moose Jaw Providence Hospital	102,236.16
Moosomin Union Hospital Nurses' Residence	1,338.49
Norquay-Canora Union Hospital	27,200.00
Ogema Health Centre	8,753.33
Outlook Union Hospital	20,993.25
Oxbow Union Hospital	57,440.00
Pangman Union Hospital	30,973.32
Prince Albert Victoria Union Hospital	37,346.66
Rabbit Lake Union Hospital Nurses' Residence	3,197.49
Regina Grey Nuns' Hospital	24,945.66
Rosthern Union Hospital	11,761.67
Saskatoon City Hospital	90,310.00
Southey Health Centre	1,988.34
Tisdale St. Therese Hospital	20,500.00
Wakaw Union Hospital	20,379.00
Weyburn Union Hospital	88,714.99
Whitewood-Moosomin Union Hospital	3,500.00
Yorkton Union Hospital	214,666.50

Union Hospital District Activity

Two new union hospital districts were officially established during the fiscal year 1960-61. These are the Beechy Union Hospital District established on November 29, 1960, and the Beaver Valley Union Hospital District established on September 6, 1960.

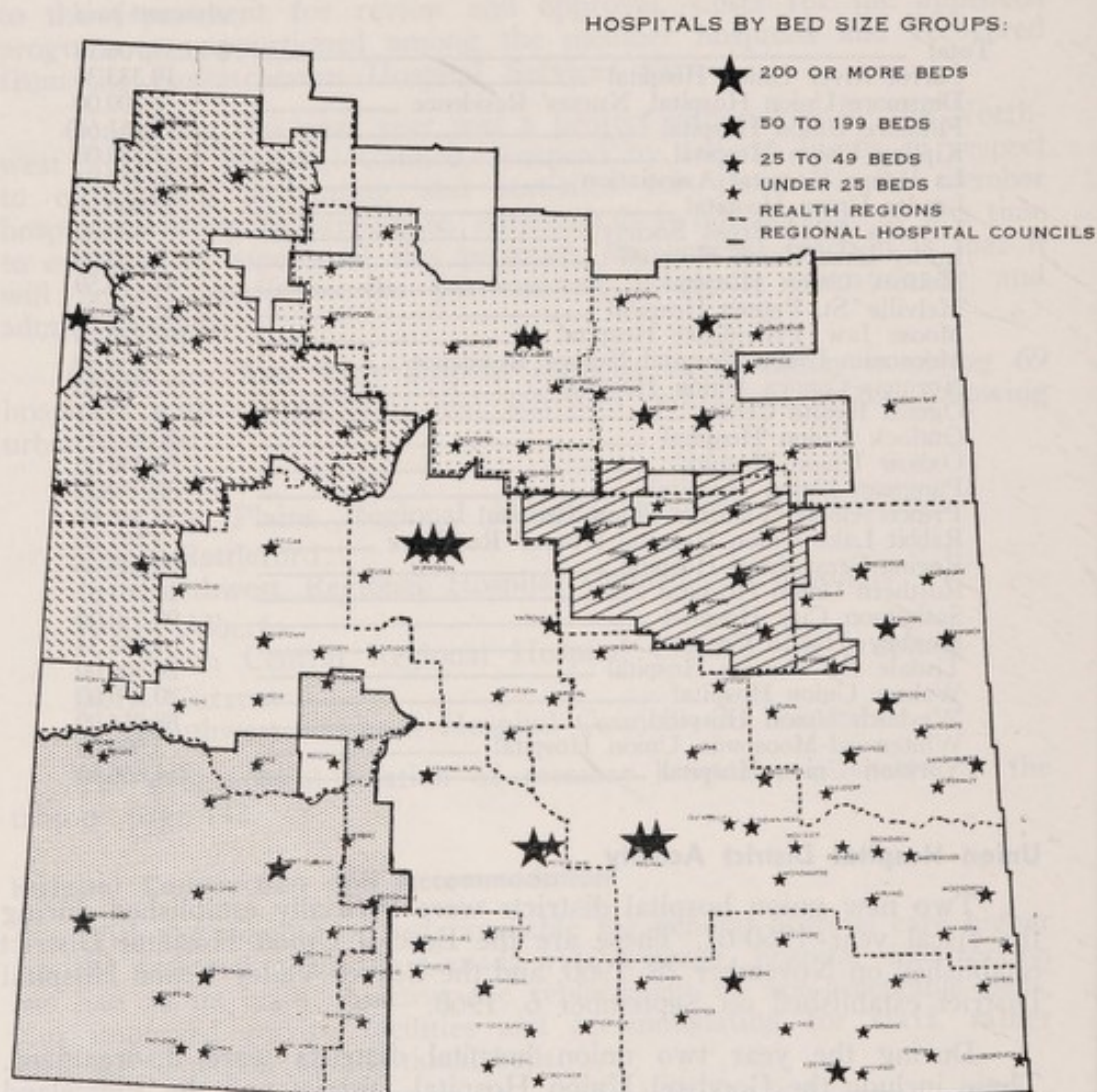
During the year two union hospital districts were disorganized. These include the Goodsoil Union Hospital District and the Pierceland Union Hospital District, following a successful vote on the question of amalgamation. The areas which formed part of these hospital districts are now included in the new Beaver Valley Union Hospital District.

Some activity with respect to the inclusion of fringe areas to existing union hospital districts and the transfer of areas from one union hospital district to another was carried on during the year, involving four municipalities or portions of municipalities and four union hospital districts.

At the present time there are 111 union hospital districts officially established involving a population of approximately 510,200, as at March 31, 1961.

Additional areas involving a population of some 191,200 contribute toward hospital capital costs by municipal taxation. Based on the intercensal estimate of 910,000, approximately 77 per cent of the population of the province now contribute in this way.

FIGURE 7. SASKATCHEWAN PUBLIC GENERAL HOSPITALS, MARCH, 1961



Beechy Community and Spalding Union are not included in Regional Hospital Councils.

Hospitals in Northern Administration District are not shown.

TABLE 45. COUNSELLING SERVICES OF THE DIVISION OF HOSPITAL ADMINISTRATION AND STANDARDS, SASKATCHEWAN 1958-1960

Inspecting and counselling services	1958	1959	1960
Number of visits.....	821	684	1,032
Inspecting and counselling in general.....	460	458	598
Assessment of physical plant, area and facilities....	63	6	9
Construction and renovation projects.....	20	2	97
Purchase and installation of equipment.....	16	5	2
General administration and business management	9	10	44
Personnel surveys and staffing problems.....	44	5	37
Costing surveys.....	15	11	6
Problems prior to rate or deficit decisions.....	46	46	46
Problems subsequent to rate or deficit decisions....	4	16	24
Institutes or conferences.....	41	36	64
Special problems.....	66	58	65
Clinical Laboratory-X-ray Course interviews.....	37	31	33
Administration of Union Hospital District Affairs.....	.....	.....	7
Miles travelled.....	109,677	97,131	169,742

* The recruitment of a medical director and five additional staff, plus the fact that a Hospital Survey is under way, accounts for the marked increase in miles travelled.

TABLE 46. NUMBER OF BEDS IN PUBLIC GENERAL HOSPITALS, GERIATRIC CENTRES, INDIAN HEALTH SERVICES UNITS AND NURSING HOMES UNDER PERMIT, SASKATCHEWAN, DECEMBER 31, 1957-1960

Item	Year			
	1957	1958	1959	1960
Number of institutions.....	158	166	165	165
Measured bed capacity				
Number of beds.....	6,002	6,727†	6,834	6,841
Beds per 1,000 population*.....	6.8	7.6	7.6	7.5
Beds set up				
Number of beds.....	6,752	7,394†	7,556	7,439
Beds per 1,000 population*.....	7.7	8.3	8.4	8.2
Beds set up in excess of provincial measured capacity				
Number of beds.....	750	667	722	598
Per cent.....	12.5	9.9	10.6	8.7

* Based on intercensal estimates, 879,000 for 1957, 888,000 for 1958, 902,000 for 1959 and 910,000 for 1960.

† This rise is mainly due to the inclusion of the Geriatric Centres and Indian Health Services Units.

AIR AMBULANCE SERVICE

The Saskatchewan Air Ambulance Service was organized just over 15 years ago. In this period of continuous service 12,591 patients have been transported. Even though approximately one-half of the 25,000 landings were completed in unprepared rural areas, a record of no injuries to either crew or passengers as a result of accidents has been maintained throughout the 15 years.

Experience

The number of patients transported during the year increased to a total of 1,079. In the year 1959-60, 1,033 patients were transported and 959 in 1958-59. A total of 305,708 miles were flown in order to complete the flights and aircraft were in the air for 2,074 hours compared with 291,317 miles and 2,042 hours in 1958-59. This constitutes an increase of 14,391 miles and 32 hours. The increase was mainly due to the 46 more patients carried and partly because the average distance per patient was greater. Twenty flights were completed to centres outside the province. Eight other requests for outside-of-province flights were not completed because of cost and other factors. Twenty flights were made to transport blood for the Canadian Red Cross for which no charge was levied.

Of the 1,079 completed flights, 701 or 65 per cent were handled from the Saskatoon base. This is an increase of 55 flights or approximately 2.5 per cent increase over the last year's figures. Although the percentage of flights completed from the Regina base decreased by 2.5 per cent, the total *number* remained constant at 378. Increases were due to the increasing demand by the public for air ambulance services, particularly for transportation to the University Hospital in Saskatoon.

A total of 222 emergency flights were completed by aviation services in the far north (not included in the total of 1,079). This is a decrease of 45 flights over the previous year, explained by a new policy regarding responsibility for payment of classified non-emergency flights, in the Northern Saskatchewan Administration District. Air ambulance has accepted responsibility for emergency flights only in the past year whereas non-emergencies have been paid for by other departments. Air ambulance aircraft have been utilized whenever possible in the far north in an effort to keep the costs to a minimum but because of the heavy demand for air service, the crew based at Saskatoon has always been hard pressed and at times find it difficult to cope with the demand.

There were 85 flight requests not completed during the year due to unsuitable and hazardous landing conditions, death of patients before pickup, and unacceptable charges (outside the province).

Several flights were initiated and completed after dark, some to lighted airports and others into fields in small centres. Night flights

into unprepared areas were attempted only if the area was previously known or the terrain in the vicinity was of such a nature as not to result in excessive risk. The service continued to operate 24 hours-a-day 365 days a year.

Staff

The service continued to employ a staff of 19 persons — a supervisor and chief pilot, a senior flight nurse, three flight nurses, three pilots, eight maintenance staff, a caretaker, a radio technician and a stock clerk.

Charges

Charges for transportation have not been changed since 1949. Within the province of Saskatchewan, patients are charged a flat rate of \$25 regardless of distance, and passengers are charged \$10 each outside the province, the charges are 35 cents per mile for total miles flown.

Service

The number and distribution of flights during the year, according to specified type of illness, is shown below. As has been general in the past, the largest group of patients requiring emergency transportation were victims of accidents.

The greatest increase occurred in the categories of cancer and internal disorders.

	1958-59	1959-60	1960-61
All patients	959	1,033	1,079
Accident cases including fractures, burns and wounds	234	271	273
Arthritis	3	5	4
Cancer and tumours	69	71	105
Cardiac conditions	49	45	57
Chest conditions	45	39	39
Communicable diseases (except poliomyelitis) ..	7	2	3
Diseases of blood	32	58	66
Diseases of central nervous system	108	107	118
Eye, ear, nose and throat disorders	8	4	—
Gastro-intestinal	173	165	192
Genito-urinary	80	92	53
Poliomyelitis	2	13	18
Pregnancy with complications	41	47	53
Premature infants and congenital deformities ..	58	59	61
Psychiatric disorders	15	17	20
Other (senile to nursing home, poliomyelitis for repair, doctors flown for consultation) ..	35	38	17

MEDICAL SERVICES (PUBLIC ASSISTANCE)

Since the provincial public assistance health services programs have been reviewed in detail many times in annual reports over the past 16 years, this report will give emphasis to new developments during 1960-61.

Beneficiaries — Program I

The beneficiaries of this program include:—

- Recipients of Old Age Security pensions who qualify for the provincial supplemental allowance on a means test together with their spouses and dependents
- Recipients of Blind Persons' Allowance, who qualify for the provincial supplemental allowance on a means test together with their spouses and dependents.
- Recipients of Mothers' Allowance including incapacitated husbands and dependents.

Beneficiaries of this program are nominated for health services by the Department of Social Welfare and Rehabilitation.

The following table shows the average number of recipients in each of the past five years:

<i>Fiscal year</i>	<i>Average number of beneficiaries</i>	<i>O.A.S. (S.A.)</i>	<i>M.A.</i>	<i>B.P.A.</i>
1956-57	28,997	19,228	9,233	536
1957-58	28,390	19,310	8,540	540
1958-59	28,055	19,476	8,027	552
1959-60	27,321	19,005	7,780	536
1960-61	27,318	18,913	7,873	532

The beneficiaries by age group for 1959-60 are shown as follows:

Total	27,321
Under 1	120
1-4	709
5-14	3,523
15-24	1,336
25-44	1,232
45-64	2,429
65-69	1,170
70 and over	16,802

Beneficiaries — Program II

The following list of beneficiaries is that in effect from April 1, 1959:

- Government wards;
- Jail cases;
- Rehabilitation cases, both those under vocational rehabilitation and certain Metis groups;
- Social Aid cases in unorganized areas:
 - (1) Local Improvement Districts
 - (2) Department of Natural Resources far north cases

- Indigent Immigrants:
- Prevention of Blindness cases;
- Relief to Destitute cases (far north).

Excluding those persons who receive care on an episode basis only, such as prevention of blindness, and relief to destitute, there was an average of 5,313 social aid recipients in 1960-61 compared with 4,891 in the previous year.

Benefits

All beneficiaries are eligible for a wide range of services and have free choice of practitioner. Medical care includes the services of physicians and surgeons in home, office or hospital. Comprehensive hospital care includes all benefits of the Hospital Services Plan, together with certain additional benefits such as out-patient services and some extra drugs not covered by the Plan. In addition, dental services, drugs and appliances, optical services, nursing, physiotherapy, and chiropody may be obtained when required.

Reciprocal agreements exist with the British Columbia and Alberta governments whereby health services are provided to those pensioners who transferred between provinces on or prior to December 31, 1952. Pensioners moving after that date must establish residence in the new province before being eligible for health services in that province.

Treaty Indians and Eskimos, whose health services are the responsibility of the federal government, are excluded from benefits. Health services, except in emergencies, are not available outside Saskatchewan unless prior approval is granted.

HEALTH SERVICES¹

Medical and Surgical Services

Through an agreement with the College of Physicians and Surgeons of Saskatchewan, complete medical, obstetrical, and surgical services are made available by the registered physicians of the province. Effective April 1, 1958, the former per capita fund system was discontinued and the province accepted a straight fee-for-service type of payment.

For the year 1960-61 the province agreed to pay 60 per cent of the 1959 schedule of fees for Program I cases as compared to 50 per cent the previous fiscal year. The province also negotiated to continue to pay for only the first 14 days of care provided by the physician for any one period of hospitalization. A special study to see the effect of the 14 day limitation, statistically showed no significant difference in the pattern of the length of hospital stay for six months in 1959 compared with a similar period in 1958. Payment of 85 per cent for Program II cases was continued and the restriction on payment for hospital units did not apply.

A comparison of the volume and assessed cost of physicians' services rendered to the Program I cases is presented in Tables 47 and 48.

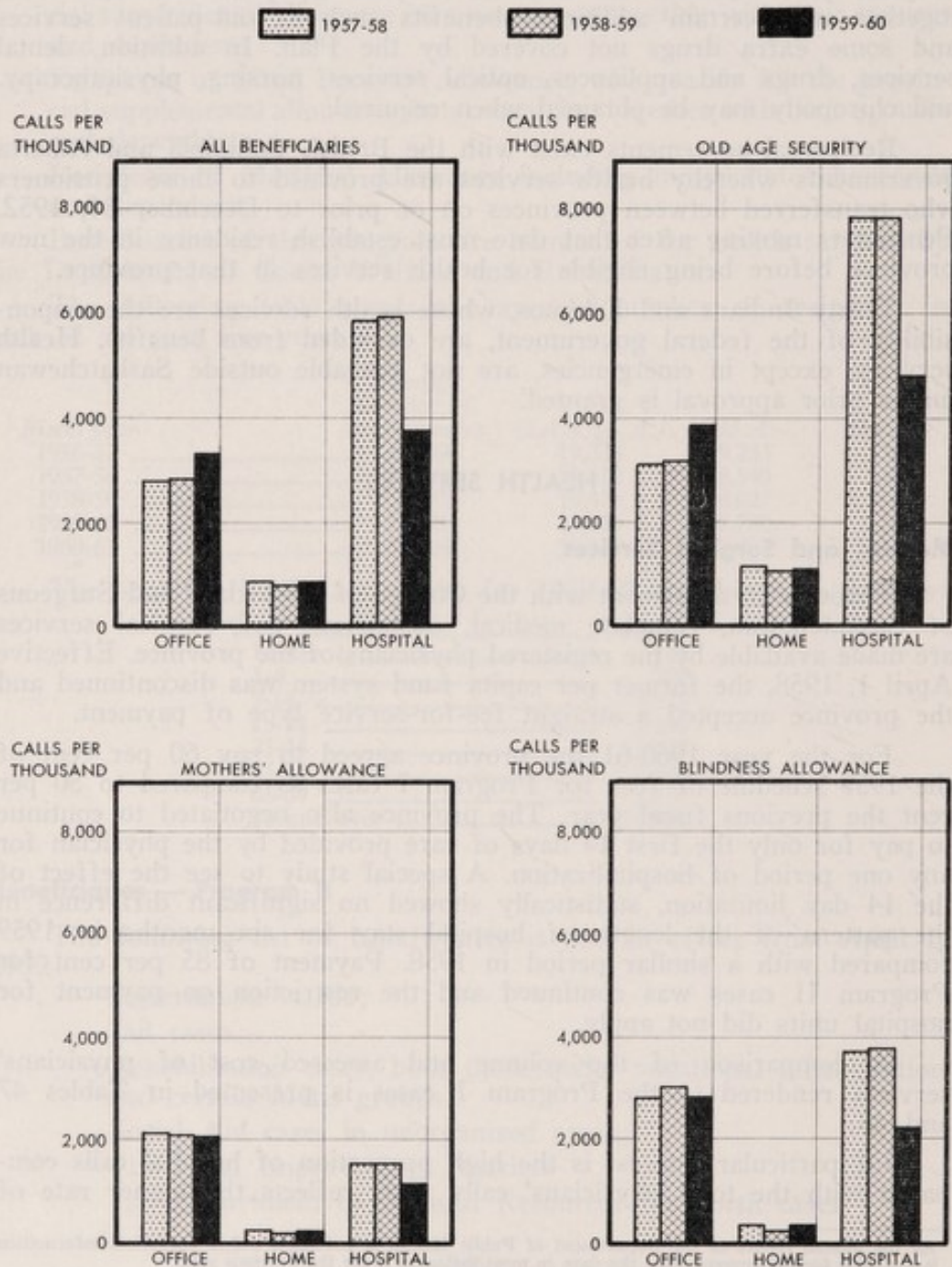
Of particular interest is the high proportion of hospital calls compared with the total physicians' calls. This reflects the higher rate of

¹ As the annual report of the Department of Public Health is published before statistical information is available for the current year, the data in most instances is for the previous year.

hospitalization of the older age group as well as their relatively longer periods of stay in hospital. The demands of this group are shown in Figure 8 as being consistently higher than that of the mothers' allowance and blind persons' allowance. The trend in utilization of physicians' services, average physician caseload and physicians' payments is shown in Table 49.

The Central Medical Assessment Board nominated by the College of Physicians and Surgeons and appointed by the Minister of Public Health, continued to be a valuable adjunct to the operation of this program.

FIGURE 8. RATE OF PHYSICIANS' CALLS PER 1,000 LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), BY TYPE OF CALL AND BENEFICIARY, SASKATCHEWAN, 1957-58 TO 1959-60



Drug Services

Drugs and appliances are paid for when supplied on a physician's prescription. During 1960-61 payment was made to 328 pharmacies registered with the Saskatchewan Pharmaceutical Association. In the previous year payment was made to 322 pharmacies. Insulin and oral hypoglycemic agents for diabetics as well as injectable liver and vitamin B₁₂ for pernicious anaemia continued to be provided from departmental stocks on the orders of the attending physician. The numbers of persons who were receiving these drugs at the end of March, 1961, is as follows:

Insulin	288 (345)
Oral hypoglycemic agents	560 (509)
Injectable liver and injectable vitamin B ₁₂	225 (205)

(bracketed figures are for the previous year)

FIGURE 9. RATE OF DRUG PRESCRIPTIONS PER 1,000 LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), BY AGE GROUP AND SEX, SASKATCHEWAN, 1959-60

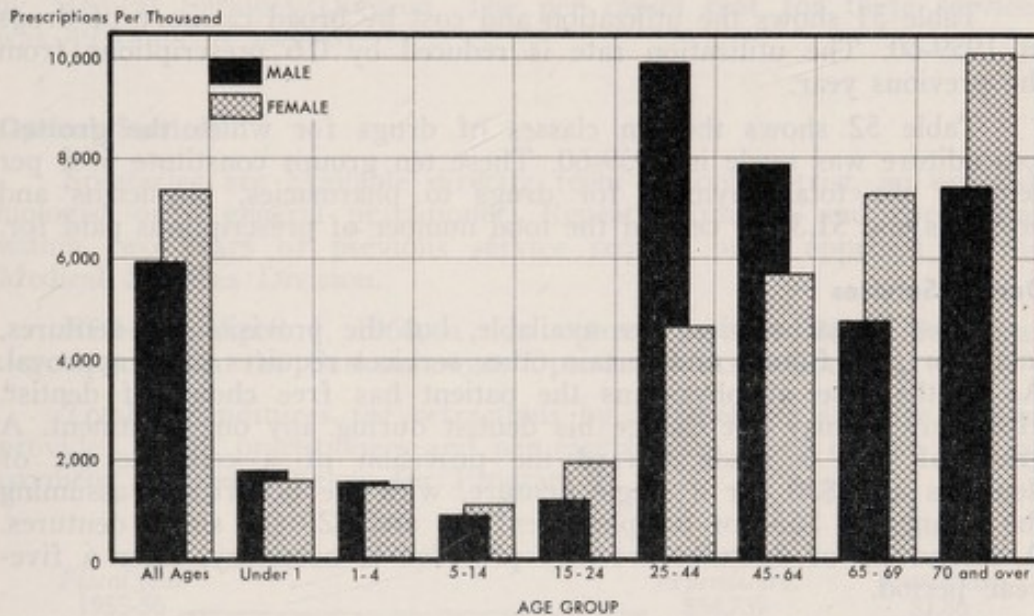
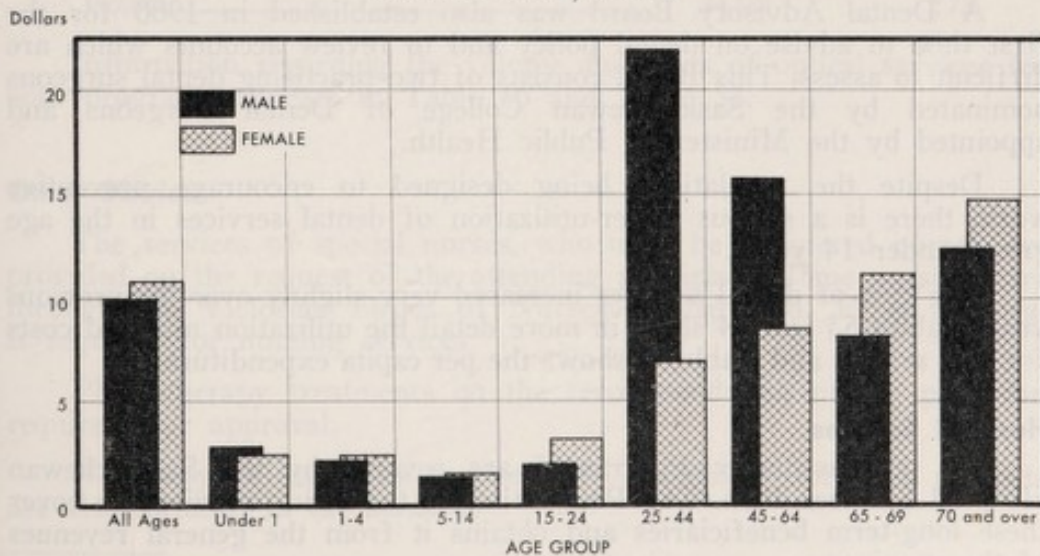


FIGURE 10. EXPENDITURES ON DRUG PRESCRIPTIONS PER LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), BY AGE GROUP AND SEX, SASKATCHEWAN, 1959-60



*Including appliances

A small stock of commonly used cortico-steroids is also supplied from central stock at the request of physicians.

The end of March 1961 completed the second year of experience with the patient paying 50 per cent of the cost for drugs. At the time of writing, detailed statistics are available only for 1959-60. These show some interesting changes. It is most difficult to analyze the changes because influences other than cost factors account for changes in utilization rates. Increased utilization in some drugs may be offset by a decrease in others. Despite other factors which confound the picture the introduction of the 50 per cent utilization fee has undoubtedly accounted for an over-all decrease in the rate of prescribing.

Medical Services Division continued to waive the 50 per cent payment by the beneficiary where the average monthly cost of essential life-saving drugs required for long-term therapy was of significant proportions. While in hospital benefit drugs are supplied to beneficiaries at no cost to them.

Table 51 shows the utilization and cost by broad category of drugs in 1959-60. The utilization rate is reduced by 0.6 prescriptions from the previous year.

Table 52 shows the ten classes of drugs for which the greatest expenditure was made in 1959-60. These ten groups constitute 56.5 per cent of the total payment for drugs to pharmacies, physicians and hospitals and 51.3 per cent of the total number of prescriptions paid for.

Dental Services

Most dental services are available, but the provision of dentures, inlays or gold fillings and certain other services requires prior approval. As in the case of physicians the patient has free choice of dentist. However, he may not change his dentist during any one treatment. A grant of \$55 is made toward the provision of a complete set of dentures and \$30 for a single denture, with the beneficiary assuming the balance of \$55 for complete dentures and \$25 for single dentures. A second set of dentures are now provided if necessary, after a five-year period.

Effective April 1, 1960, a new schedule of fees for provincial public assistance cases was negotiated with the College of Dental Surgeons of Saskatchewan.

A Dental Advisory Board was also established in 1960 for the first time to advise on dental policy and to review accounts which are difficult to assess. This Board consists of two practising dental surgeons nominated by the Saskatchewan College of Dental Surgeons and appointed by the Minister of Public Health.

Despite the regulations being designed to encourage preventive work, there is a serious under-utilization of dental services in the age group under 14 years.

The cost of dental services increased very slightly over the previous year. Tables 53 and 54 show in more detail the utilization rate and costs for this service and Table 55 shows the per capita expenditure.

Hospital Services

All persons under Program I are covered by the Saskatchewan Hospital Services Plan. The Plan estimates the funds required to cover these long-term beneficiaries and obtains it from the general revenues of the province.

The hospital statistics relating to the provincial social assistance recipients are reported in the 1960 Annual Report of the Saskatchewan Hospital Services Plan (page 12). Provincial social assistance cases represented only 4.4 per cent of the Plan's total covered population in 1960, but accounted for 8.3 per cent of total discharged cases and 13.4 per cent of patient day volume.

Among persons 70 years of age and over in the Plan's total covered population, 39 per cent were provincial social assistance recipients. They accounted for 39 per cent of discharged cases and 38 per cent of the patient day volume involved with the 70 and over age group.

In 1960 the Plan's expenditures for long-term beneficiaries amounted to \$3,369,071.12¹ or approximately \$123.32 per capita. Expenditures for Program II cases were \$106,042.15.

Out-patient services are included as benefits. In addition, a portion of the cost of emergency illness outside the province is borne by Medical Services Division. The per capita cost for these services was 49 cents in 1960-61.

Optical Services

Spectacles are available directly from an optometrist, an ophthalmologist or a general practitioner. Repeat refraction and corrections within two years of previous service require prior approval of the Medical Services Division.

Effective April 1, 1960, a new optometric schedule of fees was negotiated with the Saskatchewan Optometric Association.

Total expenditures for refractions by optometrists and eye glasses provided by all practitioners and per capita costs based on the date of payment are shown below for Program I:

<i>Fiscal year</i>	<i>Total expenditure</i>	<i>Average cost per beneficiary</i>
1955-56	\$54,739	\$1.86
1956-57	61,637	2.13
1957-58	64,494	2.27
1958-59	72,818	2.60
1959-60	69,062	2.53
1960-61	74,584	2.73

Information regarding the volume and costs of optical services for both programs appears in Table 56 and Table 57.

Other Services

The services of special nurses, who must be registered nurses, are provided on the request of the attending physician. Home nursing care through the Victorian Order of Nurses is also paid. Prior approval is required for nursing services.

Physiotherapy treatments on the recommendation of the physician require prior approval.

Necessary chiropodist's services and appliances for foot ailments are also included in the benefits.

¹ Based on discharges for the calendar year 1960.

Volume of Health Services

Table 58 shows a six-year comparison of those long-term public assistance beneficiaries who received health services at least once during the year, according to the type of service and type of beneficiary.

Detailed statistics of data on the operations of the program are obtained annually with the assistance of national health grants.

Expenditures

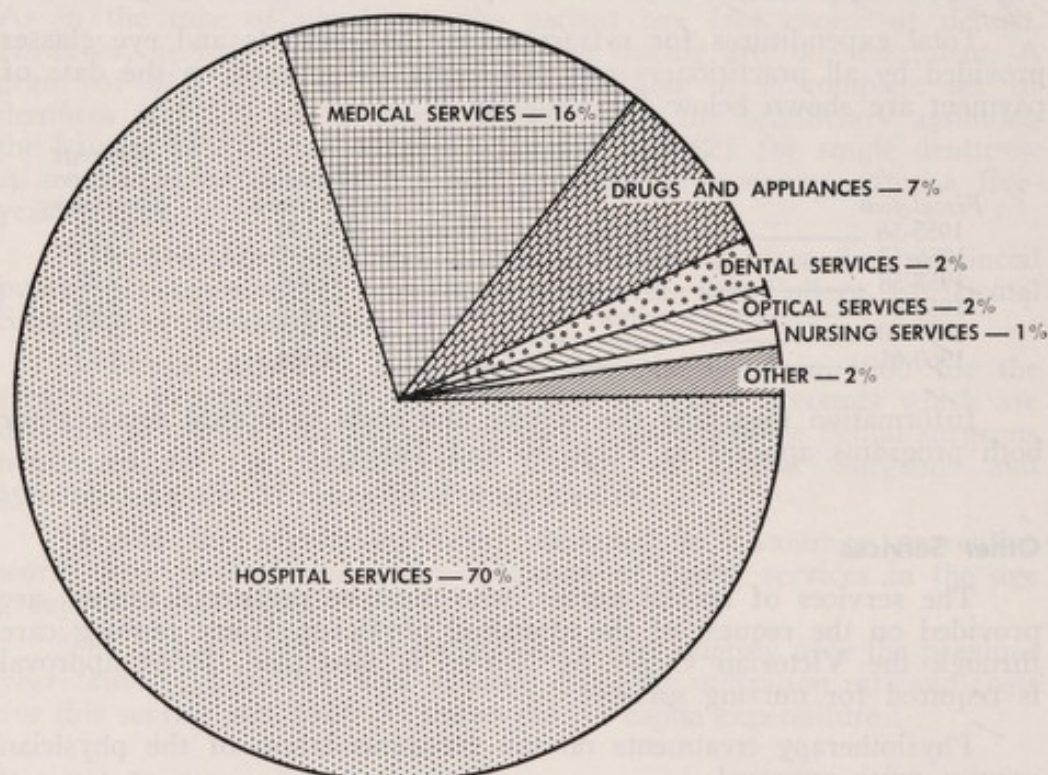
Total expenditures by Medical Services Division during 1960-61 totalled \$1,625,294. This involved processing an average of about 30,000 professional accounts per month.

The expenditures for each program and for administration were as follows:

	<i>Expenditures</i>	<i>Per cent</i>
All expenditures	\$1,625,295	100.0
Program I	1,142,578	70.3
Program II	347,782	21.4
Administration	134,935	8.3

Data on expenditures by type of service and classification of beneficiaries for 1960-61 are shown in Tables 59, 60, and 61.

FIGURE 11. PERCENTAGE DISTRIBUTION OF EXPENDITURES ON HEALTH CARE, LONG-TERM AND SHORT-TERM BENEFICIARIES COMBINED (PROGRAMS I AND II), SASKATCHEWAN, 1960-61



Note: Included in "Other" is the following:
 physiotherapy \$2,165; chiropody \$5,729; reciprocal agreement with British Columbia \$21,260; hospital out-patient services \$29,586; health grants \$55,885.

*Excludes \$134,935 spent on administration.

TABLE 47. UTILIZATION AND COST OF PHYSICIANS' SERVICES BY TYPE OF SERVICE FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), SASKATCHEWAN, 1959-60

Type of service	Volume of services		Cost of services			
	Number	Rate per 1,000 beneficiaries	Total assessed cost	Per cent	Assessed cost per capita	Average amount paid per capita*
All physicians' services.....	243,669	8,918.8	\$1,058,634	100.0	\$38.75	\$ 19.38
Physicians' calls.....	215,442	7,885.6	644,426	60.9	23.59	11.79
Office—initial.....	13,415	491.0	62,382	5.9	2.29	1.14
—repeat.....	77,379	2,832.2	172,408	16.3	6.31	3.15
Home.....	22,828	835.5	104,192	9.8	3.81	1.91
Hospital†—initial.....	600	22.0	4,136	0.4	0.15	0.08
—repeat.....	101,220‡	3,704.9	301,308	28.5	11.03‡	5.51
Surgical operations.....	5,047	184.7	242,532	22.9	8.88	4.44
Major.....	1,793	65.6	203,030	19.2	7.43	3.72
Minor.....	3,254	119.1	39,502	3.7	1.45	0.72
Confinements.....	104	3.8	8,096	0.8	0.30	0.15
Diagnostic and other procedures.....	17,741	649.4	71,390	6.7	2.61	1.31
Diagnostic procedures.....	15,212	556.8	64,090	6.0	2.34	1.18
Laboratory.....	10,449	382.5	11,592	1.1	0.42	0.22
X-ray.....	1,858	68.0	18,642	1.7	0.68	0.34
Other**.....	2,905	106.3	33,856	3.2	1.24	0.62
Other procedures.....	2,529	92.6	7,300	0.7	0.27	0.13
Special treatment‡‡.....	1,935	70.8	3,964	0.4	0.15	0.07
Other‡‡.....	594	21.8	3,336	0.3	0.12	0.06
Special services.....	5,335	195.3	76,524	7.2	2.80	1.40
Surgical assistant.....	506	18.5	11,124	1.0	0.41	0.20
Anaesthetist.....	1,664	60.9	37,096	3.5	1.36	0.68
X-ray interpretation.....	2,036	74.6	10,434	1.0	0.38	0.19
Consultant.....	1,129	41.3	17,870	1.7	0.65	0.33
Other services.....	.....	.....	12	***	†††	†††
Mileage.....	.....	.....	15,654	1.5	0.57	0.29

* Amount paid 50 per cent of assessed cost.

† Excludes calls to operative cases paid for on an inclusive fee basis.

‡ Reduction in volume and cost from previous year is due to payment being restricted to the first 14 visits for any one admission effective April 1, 1959.

** Includes basal metabolism rate, electrocardiogram, refractions, gastric analysis and various eye and ear procedures.

†† Includes, inoculations, vaccinations, physiotherapy and x-ray treatments.

‡‡ Includes strapping of sprain or other injury, catheterization, bladder and stomach lavage, prostatic massage, nose packing, cerumen removal, and all unstated procedures.

*** Less than 0.05 per cent.

††† Less than \$0.005 per capita.

TABLE 48. RATE AND PER CAPITA COST OF PHYSICIANS' SERVICES FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES, (PROGRAM I), SASKATCHEWAN, 1957-58 TO 1959-60

Type of service	Rate of services per 1,000 beneficiaries			Assessed cost per capita		
	1957-58	1958-59	1959-60	1957-58	1958-59	1959-60
All physicians' services.....	10,621.4	10,638.5	8,918.8	\$ 34.89	\$ 41.28	\$ 38.75
Physicians' calls.....	9,566.2	9,636.1	7,885.6	21.63	25.65	23.59
Office—initial.....	*	*	491.0	*	*	2.29
—repeat.....	2,820.2	2,852.9	2,832.2	6.47	8.03	6.31
Home.....	857.6	807.9	835.5	3.10	3.47	3.81
Hospital†—initial.....	‡	‡	22.0	‡	‡	0.15
—repeat.....	5,888.4	5,975.3	3,704.9**	12.06	14.15	11.03**
Surgical operations.....	199.9	190.6	184.7	7.56	9.10	8.88
Major.....	71.2	72.6	65.6	6.39	7.73	7.43
Minor.....	128.7	118.0	119.1	1.17	1.37	1.45
Confinements.....	3.6	2.6	3.8	0.22	0.18	0.30
Diagnostic and other procedures.....	665.8	615.6	649.4	2.71	2.98	2.61
Diagnostic procedures.....	439.8	438.0	556.8	1.89	2.16	2.34
Laboratory.....	253.4	256.9	382.5	0.25	0.29	0.42
X-ray.....	80.3	69.8	68.0	0.60	0.60	0.68
Other††.....	106.1	111.3	106.3	1.04	1.27	1.24
Other procedures.....	226.0	177.6	92.6	0.82	0.82	0.27
Special treatment†††.....	88.2	64.9	70.8	0.13	0.14	0.15
Physical examination.....	105.1	86.8	***	0.57	0.57	***
Other†††.....	32.7	25.9	21.8	0.12	0.11	0.12
Special services.....	185.9	193.6	195.3	2.13	2.66	2.80
Surgical assistant.....	19.2	20.1	18.5	0.35	0.43	0.41
Anaesthetist.....	59.9	65.6	60.9	1.11	1.39	1.36
X-ray interpretation.....	64.3	67.2	74.6	0.22	0.30	0.38
Consultant.....	42.5	40.7	41.3	0.45	0.54	0.65
Other services.....	.....	.....	.....	0.39	0.36	†††
Mileage.....	.....	.....	.....	0.25	0.35	0.57

* Prior to 1959-60 initial office calls were classified as "Physical examinations" under "Diagnostic and other procedures".

† Excludes calls to operative cases paid for on an inclusive fee basis.

‡ Prior to 1959-60 initial hospital calls were not differentiated in these tables.

** Reduction in volume and cost from previous years is due to payment being restricted to the first 14 visits for any one admission effective April 1, 1959.

†† Includes basal metabolism rate, electrocardiograms, refractions, gastric analysis and various eye and ear procedures.

††† Includes inoculations, vaccinations, physiotherapy and x-ray treatment.

*** Classified as "Physicians' initial calls" in 1959-60.

††† Includes strapping of sprain or other injury, catheterization, bladder and stomach lavage, prostatic massage, nose packing, cerumen removal, and other unstated procedures.

††† Less than \$0.005 per capita.

TABLE 49. PHYSICIANS PROVIDING CARE, AND PAYMENTS TO PHYSICIANS FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), SASKATCHEWAN, 1953-54 TO 1960-61

Fiscal year	Beneficiaries			Physicians		Payments		
	Number*	Number receiving physicians' care	Per cent of beneficiaries receiving care at least once a year	Providing care	Beneficiaries receiving care per physician	Average per physician†	Final per cent payment	Average per physician per patient
1953-54.....	29,036	19,067	65.7	673	28.3	\$ 654.21	52.6	\$ 23.12
1954-55.....	29,080	18,604	64.0	721	25.8	613.07	49.4	23.76
1955-56.....	29,364	19,317	65.8	735	26.3	670.12	55.1	25.50
1956-57.....	28,997	19,518	67.3	736	26.5	721.24	55.4	27.22
1957-58.....	28,390	19,666	69.3	750	26.2	693.05	52.5	26.45
1958-59.....	28,055	18,037	64.3	809	22.3	715.79	50.0	32.09
1959-60.....	27,321	20,194	73.9	823	24.5	643.20	50.0	26.25
1960-61.....	27,318	20,305	74.3	822	24.7	771.52	60.0	31.24

* Average number of beneficiaries during the fiscal year.

† This represents both in- and out-of-province payments. During 1960-61, 749 Saskatchewan physicians received an average payment of \$842.15 while 73 out-of-province physicians averaged \$46.86.

TABLE 50. EXPENDITURES FOR DRUGS AND APPLIANCES AND NUMBER OF PRESCRIPTIONS PER CAPITA WITH AVERAGE PRESCRIPTION COST, FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), SASKATCHEWAN, 1950-51 TO 1959-60

Fiscal year	Per capita expenditure*	Number prescriptions per capita	Average prescription cost†		Year	Average prescription prices (general population)			
			M.S.D. cost	Full cost		Saskatchewan‡	Canada‡	U.S.A.**	
1950-51.....	\$5.34	3.8	\$1.38	\$1.66	1950	\$	††	\$1.72	\$1.77
1951-52.....	6.47	4.2	1.51	1.81	1951	1.64		1.68	1.90
1952-53.....	7.72	4.6	1.61	1.93	1952	1.66		1.82	2.08
1953-54.....	8.27	4.9	1.70	2.09	1953	2.05		2.07	2.19
1954-55.....	9.68	5.3	1.82	2.19	1954	2.01		2.28	2.27
1955-56.....	11.58	5.8	2.00	2.41	1955	2.18		2.26	2.46
1956-57.....	12.64	6.1	2.07	2.49	1956	2.25		2.49	2.62
1957-58.....	14.59	6.8	2.13	2.57	1957	2.36		2.61	2.85
1958-59.....	16.62	7.3	2.27	2.73	1958	2.54		2.78	2.96
1959-60.....	10.43	6.7	1.55	3.10	1959	2.72		2.98	3.09

Note: With the exception of 1953-54 and 1954-55, which are based on date of service, these figures are derived from the date of payment.

* On December 1, 1948, patients became responsible for 20 per cent of the prescription price and on April 1, 1953, this was increased to 50 per cent; patient payments are not included in this price.

† Because of the fact that certain drugs and appliances are paid for in full by this division the average payment per prescription over the five-year period 1950-51 to 1954-55 represents 83 per cent of the full assessed value. The figures for 1955-56 and the following years have been calculated on this basis.

‡ Canadian Pharmaceutical Journal.

** Lilly Digest.

†† Data not available.

TABLE 51. UTILIZATION AND COST OF BROAD CATEGORY OF DRUGS* BY LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), SASKATCHEWAN, 1959-60

Broad drug category	Prescriptions		Amount paid†		
	Number	Rate per 1,000 beneficiaries	Total	Average cost per beneficiary	Average cost per prescription
All prescriptions.....	183,944	6,732.7	\$ 285,026	\$ 10.43	\$ 1.55
Drugs used against acute infectious and parasitic diseases.....	14,230	520.8	56,519	2.07	3.97
Drugs used in the palliation and therapy of neoplasms.....	.....	.....	.....	.....	.....
Drugs of endocrine origin and synthetic substitutes.....	3,032	111.0	4,146	0.15	1.37
Drugs affecting allergic metabolic and nutritional deficiency conditions.....	21,909	801.9	35,256	1.29	1.61
Drugs used against diseases of the blood and blood forming organs....	1,756	64.3	2,232	0.08	1.27
Drugs affecting the nervous system and mental diseases including psychoneurotic and personality disorders.....	45,302	1,658.1	54,326	1.99	1.20
Drugs affecting the sense organs (eye and ear).....	2,958	108.3	1,991	0.07	0.67
Cardiovascular drugs (drugs affecting diseases of the circulatory system).....	31,157	1,140.4	38,624	1.41	1.24
Drugs affecting diseases of the respiratory system (including the nose and throat).....	13,337	488.2	16,644	0.61	1.25
Drugs affecting diseases and conditions of the gastro-intestinal tract.....	21,999	805.2	26,518	0.97	1.21
Drugs affecting the genito-urinary system.....	12,063	441.5	20,387	0.75	1.69
Drugs affecting the skin and cellular tissue.....	9,618	352.0	9,457	0.35	0.98
Drugs used against diseases of the bones and organs of movement.....	3,632	132.9	8,055	0.29	2.22
Dental and oral preparations.....	260	9.5	126	.....	0.49
Biologicals, vaccines, serums, diagnostic agents and non-specific parenteral solutions.....	881	32.2	928	0.03	1.05
Miscellaneous, poorly defined drug preparations.....	42	1.5	59	.....	1.41
Drugs and dressings used in accidents, poisoning and violence..	932	34.1	1,119	0.04	1.20
Surgical appliances and prosthetics..	836	30.6	8,639	0.32	10.33

* Includes appliances and all dispensing agencies.

† "Amount paid" means (1) the amount paid for prescriptions dispensed by drugstores and physicians which is equivalent to 50 per cent of the full assessed price, (2) the amount paid for prescriptions dispensed by hospitals (cost plus 10 per cent) which is equivalent to 60-70 per cent of the full retail price.

TABLE 52. TYPE AND COST OF SELECTED PRESCRIPTIONS* WITH THE HIGHEST TOTAL COST FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), SASKATCHEWAN, 1959-60

Type of prescription	Number of prescriptions	Total cost	Average cost per prescription
Systemic broad spectrum antibiotics	5,868	\$ 41,935	\$ 7.15
Multivitamins and vitamins and minerals.....	11,318	22,295	1.97
Antihypertensives†.....	9,978	18,688	1.87
Diuretics and antidiuretics.....	9,605	17,089	1.78
Ataractics.....	5,887	15,865	2.69
Barbiturates.....	17,364	13,488	0.78
Opiates‡.....	9,348	9,255	0.99
Digitalis and its glycosides.....	13,523	8,511	0.63
Laxatives and cathartics.....	7,481	6,778	1.10
Antiasthmatics and respiratory antispasmodics.....	3,941	7,163	1.82

Note: Based on date of prescription.

* Dispensed by drugstores and hospitals (exclusive of in-patient benefit drugs under S.H.S.P.). Cost includes the amount paid by Medical Services Division which is equivalent to approximately 50 per cent of the full price for prescriptions dispensed by drugstores and physicians and 60 to 70 per cent of the full price for prescriptions dispensed by hospitals.

† Includes rauwolfia and its analogues and ganglionic blocking agents but not benzothiadiazines which are coded as diuretics.

‡ Includes acetylsalicylic acid, phenacetin and caffeine with codeine gr. ¼ or more per dosage unit.

TABLE 53. RATE OF DENTAL SERVICES PER 1,000 BENEFICIARIES BY TYPE OF SERVICE FOR BOTH LONG-TERM AND SHORT-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAMS I AND II), SASKATCHEWAN, 1955-56 TO 1959-60

Type of service	1955-56	1956-57	1957-58	1958-59	1959-60
All services.....	535.0	646.2	575.3	568.9	537.8
Fillings.....	198.9	260.8	222.2	215.0	197.4
Extractions.....	274.6	317.6	285.9	286.2	273.2
Dentures.....	61.5	67.8	67.2	67.4	67.2
Complete dentures*.....	32.2	34.1	36.4	35.6	36.5
Repairs.....	23.4	25.7	23.7	23.4	21.5
Relines.....	4.0	5.5	5.1	5.9	6.2
Partial dentures.....	1.9	2.5	2.0	2.5	3.0
Other.....	....	....	....	0.3	....

* Upper or lower denture.

TABLE 54. UTILIZATION AND COST OF DENTAL SERVICES BY TYPE OF SERVICE FOR BOTH LONG-TERM AND SHORT-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAMS I AND II), SASKATCHEWAN, 1959-60

Type of service	Volume of services			Cost of services			
	Number	Rate per 1,000 beneficiaries	Per cent	Total amount	Average cost per beneficiary	Average cost per service	Per cent
All services.....	17,324	537.8	100.0	\$ 87,004	\$ 2.70	\$5.02	100.0
Examination and report.....				412	0.01		0.5
Fillings.....	6,358	197.4	36.7	22,626	0.70	3.56	26.0
Extractions.....	8,802	273.2	50.8	16,228	0.51	1.84	18.6
Dentures.....	2,164	67.2	12.5	43,824	1.36	20.25	50.4
Complete dentures*.....	1,175	36.5	6.8	34,543	1.07	29.40	39.7
Repairs.....	692	21.5	4.0	3,958	0.12	5.72	4.6
Relines.....	199	6.2	1.1	3,027	0.10	15.21	3.5
Partial dentures.....	98	3.0	0.6	2,296	0.07	23.43	2.6
Other.....				3,914	0.12		4.5

* Upper or lower denture.

TABLE 55. PER CAPITA EXPENDITURES FOR DENTAL SERVICES BY SELECTED CLASSES OF BENEFICIARY FOR BOTH LONG-TERM AND SHORT-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAMS I AND II), SASKATCHEWAN, 1950-51 TO 1959-60

Fiscal year	All beneficiaries	Class of beneficiary		
		Old age security (SA)	Mothers' allowance	Blind persons' allowance
1950-51.....	\$3.23	\$2.91	\$3.87	\$3.46
1951-52.....	2.34	2.02	3.07	1.87
1952-53.....	2.21	1.86	2.97	2.32
1953-54.....	2.21	1.70	3.50	1.82
1954-55.....	2.34	1.59	3.80	2.11
1955-56.....	2.31	1.39	3.73	3.24
1956-57.....	2.77	1.57	4.62	3.05
1957-58.....	2.71	1.73	4.26	2.50
1958-59.....	2.75	1.72	4.56	3.21
1959-60.....	2.70	1.71	4.10	3.53

TABLE 56. UTILIZATION AND COST OF OPTICAL SERVICES BY TYPE OF SERVICE FOR BOTH LONG-TERM AND SHORT-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAMS I AND II), SASKATCHEWAN, 1959-60

Type of service	Volume of services			Cost of services			
	Number	Rate per 1,000 beneficiaries	Per cent	Total	Average cost per beneficiary	Average cost per service	Per cent
All services.....	12,854	399.0	100.0	\$ 79,394	\$ 2.46	\$6.18	100.0
Services.....	5,801	180.1	45.1	28,579	0.88	4.93	36.0
Simple examination.....	57	1.8	0.4	114	*	2.00	0.1
Refraction without fitting fee.....	362	11.2	2.8	1,442	0.04	3.98	1.8
Refraction with fitting fee.....	3,364	104.4	26.2	23,393	0.73	6.95	29.5
Fitting fee only.....	2,018	62.7	15.7	3,630	0.11	1.80	4.6
Materials.....	7,053	218.9	54.9	50,815	1.58	7.20	64.0
Glasses.....	5,648	175.3	43.9	46,396	1.44	8.21	58.4
Repairs.....	63	1.9	0.5	100	*	1.59	0.1
Replacements.....	1,330	41.3	10.4	4,089	0.13	3.07	5.2
Other.....	12	0.4	0.1	230	0.01	19.17	0.3

* Less than 1 cent.

TABLE 57. COST OF OPTICAL SERVICES BY TYPE OF SERVICE AND CLASS OF BENEFICIARY FOR BOTH LONG-TERM AND SHORT-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAMS I AND II), SASKATCHEWAN, 1959-60

Type of service	All beneficiaries	Class of beneficiary			
		Old age security (SA)	Mothers' allowance	Blind persons' allowance	Short-term beneficiaries
Cost of services					
Total.....	\$ 79,394	\$ 48,057	\$ 18,806	\$ 735	\$ 11,796
Services.....	28,579	16,852	7,342	224	4,161
Simple examination.....	114	86	22	4	2
Refraction without fitting fee.....	1,442	736	435	28	243
Refraction with fitting fee.....	23,393	14,074	6,007	142	3,170
Fitting fee only.....	3,630	1,956	878	50	746
Materials.....	50,815	31,205	11,464	511	7,635
Glasses.....	46,396	29,550	9,994	422	6,430
Repairs.....	100	65	21	1	13
Replacements.....	4,089	1,417	1,429	51	1,192
Other.....	230	173	20	37	.....
Cost per capita					
Total.....	\$ 2.46	\$ 2.53	\$ 2.42	\$ 1.37	\$ 2.41
Services.....	0.88	0.89	0.94	0.42	0.85
Simple examination.....	*	*	*	0.01	*
Refraction without fitting fee.....	0.04	0.04	0.06	0.05	0.05
Refraction with fitting fee.....	0.73	0.74	0.77	0.27	0.65
Fitting fee only.....	0.11	0.11	0.11	0.09	0.15
Materials.....	1.58	1.64	1.48	0.95	1.56
Glasses.....	1.44	1.56	1.29	0.79	1.32
Repairs.....	*	*	*	*	*
Replacements.....	0.13	0.07	0.19	0.09	0.24
Other.....	0.01	0.01	*	0.07	.....

* Less than 1 cent.

TABLE 58. PERCENTAGE OF BENEFICIARIES WHO RECEIVED HEALTH SERVICES AT LEAST ONCE DURING THE YEAR BY TYPE OF SERVICE AND TYPE OF BENEFICIARY FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), SASKATCHEWAN, 1955-56 TO 1960-61

Type of service	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
All beneficiaries						
At least one type of health service.....	82.4	85.3	87.0	87.8	89.4	90.1
Physicians' care.....	65.8	67.3	69.3	64.3	73.9	74.3
Drugs.....	60.7	61.8	64.7	62.9	69.5	69.4
Dental care.....	13.3	13.9	13.4	13.5	13.9	14.5
Optical care.....	16.4	18.1	19.0	19.5	19.8	20.3
Special nursing care.....	0.2	0.2	0.3	0.4	1.4	1.4
Chiropody.....	1.3	1.4	1.6	1.5	1.7	1.6
Hospital care*.....	7.7	8.2	9.2	9.1	9.6	9.1
Other.....	1.3	1.3	1.7	1.4	0.4	0.4
Old age security (supplemental allowance) group						
At least one type of health service.....	83.5	86.8	86.4	88.0	89.6	90.1
Physicians' care.....	68.6	70.5	70.4	67.8	76.2	76.3
Drugs.....	66.4	68.2	68.8	68.4	75.7	75.7
Dental care.....	7.3	7.4	7.7	7.9	7.8	8.1
Optical care.....	16.6	17.9	19.0	19.3	19.3	19.9
Special nursing care.....	0.3	0.2	0.5	0.5	1.9	1.9
Chiropody.....	1.9	2.0	2.2	2.0	1.7	2.2
Hospital care*.....	7.8	8.3	9.2	9.1	9.7	9.4
Other.....	1.7	1.6	2.3	1.8	0.4	0.4
Other beneficiaries						
At least one type of health service.....	80.2	82.5	88.1	87.4	89.1	90.2
Physicians' care.....	60.3	61.1	67.0	56.2	68.6	69.9
Drugs.....	49.4	49.3	56.0	50.6	55.3	55.1
Dental care.....	25.1	26.6	25.4	26.2	27.7	29.0
Optical care.....	16.1	18.3	18.9	19.9	20.8	21.4
Special nursing care.....	0.1	0.1	0.1	0.1	0.3	0.2
Chiropody.....	0.2	0.3	0.3	0.4	0.4	0.4
Hospital care*.....	7.4	8.0	9.3	9.2	9.3	8.4
Other.....	0.5	0.8	0.3	0.3	0.2	0.4

* Does not include hospitalization under S.H.S.P.

TABLE 59. EXPENDITURE BY TYPE OF SERVICE AND CLASSIFICATION OF BENEFICIARY FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), SASKATCHEWAN, 1960-61*

Type of service	Total	Total per capita cost	O.A.S. (S.A.)	O.A.S. (S.A.) per capita cost	M.A.	M.A. per capita cost	B.P.A.	B.P.A. per capita cost
All services.....	\$ 1,121,317.23	\$ 41.05	\$ 881,785.15	\$ 46.62	\$ 221,434.02	\$ 28.12	\$18,098.06	\$ 34.02
Medical.....	621,669.44	22.76	497,273.44	26.29	114,016.25	14.48	10,379.75	19.51
Dental.....	83,718.82	3.06	36,830.30	1.95	45,135.22	5.73	1,753.30	3.29
Optical.....	74,583.92	2.73	53,247.21	2.82	20,527.81	2.61	808.90	1.52
Nursing.....	28,592.50	1.05	28,063.50	1.48	397.00	0.05	132.00	0.25
Physiotherapy.....	2,062.50	0.08	1,640.50	0.09	407.00	0.05	15.00	0.03
Hospital†.....	12,325.14	0.45	9,250.19	0.49	2,835.85	0.36	239.10	0.45
Drugs.....	280,411.31	10.26	241,917.33	12.79	34,261.69	4.35	4,232.29	7.96
Appliances.....	12,236.25	0.45	8,200.08	0.43	3,555.15	0.45	481.02	0.90
Chiroprody.....	5,717.35	0.21	5,362.60	0.28	298.05	0.04	56.70	0.11

* Includes old age security and blind persons' supplemental allowance cases, and mothers' allowance recipients, including their spouses and children under 16 years.
 † Excludes in-patient hospital services received under S.H.S.P.

TABLE 60. EXPENDITURES FOR LONG-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM I), UNDER THE MEDICAL SERVICES DIVISION FOR THE FISCAL YEAR 1960-61, AND THE SASKATCHEWAN HOSPITAL SERVICES PLAN FOR THE CALENDAR YEAR 1960

Classification	Total expenditure	Per capita expenditure
All health services.....	\$ 4,490,388.35	\$ 164.37
Total S.H.S.P.....	3,369,071.12	123.32
O.A.S. (S.A.) (S.H.S.P.).....	3,018,335.91	159.59
M.A., C.W. and G. (S.H.S.P.).....	305,689.25	38.83
B.P.A. (S.H.S.P.).....	45,045.96	84.67
Total medical care and related services.....	1,121,317.23	41.05

TABLE 61. EXPENDITURE BY TYPE OF SERVICE AND CLASSIFICATION OF BENEFICIARY FOR SHORT-TERM PUBLIC ASSISTANCE BENEFICIARIES (PROGRAM II), SASKATCHEWAN, 1960-61

Type of service	Total M.S.D. and S.H.S.P.	All M.S.D. beneficiaries	Class of beneficiary						Wards*	Correction cases
			Social Welfare social aid	Social aid in L.I.D.'s	Natural Resources social aid	Vocational rehabilitation cases	Metis rehabilitation cases	Indigent immigrant cases		
Total expenditures†										
All services.....	\$ 314,539.96	\$ 208,497.81	\$ 7,423.32	\$ 74,571.79	\$ 7,796.55	\$ 10,083.98	\$ 5,557.76	\$ 720.58	\$ 81,299.06	\$ 21,044.77
Medical.....	114,357.78	114,357.78	6,146.77	40,497.74	5,154.88	5,384.45	3,219.05	148.32	48,666.43	5,140.14
Dental.....	22,120.59	22,120.59	191.00	4,415.50	660.00	1,249.50	775.00	.....	13,485.00	1,344.59
Optical.....	7,682.28	7,682.28	122.05	2,857.53	442.25	232.00	285.83	.....	2,841.02	901.60
Nursing.....	311.75	311.75	.....	158.00	.....	33.75	.....	.....	18.00	102.00
Physiotherapy.....	102.00	102.00	.....	46.00	.....	49.50	.....	.....	6.50	.....
Hospital.....	120,555.01	14,492.86	234.15	1,195.13	49.70	83.90	36.70	572.26	560.05	11,760.97
Drugs.....	45,274.62	45,274.62	724.22	24,992.84	1,342.72	1,571.34	1,220.96	.....	13,633.05	1,789.49
Appliances.....	4,144.13	4,144.13	5.13	409.05	147.00	1,479.54	20.22	.....	2,077.21	5.98
Chiropody.....	11.80	11.80	.....	.....	.....	.....	.....	.....	11.80	.....
Per capita expenditures										
All services.....	†	\$ 39.24	\$ 164.96	\$ 37.29	\$ 10.30	\$ 100.84	\$ 38.07	\$ 120.10	\$ 44.79	\$ 47.40
Medical.....	.....	21.52	136.60	20.25	6.81	53.84	22.05	24.72	26.81	11.58
Dental.....	.....	4.16	4.24	2.21	0.87	12.49	5.31	.....	7.43	3.03
Optical.....	.....	1.45	2.71	1.43	0.59	2.32	1.96	.....	1.57	2.03
Nursing.....	.....	0.06	.....	0.08	.....	0.34	.....	.....	0.01	0.23
Physiotherapy.....	.....	0.02	.....	0.02	.....	0.50	.....	.....	**	.....
Hospital.....	.....	2.73	5.20	0.60	0.07	0.84	0.25	95.38	0.31	26.49
Drugs.....	.....	8.52	16.10	12.50	1.77	15.71	8.36	.....	7.51	4.03
Appliances.....	.....	0.78	0.11	0.20	0.19	14.80	0.14	.....	1.14	0.01
Chiropody.....	.....	**	.....	.....	.....	.....	.....	.....	0.01	.....

* Includes Boys' School.

† Because of the nature of the payments or current type of care received by the beneficiaries, the following expenditures are not included in this table: mothers' allowance (husbands) examinations, \$1,392.45; eligibility examinations for admission to geriatric centres, \$2,510.50; miscellaneous health services, \$35,931.77; disabled persons allowance, \$2,578.71; prevention of blindness, \$10,664.06; relief to destitutes (Northern Administration District), \$28,871.91; relief to destitutes (Municipal and Local Improvement District), \$249.34; municipal social aid health grants, \$55,885.50. The total expenditure for these items was \$139,284.24.

‡ S.H.S.P. expenditures include those for medical indigents. Because medical care is given on a current basis only, it is not possible to determine the number of beneficiaries involved in the per capita expenditure. Actual expenditure was \$106,042.15.

** Less than one cent.

MUNICIPAL MEDICAL CARE PROGRAMS

These plans, commonly known as municipal doctor plans, provide medical care on a prepayment basis for the residents of rural and urban municipalities. Funds to finance medical care are derived mainly from local taxation. By taxing the residents and property owners the total cost of care is spread over all the population of the municipality thereby removing the financial burden of necessary care in individual cases.

Organization

These plans are organized and administered by local governing bodies which enter into contracts with physicians to provide specified services to the population of the municipality. When a plan is confined to a single municipality, the municipal council acts as the administrative body but where two or more municipalities join together to form a health services unit, the administrative duties are delegated to a joint board known as a health services board appointed by the councils of the municipalities belonging to the unit.

Municipal medical care plans may provide for different kinds of services. Some provide basic medical care such as office, home and hospital visits. Others, in addition to basic care, provide limited or complete surgical and diagnostic care. The number and type of services that are provided usually depend on the number of physicians in practice locally, and the facilities available to these physicians. These plans provide coverage for all residents and differ in this respect from voluntary prepaid programs which typically cover only a percentage of the resident population. The municipal plans have virtually no exclusions in the form of waiting periods, exclusion of pre-existing conditions, or termination after a certain length of illness.

Finance

Three methods may be used to finance a medical care plan. The most widely used is a property tax. Another method which has received much attention in recent years is a personal tax. The third method is a combination of a property tax and a personal tax which is now attracting more attention as the costs of services rise. In those municipalities where services are financed through a property tax, the council may pass a bylaw excluding non-ratepayers from service until they have paid a personal tax.

Financial assistance is provided by the Department of Public Health in the form of grants. The purpose of the grants is to assist those areas of least wealth (low per capita assessment) and to strengthen the services which it considers should be improved and expanded. The grants are paid to those municipalities which accept the responsibility for establishing a health service which meets certain minimum standards. The actual amounts paid out in grants is shown in Table 62.

In the majority of municipal plans the physician is engaged on a salary basis. Some plans, where both medical and surgical care is provided, pay the physicians a salary for general medical services and a fee-for-service for surgery. A few plans provide all services on a fee-for-service basis.

Two distinguishing features of the plan have remained unchanged. Control is invariably by the elected public body and coverage of the population group is on an area or geographic basis and is virtually complete.

Coverage

During the year medical care programs were in operation in 73 rural municipalities, 1 local improvement district, 39 villages and 13 towns. Of the 126 plans providing physicians' services 77 offered both medical and surgical care and 49 basic general medical services. A few of the latter provided for part of the cost of surgical care.

The cost of providing services increased again this year. In both salary and fee-for-service plans councils have had to provide for increased expenditures for medical care. Some municipalities, due to increased cost, have placed further restrictions on services.

TABLE 62. MEDICAL CARE GRANTS TO MUNICIPALITIES, SASKATCHEWAN, DURING THE FISCAL YEAR, 1960-61

<i>Rural Municipalities</i>			
Lomond No. 37	\$ 207.75	Sasman No. 336	\$ 614.75
Tecumseh No. 65	212.00	Lakeview No. 337	439.00
Norton No. 69	201.25	Lakeside No. 338	280.25
Stonehenge No. 73	69.00	Leroy No. 339	454.25
Maryfield No. 91	209.50	Wolverine No. 340	1,125.00
Walpole No. 92	43.00	Viscount No. 341	329.75
Elmsthorpe No. 100	234.75	Colonsay No. 342	189.75
Saltcoats No. 213	1,255.50	Perdue No. 346	208.25
Cana No. 214	1,443.75	Kelvington No. 366	1,981.35
Stanley No. 215	3,240.00	Ponass Lake No. 367	1,629.00
Tullymet No. 216	766.50	Spalding No. 368	429.00
Lipton No. 217	354.00	St. Peter No. 369	623.50
Longlaketon No. 219	1,501.50	Porcupine No. 395	3,893.40
McKillop No. 220	249.25	Barrier Valley No. 397	907.50
Sarnia No. 221	120.88	Pleasantdale No. 398	1,337.25
Craik No. 222	181.00	Bjorkdale No. 426	5,040.75
Ituna Bon Accord No. 246	2,826.45	Tisdale No. 427	578.25
Kellross No. 247	1,692.60	Star City No. 428	501.00
Touchwood No. 248	586.95	Hillsdale No. 440	280.50
Emerald No. 277	1,212.75	Manitou Lake No. 442	272.50
Kutawa No. 278	360.00	Arborfield No. 456	312.50
Milton No. 292	108.25	Willow Creek No. 458	613.50
Buchanan No. 304	464.75	Kinistino No. 459	601.50
Elfros No. 307	353.00	Birch Hills No. 460	402.00
Antelope Park No. 322	16.50	Eldon No. 471	339.50
Preeceville No. 344	4,626.60	Moose Range No. 486	1,244.25
Hazel Dell No. 335	3,662.10	Nipawin No. 487	507.25

Local Improvement Districts

Local Improvement District No. 983	\$ 4,761.00
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Villages

Alsask	\$ 56.00	Lipton	\$ 101.25
Archerwill	478.50	Loon Lake	596.25
Avonlea	85.50	Marengo	32.50
Aylesbury	45.00	Margo	64.25
Bulyea	43.00	Marsden	44.00
Earl Grey	193.50	Maryfield	113.00
Flaxcombe	36.75	Neilburg	63.75
Hubbard	280.50	Perdue	103.25
Ituna	985.05	Quill Lake	113.25
Jasmin	115.50	Rose Valley	395.25
Kelliher	477.75	Silton	66.75
Kinley	29.00	Truax	22.50
Leney	12.50	Wishart	124.42
Leroy	124.50		

Towns

Arborfield	\$ 137.25	Preeceville	\$ 1,321.65
Birch Hills	138.50	Star City	151.00
Carrot River	368.55	Saltcoats	373.50
Craik	150.75	Strasbourg	143.75
Kelvington	835.80	Sturgis	1,202.85
Kindersley	1,929.00	Wadena	2,250.30

Summary

Total	\$69,902.45
Rural municipalities	51,335.08
Local Improvement Districts	4,761.00
Villages	4,803.47
Towns	9,002.90

HEALTH SERVICES ASSOCIATIONS

Medical Services Incorporated with head office in Saskatoon, and Group Medical Services with head office in Regina, continued in operation during the year 1960 as the two large non-profit Associations providing insurance against the cost of physicians' services. Each Association had a moderate increase in its subscription enrolment during the year.

The Saskatoon Mutual Medical and Hospital Benefit Association Limited continued to be the only Association in operation incorporated under The Mutual Medical and Hospital Benefit Associations Act. Its membership total remained virtually unchanged during the year, with a net decrease in membership of 148.

The total number of persons insured against the cost of physicians' services by these three Associations is 293,898 persons or 32.3 per cent of the total population of the province.¹

Membership enrolment in the three plans is shown in the following table:

<i>Year</i>	<i>Total enrolment</i>	<i>Medical Services Incorporated</i>	<i>Group Medical Services</i>	<i>Saskatoon Mutual Medical and Hospital Benefit Association Limited</i>
1958	260,074	192,351	62,822	4,901
1959	284,943	211,514	68,201	5,228
1960	293,898	214,002	74,816	5,080

¹ Based on 1960 population of Saskatchewan of 910,000, estimated by the Dominion Bureau of Statistics, Ottawa, Canada.

OCCUPATIONAL HEALTH BRANCH

The Occupational Health Branch has the responsibility to protect and promote the health of persons at work. The range and diversity of its activities can be deduced from the headings of this report. The diversity of work implies that it is necessary to work in co-operation with a wide variety of agencies, both governmental and private, if the programs of the branch are to be effective. This emphasizes the fact that at all levels of occupational health work a team effort is required; the leadership must however come from the occupational health unit.

There have been an increasing number of requests for the staff to present papers or give talks on a wide variety of occupational health subjects to different associations and groups. The subjects have included: weight lifting and handling, the effect on humans of agricultural chemical residues in food, employee health services, and the medical examination of vehicle drivers.

The director has continued his membership of the medical committee of the Saskatchewan Highway Safety Council.

The staff of the branch remains the same as in the previous year:

1 medical director

1 occupational hygienist

1 occupational health nurse

1 clerical

Occupational Diseases

The interagency agreement by which the Workmen's Compensation Board immediately notifies the branch director of the circumstances of claims for compensation for occupational disease has demonstrated its value in the several cases of suspected industrial disease occurring in the province during the year. The early notification of a case of suspected occupational disease enables the staff of the branch to conduct investigations at the work place to determine whether or not a health hazard exists. If it does, then recommendations are immediately made to the management to prevent or control the hazard. The environmental survey combined with an examination of the claimant for compensation and consultation with his physician usually enables an accurate diagnosis of the case to be made, this being of considerable assistance to the Workmen's Compensation Board in reaching a decision concerning the payment of compensation. The cases referred which were considered to be occupationally related were, ornithosis, noise induced occupational deafness, pneumonia, farmer's lung, and minor effects of exposure to mercaptans and hydrogen sulphide. There were five other cases of illness which, after careful investigation, were not considered to be occupationally related.

The director and occupational hygienist completed their initial investigation and research into the problem of Raynaud's phenomenon

(dead, white fingers) of occupational origin in jack-leg drillers in the uranium mines. It was concluded that the condition was due to a combination of two factors, vibration of a certain frequency and amplitude, and the relatively low temperatures prevalent underground in most of the mines. Mine management and union representatives have been advised concerning measures to prevent or at least delay the onset of the condition. Further research into the cause and prevention of this condition will be continued with the co-operation of research workers from outside the province.

In view of the current interest in the relationship between work and heart disease the discussion between the director and the Workmen's Compensation Board were valuable in helping them to assess the increasing number of claims being made that coronary thrombosis was work related.

Employee Health Services

It is the objective to ensure that every industry employing a sufficient number of persons should have its own employee health service; the extent of the service will depend on the nature of the work and the permanency of the operation. When one industry alone is too small to justify the employment of a nurse on a full-time basis it is sometimes possible by joint agreement with other similarly placed industries to share the services of a nurse and part-time physician. The branch has been instrumental in assisting two groups at the Squaw Rapids Dam site and two in Regina to establish employee health services on this staff-sharing basis.

Education

The branch director was officially appointed as part-time lecturer in the University Department of Social and Preventive Medicine. The short course in occupational health given to the third year medical students is regarded as being an essential part of the objective of the branch to protect and promote the health of persons at work.

A two day course was held for factory and mine inspectors on the recognition of potential health hazards at the place of work. Further courses are planned for the future and in this way it is hoped that health hazards will not be overlooked by factory and mine inspectors during their routine visits to the workplace.

Surveys

The medical literature from different parts of the world has in recent years described the potential health hazard which occurs to workers exposed to grain dust. The actual situation in Saskatchewan is not known but it has been suspected in certain quarters that grain dust could be responsible for certain respiratory disorders. It was obviously necessary to conduct some sort of survey to check the validity of those impressions and the question arose as to the nature of the group to be surveyed. Farmers were considered, but for a variety of reasons it was decided to conduct the survey among grain elevator men. To this end discussions were held with the managements of three of the larger grain elevator companies and the representatives of the employees of one which were organized. It was explained that approximately 500 men would be interviewed using a standard questionnaire enquiring about general health, respiratory symptoms, smoking habits and occupational history. The results of the interview, which would be undertaken by the branch director

and occupational health nurse, would be confidential, but summaries of the over-all findings would be made available to the companies and employees representatives as well as to the Workmen's Compensation Board who are faced with the problem of whether or not to compensate men with respiratory disorders who have been exposed to grain dust.

In order to avoid bias, elevators have been randomly selected throughout the province. More than half of the 500 interviews were completed in 1960-61, and the remainder will be completed during the summer of 1961.

Agricultural Health

With the further industrialization of agriculture the farmer is confronted with an increasing number of hazards, and though the main hazard is mechanical accidents with which the Occupational Health Branch is not directly concerned, the hazard associated with the use of a wide variety of chemicals on the farm is very real and increasing year by year. The task of establishing an occupational health program for agricultural workers on a scale comparable to that already available for those working in larger industries is formidable and may never be achieved. However, opportunities do arise to contribute in the maintenance of the health of the agricultural worker. Such an occasion occurred in the fall of 1960 when the Department of Agriculture informed the Occupational Health Branch of the program to spray cattle with an organic phosphorus insecticide, Co-Ral, to eradicate the warble-fly and lice. The method of application to the cattle—spraying under high pressure—exposes the operator to a greater hazard than the ordinary use of insecticides, and particularly so as one operator working for a municipality would be exposed not just on one day but over a period of two or three weeks. As these organic phosphorus insecticides have a cumulative effect the method of work involving repeated exposures demands that the operator understands fully the toxic properties of the material he is handling, its mode of absorption into the body, early symptoms of poisoning and means of protection. This information was given during talks to groups of operators and farmers and municipal officials organized in several locations by the Department of Agriculture. Written material summarizing the talks was handed out. In all, 15 such meetings were attended by the branch director or the occupational hygienist. Added to this educational method of preventing Co-Ral poisoning was a program of medical supervision for operators who would be cattle spraying regularly for a period of two weeks or more during the fall season. This was achieved through the co-operation of the regional medical health officers and their staff. An essential part of this supervision was the blood test, made weekly or twice weekly depending on the duration of exposure to the insecticide. The effects of absorption of these organic phosphorus insecticides can be detected before any symptoms of poisoning appear by analyzing the blood for a substance called cholinesterase and comparing the results with the original pre-exposure cholinesterase level for that individual.

This health supervision program could not be described as an unqualified success for a variety of reasons—difficulty tracing and contacting the operators, last minute changes in spray operators, travelling involved, and the technical difficulties of collecting blood literally in the field and the subsequent analysis in the occupational health laboratory in Regina. If this type of insecticide is used again in a future year experience has taught us to use a method of field analysis of blood samples even if it is not as accurate—the degree of accuracy would be sufficient for surveillance purposes.

The branch has assisted the Agricultural Machinery Administration in the evaluation of noise levels to which farmers would be exposed when using the various machines and implements tested at their station. A short article on the hazard of exposure to loud noise was written for publication. This enables farmers to weigh the importance of noise, along with other factors, when considering the purchase of new equipment. It is hoped the long-term benefit of this program will be to force manufacturers to devise means of controlling the noise produced by agricultural equipment.

Radiological Health

The radiological health committee, of which the branch director was chairman, completed its work with the drafting of the Radiological Health Bill which was passed at the 1961 sitting of the legislature. The Act incorporates the recommendations made in the committee's report which was summarized in the 1959-60 annual report.

The Occupational Health Branch has been named the provincial health authority under regulations of the Federal Atomic Energy Control Act, the branch occupational hygienist being named inspector for the functions delegated to the province under this Act. Since federal government inspectors had just previously concluded a survey of all premises containing radioactive isotopes only oil well logging sources and welding radiographic installations were inspected.

First Aid

First aid kits have been planned for special groups. The Department of Mineral Resources requested advice on first aid equipment and supplies for their northern survey parties. As these parties are often isolated for a day or two it was considered advisable to include drugs for the relief of pain and the control of infection. The kit designed for school buses was on the other hand very simple, consisting of essentials only.

Occupational Health Nursing

There has not been any significant increase in the numbers of occupational health nurses in the province, although the nurse employed by Saskatchewan Power Corporation in Regina has now extended a similar service to Saskatchewan Government Insurance, and a nurse and physician, part-time, have been appointed by Saskatchewan Power Corporation on the dam site at Squaw Rapids.

The quality of service and the scope of programs have increased steadily in spite of the fact that lack of medical supervision is in most cases a restricting factor.

Programs which have always included emergency care and some counselling are now being extended into the field of prevention, more interest is being shown in methods of health education and nurses are becoming more active in accident prevention programs and supervision of first aid.

All services now have suitable medical record systems in operation and most nurses have commended a manual of policies and procedures for their own particular centre.

The supervising Occupational Health Nurse has continued her program on a consultant and educational basis, some time has been spent with new nurses following staff changes. Students from schools of nursing in Moose Jaw and Regina have spent observation days in industries which have health centres and a nurse in charge.

Occupational Hygiene

As was previously mentioned, occupational health relies on teamwork to accomplish its purposes. For any hazard brought to the attention of the branch a survey was made of the premises involved in order to ascertain the extent and severity of the hazards involved. In many instances other hazards were discovered during these surveys.

The surveys involved a determination of the contaminant in the air surrounding the worker by air analysis. Frequently these could be done with direct reading instruments. A total of 125 of such chemical measurements were made. Often biological specimens from the workers involved were required to determine the true exposure of the workers to the contaminants in the air. A total of 189 air and biological samples were analyzed chemically in the branch laboratory.

The physical hazards were recorded on-the-spot with appropriate instrumentation and later evaluated and analyzed in the branch laboratory.

The survey results had to be correlated with medical examinations before suitable recommendations could be proposed to the plant or circumstance in question. In some instances simple exhaust systems to provide local control over toxic materials were designed by the occupational hygienist.

A summary of the 66 surveys carried out is listed in the following tables:

PHYSICAL HAZARDS

<i>Hazards</i>	<i>Type of industry involved</i>	<i>Number of surveys made</i>
Noise	Steel fabrication	2
	Electric generating stations	2
	Aircraft testing	1
Vibration	Mining	2
Thermal stress	Steel manufacturing and fabricating	5
Lighting	Aircraft repair	1
Radiation	Instrument repair	1
	Oil well logging	3
	Weld examination	1
Radioactivity	Natural waters, mud and fish	1
Ventilation surveys	Schools	3
	Printing shop	1
	Steel fabricating	2
	Wallboard manufacturing	2
	Spray painting	4

CHEMICAL HAZARDS

<i>Hazards</i>	<i>Type of industry involved</i>	<i>Number of surveys made</i>
Gases (Carbon monoxide, carbon dioxide, sulfur dioxide, hydrogen sulfide, etc.)	Steel fabricating	4
	Public schools	3
	Aircraft repair	1
	Oil refinery	2
Solvent vapors (toluene, xylene, benzene, etc.)	Wallboard manufacturing	2
	Aircraft repair	1
Lead fume	Printing	1
Organic mercurial	Agriculture—seed treating	15
Dust (silica)	Foundry	1
	Mining	2
	Ore processing	2
	Aircraft repair	1

The widespread use of organic mercurial compounds in treating seed grains against plant diseases resulted in a survey of commercial seed cleaning and treating establishments. Results indicate that only very small quantities of the mercury compounds evaporate into the surrounding air. The chief cause for concern is in handling the treated seed. Husks and other associated dusts in the treated grain contain these mercury compounds and become airborne whenever handled. When performed out of doors this dust is immediately diluted but when bagging the treated grain indoors fairly high concentrations were observed. Poor housekeeping in these treating plants may also result in an accumulation of this mercury contaminated dust which becomes airborne in any draft of wind.

Ambulance Services

Twenty-nine ambulance services registered with the department in December, 1960, these services operating a total of 37 ambulances and having 70 ambulance personnel available.

For the convenience of ambulance personnel, courses in advanced first aid are now held on alternate years in Regina and Saskatoon. In May, 1960, a course was held at the University Hospital, Saskatoon, 15 ambulance attendants being present.

HEALTH EDUCATION SERVICES

The year under review was distinguished by substantially increased utilization of the Health Education Division's services by program directors and regional health officers. The potentialities of the public health services will not wholly be realized until it is recognized generally that organized, planned health education, with the assistance of specialists in the work, is essential.

The key to change was the close consultation between the directors of regional health services and health education, made possible by appreciation of resources which have waited almost 15 years to be utilized.

It is being appreciated that health education is neither specialized publicity nor public relations activity, although good public relations are as necessary to health education as to all other public health endeavor, and publicity is one of many tools employed in health education.

The Health Education Division is both a service agency and a program agency. It provides consultation and assistance to the department and its many divisions and health regions in planning and conducting health education. It is a program organization in its management of the department's accident-prevention activity.

As no special provision was made for the safety program when it was initiated, a large proportion of the division's human and material resources have come to be devoted to accident prevention, to the detriment of assistance with other health needs. This can be changed only if a separate budget for accident-prevention is approved or the division's funds are increased proportionately.

In the city of Prince Albert the good effects of more than 15 years of health education relating to the prevention of communicable diseases were reflected in the tremendous response to the poliomyelitis immunization program in which the new Sabin oral vaccine was utilized. It was estimated that 97 per cent of the eligible population of the city, estimated to be 23,800, reported to the vaccine stations for their doses. The director of health education personally assisted the regional medical health officer in a short, intensive campaign of motivational publicity to bring out the population. A report on the methods employed and the reasons for them has attracted wide attention in the United States and Canada.

One of the important first steps in the health education aspects of the Prince Albert project was the involvement of the director of health education as a consultant in the planning stages. This was the first important occasion in the history of the division that this happened.

In July, the decision to recommend to the public a fourth or booster dose of Salk vaccine for the prevention of poliomyelitis, resulted in acceleration of the division's year-around public education for polio-

myelitis prevention. The high levels of poliomyelitis vaccination achieved in 1960, and noted internationally, were due to the public's understanding and acceptance of prevention, carefully developed over recent years.

Later in the year the distribution of fluoride tablets for the dental health of rural children began in several health regions. This step also attracted wide attention. Here the Health Education Division provided an inexpensive folder and a poster and employed mass media for interpretation but the task of informing and persuading individual parents was largely assumed by the public health nurses in the field.

The Health Education Division continued to urge the importance of public education by means of annual reports.

Field staff were assisted in their prenatal education program with the provision of special films. The manner in which demand on resources grows as a program gains acceptance was illustrated by the fact that one set of prenatal films sufficed two years ago. In 1960 several health regions had continuing use for these visual aids because they had so many prenatal classes. Therefore, additional sets of films were acquired with funds from the National Health Grants.

The health education service to the regional health officers and their staff took innumerable forms. The physicians were assisted, for instance, in the organization and conduct of Safe Food Fairs (food hygiene institutes) for amateur caterers and housewives in small centres. Short courses in creative speaking were provided for in-service staff training.

A member of the staff continued daily radio chats to women of the province on a wide variety of health and safety subjects. Throughout the year there was a constant flow of health information through the press and periodicals and for special programs there was some concurrent advertising in the press as well as paid time on radio and television stations. Both the press, and radio and television stations gave much public-service support.

As long ago as 1951, the Health Education Division pioneered in Canada the use of short dramatic sketches and plays as a health education medium. These were most effective but imposed too heavy a drain on divisional resources. Films are photographed plays, and from a practical standpoint they are more useful tools. However, in the development of a better understanding of the problems of aging, the division presented a play at several regional conferences.

By far the greatest emphasis and expenditure of time and resources was given to the safety education program. Trend charts show progress in the reduction of fatal and non-fatal accidents in Saskatchewan since the division accepted responsibility for this activity in 1952.

The problem of accidents overshadows most other problems with which public health services have to contend in point of numbers of persons killed and disabled. In the calendar year 1960, accidents took the lives of 451 Saskatchewan residents and resulted in more than 68,000 more requiring medical and hospital attention. A study showed that accidents rank with cancer and cardiovascular diseases in toll of life years because so many of the victims are children or young adults. It has been demonstrated that this problem can be reduced—indeed, it *has* been reduced with the narrow program of which the division has been capable with its limited resources.

The Saskatchewan Highway Safety Council has estimated that accidents cost the people of Saskatchewan about \$42 million each year. It is known that the cost of treatment of accident victims to the Saskatchewan Hospital Services Plan reached \$2.5 million in 1960. This problem, with its waste of life and resources and its burden of sorrow, pain, and inefficiency, deserves far more emphasis in the department's preventive efforts than has hitherto been possible. There are whole areas of prevention which the division has been unable to reach. Throughout the public services of Saskatchewan there are various other unco-ordinated efforts which are not as effective as they might be if there was a more active concern with this tragic problem at high levels of government.

Child Safety Day was initiated by the division in 1954 and has since been observed annually in Saskatchewan on the first Sunday of May. Most of the criticism of special days and weeks comes from persons who suggest no alternatives and themselves make very little contribution to public welfare in the province. Child Safety Day serves a useful purpose in causing public awareness, awakening the public conscience, and promoting individual and group attitudes and activities conducive to prevention of accidents among children.

In the calendar year 1960 accidents took the lives of 100 children under the age of 15, and resulted in more than 27,000 more needing medical and hospital care.

In 1960, official and voluntary organizations in five other provinces observed Child Safety Day. During the year, following pilot programs in a number of Saskatchewan centres, the Canadian Junior Chamber of Commerce decided unanimously to sponsor the special day nationally. This has received the commendation of national government leaders. The Health Education Division worked closely with the officers of the Canadian Junior Chamber of Commerce in co-ordinating and planning national observance on May 7, 1961.

The involvement of voluntary agencies such as this is a fundamental principle in the health education programs. It is encouraged in various ways.

The division was represented on a committee planning, and later judging, the safety awards project of the Saskatchewan Power Corporation.

In 1953, the division promoted Saskatchewan Farm Safety Week which has also since, through its efforts, become a national event. The division has actively participated in the four Western Canada Farm Safety Conferences and organized both the second and fourth conferences, held in Valley Centre, Fort Qu'Appelle. A steady reduction in the number and rate of farm-work fatalities testifies to the value and effectiveness of the division's farm safety work.

Wide interest has been shown by farm parents in the division's "safe play areas for farm children" project. It has supplied several thousand farm parents with prepared sketch plans for construction of safe play equipment for young farm children, to be set up in areas fenced off from dangerous farmyards.

In the prevention of farmyard accidents the division has also continued its spring farmyard cleanup campaigns.

The division accepted during the year the challenge of smoking among youths and the relationship of smoking to lung and heart disease and other ills. There are formidable obstacles in the way but it is not thought impossible to reduce the volume of smoking among young persons.

In 1960 the division again promoted Saskatchewan observance of World Health Day (April 7), the anniversary of the founding of the World Health Organization.

It has not yet been sufficiently recognized or accepted in Canada—and in Saskatchewan—that carefully planned and sustained health education of the public with the help of specialists skilled in this work is a vitally important element in modern public health endeavor. In a literate, democratic society, no health agency can attain its objectives without the understanding, acceptance and participation of the people it serves.

It has also been most difficult to fill available health education positions in the headquarters divisions and in the health regions. The work calls for skilled, experienced, versatile, imaginative, and enthusiastic men and women who can supplement the training and skills of the public health physicians and the other technical personnel in their relations with the people they serve. Unfortunately, there is no adequate training opportunity in Canada for this specialty, but there is provision in the National Health Grants which has enabled a number of individuals to take graduate courses at American universities after a period of orientation and experience. These bursaries provide for all expenses arising from a year's qualifying study. These attractive opportunities have attracted only a handful of Canadian young persons in the past decade. Obviously, public and voluntary health agencies will have to devise new methods to attract and hold competent personnel for an essential function in the modern program.

RESEARCH AND STATISTICAL SERVICES

An appreciable increase in staff took place during the year, because of the additional work load in conjunction with the proposed medical care program. A large portion of the staff's time went towards providing services to the various agencies, especially the Advisory Committee on Medical Care.

The branch was once again used to provide those services, namely, organizing, tabulating and analyzing of data essential to the department's functioning.

Financially, the branch found its resources both in a national health grant and from provincial revenues.

Continuing Studies

A number of projects are carried annually by the branch, some of which are published and widely distributed throughout the province and around the world. A list of these includes documents which are in large part an accumulation and analysis of statistics for such programs as the Swift Current Health Region Medical Care Plan, and the Medical Services Division—a provincial government program which provides medical care for pensioners and other persons receiving social assistance. In addition, the branch is chiefly responsible for the editing and preparing for publication the Annual Report of the Department of Public Health as well as the annual report on Saskatchewan Vital Statistics.

A new publication will be issued this year by the branch. It will be a report containing facts and figures about accidents, both fatal and non-fatal. Previously a somewhat similar document was prepared by the Health Education Division of the Department of Public Health, but with the increase in size and complexity of the work involved the branch agreed to assume responsibility for the document.

Other continuing studies include the preparation of monthly statistics of births and infant deaths in Saskatchewan based on preliminary data. Added to this is the preparation of hospital service areas population projections.

Special Studies

Tuberculosis Caseload Study

A number of statistical and analytical studies of present and future caseloads of tuberculosis in Saskatchewan in relation to the program operated by the Saskatchewan Anti-Tuberculosis League were done. The object was to determine the long-range need for beds for tuberculosis cases.

Old-Age Illness Studies

These included population projections of the 65 and over age groups showing, by means of special charts and maps, trends in aged population

and the geographic distribution of these people in Saskatchewan. In addition, help was given in a special survey of the social, economic and health status of the older people, conducted by Regina city and Regina Rural Health Region.

Cost of Drugs

The cost of drugs to the consumer was the subject under review. The object was to compare the marketing experience—cost-price relationship—of drugs relative to other consumer goods. Costs and profits at both the manufacturers' and at the retail level were studied.

Hospitalization by Diagnostic Category

Hospitalization experience by specific age group and diagnostic category under the Saskatchewan Hospital Services Plan was compared with that for the Indiana Blue Cross beneficiaries group.

Service Area of Individual Hospitals

This study was to devise a guide for use in conjunction with hospital planning. The technique was to determine the degree of servicing a particular area received by means of studying the percentage distribution by hospital of hospitalized cases in a specific area.

Population Study—Hospital Committee

Population projections for each health service area, city and large town, were prepared. The figures were provided for the year 1970 using as a basis for the projections the population trends prevailing during the nine year period 1951-1959.

Studies for the Advisory Committee on Medical Care

The problems related to planning and implementing a medical care program for the entire province were the areas investigated. These surveys included: a detailed retrospective study of the methods of financing the Swift Current Medical Care Plan; a comparative study of costs, benefits and utilization of the major medical care programs in the province; Swift Current Medical Care Plan, Medical Services Incorporated and Group Medical Services; a medical manpower survey for the years 1933, 1939, 1949, 1955 and 1957, giving such information as type of practice, residence, specialty and education; an inquiry into the expenditures of the Saskatchewan Cancer Commission; and inquiry into the Workmen's Compensation Board's payment for medical aid; a study on the extent of benefits provided by medical care plans; a review of aspects of financing, method of payment to doctors and payment for drugs, under the National Health Services in the United Kingdom; and a survey of Air Ambulance Services.

Costs of Public Medical Care Services

An analysis was made of the volume and distribution of services by each participating physician in the operations of the health department's program of complete health care for pensioners and other persons receiving long-term public assistance.

Information Services

This phase of the branch's operation is continuously becoming more important in terms of staff time spent doing this type of work. Primarily, services were rendered to other divisions and agencies, government, voluntary or private, whenever it was felt that the requests would not be too extravagant and that the service would help in clarifying disputed points. It was found that some effort had to be exerted to limit the amount of such extra-mural work so as to be manageable by the branch.

Saskatchewan Hospital Services Plan data was commonly used throughout to provide information regarding population distributions, hospitalization experience and any other information that could be drawn from this source.

The library functions as (1) a specialized reference library, (2) a central agency for the order of books, pamphlets and periodicals, (3) a central agency for the order of books, pamphlets and periodicals, (4) a central agency for the order of books, pamphlets and periodicals, (5) a central agency for the order of books, pamphlets and periodicals.

During the fiscal year 1960-61, 2,881 books, pamphlets and periodicals were loaned in response to requests from personnel within the branch and to other divisions and agencies. The total number of books, pamphlets and periodicals loaned in response to requests from personnel within the branch was 1,441. These were from the University of Saskatchewan, British Columbia, Manitoba, McGill, Western Ontario, Rochester, School of Medicine and Dentistry, Toronto (School of Hygiene), Regina College, the Prince Rupert Laboratory (Saskatoon), the Medical Arts Clinic (Regina), the Department of Labour (Ottawa), the Department of National Health and Welfare (Ottawa), the National Library of the Public Archives of Canada (Ottawa), Regina Public Library.

Publications purchased for the library as well as those purchased by other branches divisions and services are ordered by the library in co-operation with the Administrative Services Branch and the Provincial Government Purchasing Agency. Records are maintained regarding source, payment and price.

1. See the Index Medicus, the Hospital Literature Index, the Saskatchewan Hospital Health Bulletin, and the Saskatchewan Hospital Yearbook.

PUBLIC HEALTH LIBRARY

The Public Health Library was established in 1946 and in 1950 became a division of the Research and Statistics Branch. Library services are extended to departmental personnel, faculty of the College of Medicine of the University of Saskatchewan, students of the combined clinical laboratory x-ray training course, nursing students, organizations associated with the department, other departments, other libraries, and individuals.

The library functions as (1) a specialized reference library, (2) a circulating library, (3) a central agency for the order of books, pamphlets and periodicals required by various branches and units of the department.

Reference Services

In response to requests, information is secured through the use of standard reference texts and specialized medical and hospital texts, dictionaries, directories and indexes.¹ This information goes out verbally, by telephone and by mail.

Loan Services

During the fiscal year 1960-61, 2,981 books, pamphlets and periodicals were loaned in response to special requests from personnel within the province.

In addition, 1,351 issues of various periodicals were circulated on circulation lists.

Since it is not possible for a library to have on its shelves every publication needed, the resources of the library were augmented by borrowing books, periodicals and reports from universities and scientific institutions. During the fiscal year 1960-61 interlibrary loans numbered 141. These were from the Universities of Saskatchewan, British Columbia, Manitoba, McGill, Western Ontario, Rochester (School of Medicine and Dentistry), Toronto (School of Hygiene), Regina College, the Prairie Regional Laboratory (Saskatoon), the Medical Arts Clinic (Regina), the Department of Labour (Ottawa), the Department of National Health and Welfare (Ottawa), the National Library of the Public Archives of Canada (Ottawa), Regina Public Library.

Order Services

Publications purchased for the library, as well as those purchased by other branches, divisions and services, are ordered by the library in co-operation with the Administrative Services Branch and the Provincial Government Purchasing Agency.² Records are maintained regarding source, payment and price.

¹ e.g., the Index Medicus, the Hospital Literature Index.

² Except the Saskatchewan Training Schools, the Saskatchewan Hospital, North Battleford, and the Saskatchewan Hospital, Weyburn.

Cataloguing and Indexing Activities

Public Health Library books are classified and catalogued according to the Library of Congress classification and cataloguing systems. Pamphlets and reports are catalogued by author, title and subject. Periodicals are scanned and outstanding articles of permanent value are indexed.

Cards are filed showing the location of publications ordered for other branches, divisions and services. While some of the books in the unit libraries are in constant use and are therefore not available for loan, others may be borrowed for periods varying from two days to four weeks, by requesting them through the Public Health Library.¹

Library Resources

The library holdings include approximately 3,850 books, 4,000 pamphlets, 960 volumes of permanently bound periodicals, and 140 current periodical subscriptions.

While most of the publications are acquired by purchase, a number of reports, pamphlets, periodicals and reprints are secured free from governmental agencies, societies, commercial firms, scientific institutes, and individuals who supply reprints of research studies.

Publications of the Week

"Publications of the Week" is a list of selected books, pamphlets and reports newly received. This listing, issued irregularly, was distributed to 101 persons. Due to a heavy demand for some of the publications, it was not always possible to forward all publications promptly in response to requests. A reserve system ensures, however, that the desired publications will go forward to the borrower as soon as possible.

¹ Books borrowed from other branches, divisions and services numbered 114.

SASKATCHEWAN VITAL STATISTICS

The Vital Statistics Division continued to provide the administrative machinery required for the registration of births, stillbirths, deaths, marriages, divorces and adoptions in Saskatchewan.

Division registrars, of whom there are approximately 800 in the province, forward their returns of birth, death and stillbirth registrations on a weekly basis to the central office in Regina. From these registrations the central office creates notice of birth, death and stillbirth cards by health statistical area. These notification cards are then sorted by health region and residence and forwarded as soon as possible to the medical health officers of the health regions. The purpose of this procedure being to keep the health officers informed of the vital events occurring to residents of their regions.

Marriage registrations are filed directly with the central office in Regina by the officiating clergyman or marriage commissioner and are not channelled through a division registrar.

The total number of registrations processed in 1960 was 37,244. A comparison of the number of registrations for 1957, 1958, 1959 and 1960 follows:

<i>Processed registrations</i>	<i>1957</i>	<i>1958</i>	<i>1959</i>	<i>1960</i>
Total	37,524	37,310	38,037	37,244
Births	23,939	24,011	24,437	24,050
Stillbirths	309	278	270	238
Deaths	6,769	6,557	6,922	6,767
Marriages	6,507	6,464	6,408	6,189

Registrations were checked for completeness, and indexed, numbered, microfilmed, and filed in a fireproof vault as permanent records.

Births which are not registered at the time of event, and corrections on the original registration of birth, continue to present a problem. Each application for correction is carefully investigated and satisfactory evidence must be produced to assure that there actually was an error at the time of the original registration. In addition to an application for a delayed registration, the applicant must also file satisfactory documentary evidence in accordance with the "Standard Minimum of Evidence for Delayed Registrations" agreed to by all provinces in 1944. A large amount of correspondence is necessary in handling correction and delayed registration files.

Likewise, considerable correspondence and personal interviews are necessary in connection with legitimation of births, registration of illegitimate children, alteration of given names and adoptions, before the proper notations can be entered on the original registrations concerned.

The numbers of delayed registrations and notations made in 1957, 1958, 1959 and 1960 are as follows:

Type of investigation	1957	1958	1959	1960
Delayed registration	1,476	1,663	1,539	1,533
Correction of original registration	2,467	2,177	1,710	1,697
Registration of illegitimate child in name of father	38	27	43	36
Legitimation of birth	79	100	102	158
Alteration of vital statistics registration resulting from change of name certificate	469	470	413	423
Alteration of given name	429	414	362	340
Adoption notation	515	483	468	481

Current birth, stillbirth, death and marriage registrations are micro-filmed at the earliest possible date after registration. The films are forwarded to the Dominion Bureau of Statistics which compiles vital data for the country as a whole. Documents submitted as supporting evidence in connection with the division's activities are also placed on microfilm for reference.

Certified copies of the original registrations, certificates, and statements or verifications were issued as part of the function of the division to the public or other agencies, as proof of these events, upon receipt of an application in the required form and payment of the prescribed fee.

The revenue received from these and from other sources for the years 1956 to 1960 inclusive was as follows:

	1956	1957	1958	1959	1960
Total	\$85,319	\$87,384	\$86,700	\$84,459	\$88,086
Vital statistics fees	61,465	63,142	62,110	60,881	63,673
Marriage licence fees	18,193	18,779	18,628	18,233	18,486
Revenue from microfilm	3,886	3,757	3,766	3,852	3,834
Revenue from change of name	1,775	1,706	2,196	1,493	2,094

The Division of Vital Statistics also provides the administrative machinery necessary to carry out the provisions of the Marriage Act. This includes recognition of religious denominations, registration of clergymen authorized to perform marriages, appointment of issuers of marriage licences, supplying of marriage licences to issuers, printing and distributing of all required forms, and checking of forms such as statutory declarations, health certificates, licences, banns, consent forms for the marriage of minors, divorce certificates, and death certificates.

Under the authority of the Change of Name Act, all applications for change of name must be submitted to this division for consideration. All approved registrations of change of name are retained as permanent records in a fireproof vault. In 1960 there were 207 change of name applications accepted for registration compared to 150 in 1959.

Vital Data

According to data published by the Dominion Bureau of Statistics in 1960, the population of Saskatchewan was 910,000. This represents an increase of 8,000 over 1959 or 0.89 per cent (Table 63).

Live births registered during 1960 totalled 24,088 and deaths 6,868 resulting in a natural increase of 17,220 or 19.0 per 1,000 population. This rate is 0.2 less than that for 1959.

In 1960, the birth rate per 1,000 population was 26.5 or 0.5 less than the year before. At the same time the death rate decreased to 7.5 per 1,000 population, from 7.8 in 1959.

During the year under review, the number of stillbirths recorded in Saskatchewan was 221, 26 less than in 1959. The stillbirth rate per 1,000 live births was 9.2 representing a decrease from 10.2 for 1959 (Table 65).

As regards infant mortality, the year 1960 showed an increase over the preceding year. The number of infants dying in their first year of life was 637 as against 626 in 1959. The infant mortality rate in 1960 increased to 26.4 per 1,000 live births compared with 25.7 in 1959. The all time low record has been established at 25.5 per 1,000 live births in 1957.

Among the leading causes of death, heart disease and malignant neoplasms (cancer) retained the first and second places, respectively. Together they accounted for slightly over one-half of all deaths in the province in 1960 (Table 66). Other leading causes of death were vascular lesions affecting the central nervous system, accidents, diseases peculiar to early infancy, pneumonia, diseases of arteries, congenital malformations, diabetes mellitus, and suicide and self-inflicted injury in that order. As in 1959, these 10 leading causes accounted for more than four out of every five deaths occurring in Saskatchewan. In this connection, it is worth recalling that tuberculosis disappeared from among the 10 leading causes of deaths in 1954. A comparison of the 10 leading causes of deaths can be found in Table 66.

From 6,388 in 1959, the number of marriages decreased to 6,209 in 1960, and the marriage rate decreased from 7.1 to 6.8 per 1,000 population. The rate of divorces and annulments per 1,000 population decreased from 0.31 in 1959 to 0.24 in 1960. In 1960 the ratio of divorces and annulments to marriages was 1:29 as against 1:23 in 1959 (Table 68). These figures do not include separations on which no statistical data are being compiled.

TABLE 63. POPULATION TREND FOR SASKATCHEWAN, CENSUS YEARS 1901 TO 1951 AND 1956, AND ESTIMATES FOR 1952, 1953, 1954, 1955, 1957, 1958, 1959 AND 1960

Year	Canada	Saskatchewan			
	Total population	Total population	Per cent of Canada's population	Increase over preceding population	
				Number	Per cent
1901.....	5,371,315	91,279	1.70	19,279	.....
1906.....		257,763		166,484	182.39
1911.....	7,206,643	492,432	6.84	234,669	91.04
1916.....		647,835		155,403	31.56
1921.....	8,787,940	757,510	8.62	109,675	16.93
1926.....		820,738		63,228	8.35
1931.....	10,376,786	921,785	8.88	101,047	12.31
1936.....		931,547		9,762	1.06
1941.....	11,506,655	895,992	7.79	-35,555	-3.82
1946.....		832,688		-63,304	-7.07
1951.....	14,009,429	831,728	5.94	-960	-0.12
1952.....	14,459,000*	843,000	5.83*	11,272	1.32
1953.....	14,845,000*	861,000	5.80*	18,000	2.13
1954.....	15,287,000*	873,000*	5.71*	12,000*	1.39*
1955.....	15,698,000*	878,000*	5.59*	5,000*	0.57*
1956.....	16,080,791	880,665	5.48	2,665	0.30
1957.....	16,589,000	879,000	5.30	-1,665	-0.19
1958.....	17,048,000	888,000	5.21	9,000	1.02
1959.....	17,442,000	902,000	5.17	14,000	1.58
1960.....	17,814,000	910,000	5.11	8,000	0.89

* Note that numbers and percentages as given for these years vary slightly as a result of postcensal adjustments from the numbers and percentages as shown in the annual reports on Saskatchewan Vital Statistics for the years 1952, 1953, 1954 and 1955.

TABLE 64. NATURAL INCREASE IN POPULATION, SASKATCHEWAN, 1916-1960

Year	Live births	Deaths	Natural increase*	
			Number	Rate per 1,000 population
1916-1920 average....	20,764	6,260	14,504	21.2
1921-1925 average....	21,541	5,853	15,688	20.1
1926-1930 average....	21,298	6,256	15,042	17.5
1931-1935 average....	20,325	6,037	14,288	15.4
1936-1940 average....	18,675	6,365	12,310	13.5
1941-1945 average....	18,444	6,437	12,007	14.1
1946.....	21,433	6,422	15,011	18.0
1947.....	23,334	6,610	16,724	20.0
1948.....	21,562	6,496	15,066	18.0
1949.....	21,662	6,596	15,066	18.1
1950.....	21,546	6,243	15,303	18.4
1951.....	21,733	6,440	15,293	18.4
1952.....	22,605	6,625	15,980	19.0
1953.....	23,703	6,687	17,016	19.8
1954.....	24,981	6,323	18,658	21.4†
1955.....	24,746	6,661	18,085	20.6†
1956.....	24,059	6,666	17,393	19.7
1957.....	23,921	6,743	17,178	19.5
1958.....	23,843	6,483	17,360	19.5
1959.....	24,319	7,003	17,316	19.2
1960.....	24,088	6,868	17,220	19.0

* The natural increase is the excess of live births over deaths.

† Note that rates as given for these years vary slightly as a result of postcensal adjustments from the rates as shown in the annual reports on Saskatchewan Vital Statistics for the years 1954 and 1955.

TABLE 65. NUMBER OF STILLBIRTHS, INFANTS DEATHS, AND MATERNAL DEATHS, WITH ANNUAL RATES PER 1,000 LIVE BIRTHS, SASKATCHEWAN, 1926-1960

Year	Live births	Stillbirths		Infant deaths*		Maternal deaths	
		Number	Rate	Number	Rate	Number	Rate
1926-1930.....	21,298	551	25.9	1,560	73.2	126	5.9
1931-1935.....	20,325	488	24.0	1,260	62.0	91	4.5
1936-1940.....	18,675	393	21.0	1,025	54.9	68	3.6
1941-1945.....	18,444	348	18.9	858	46.5	52	2.8
1946.....	21,433	372	17.3	1,004	46.8	36	1.7
1947.....	23,334	362	15.5	1,018	43.6	38	1.6
1948.....	21,562	347	16.1	867	40.2	22	1.0
1949.....	21,662	325	15.0	834	38.5	27	1.2
1950.....	21,546	346	16.1	690	32.0	21	1.0
1951.....	21,733	303	13.9	676	31.1	22	1.0
1952.....	22,605	314	13.9	787	34.8	13	0.6
1953.....	23,703	319	13.5	797	33.6	13	0.5
1954.....	24,981	327	13.1	708	28.3	22	0.9
1955.....	24,746	300	12.1	745	30.1	11	0.4
1956.....	24,059	291	12.0	680	28.3	8	0.3
1957.....	23,921	280	11.7	609	25.5	5	0.2
1958.....	23,843	270	11.3	616	25.8	13	0.5
1959.....	24,319	247	10.2	626	25.7	10	0.4
1960.....	24,088	221	9.2	637	26.4	10	0.4

* Deaths of children under one year of age.

TABLE 66. TEN LEADING CAUSES OF DEATH WITH PERCENTAGES AND RATES PER 1,000 POPULATION, SASKATCHEWAN, 1959 AND 1960

Cause of death*	Number		Per cent		Rate per 100,000 population	
	1959	1960	1959	1960	1959†	1960†
All causes.....	7,003	6,868	100.0	100.0	776.4	754.7
Ten leading causes.....	5,850	5,810	83.5	84.6	648.6	638.5
Heart diseases (410-443).....	2,292	2,384	32.7	34.7	254.1	262.0
Malignant neoplasms (140-205).....	1,121	1,132	16.0	16.5	124.3	124.4
Vascular lesions affecting the central nervous system (330-334).....	752	684	10.7	10.0	83.4	75.2
Accidents (E800-E962).....	444	455	6.4	6.6	49.2	50.0
Diseases peculiar to early infancy (760-776).....	346	353	4.9	5.1	38.4	38.8
Pneumonia (490-493).....	334	331	4.8	4.8	37.0	36.4
Diseases of arteries (450-456).....	218	166	3.1	2.4	24.2	18.2
Congenital malformations (750-759).....	128	118	1.8	1.7	14.2	13.0
Diabetes mellitus (260).....	132	112	1.9	1.7	14.6	12.3
Suicide and self-inflicted injury (E970-E979).....	.....	75	.....	1.1	.....	8.2
Influenza (480-483).....	83	.....	1.2	.....	9.2	.....
Other.....	1,153	1,058	16.5	15.4	127.8	116.2

* Code numbers according to the *International Statistical Classification of Diseases, Injuries, and Causes of Death, 1955*, are shown in parentheses.

† 1959 and 1960 rates are based upon population estimates for the year.

TABLE 67. ACCIDENTAL DEATHS BY CAUSE OF DEATH, SASKATCHEWAN, 1958-1960

Accidental deaths*	Number			Rate per 100,000 population		
	1958	1959	1960	1958	1959	1960
Total.....	426	444	455	48.0	49.2	50.0
Motor vehicle accidents.....	147	162	160	16.5	18.0	17.6
Other transport accidents.....	22	24	32	2.5	2.6	3.5
Accidental poisoning.....	20	13	10	2.3	1.4	1.1
Accidental falls.....	68	56	88	7.7	6.2	9.7
Accident caused by machinery.....	17	25	9	1.9	2.8	1.0
Accident caused by fire and explosion of combustible material.....	39	35	28	4.4	3.9	3.1
Accident caused by hot substance, corrosive liquid, steam and radiation....	.....	3	3	.....	0.3	0.3
Accident caused by firearm.....	6	8	19	0.7	0.9	2.1
Accidental drowning and submersion.....	36	28	34	4.0	3.1	3.7
All other accidental causes.....	71	90	72	8.0	10.0	7.9

* Causes according to the *International Statistical Classification of Diseases, Injuries, and Causes of Death*, 1955, Vol. 1, pp. 375-380.

TABLE 68. DIVORCES AND ANNULMENTS, RATIO TO MARRIAGE AND RATES PER 1,000 POPULATION, SASKATCHEWAN, 1954-1960

Item	1954*	1955*	1956	1957	1958	1959	1960
Number of divorces and annulments.....	255	242	226	246	286	277	216
Number of marriages.....	6,953	6,494	6,403	6,510	6,464	6,388	6,209
Ratio of divorces and annulments to marriages.....	1:27	1:27	1:28	1:26	1:22	1:23	1:29
Rate of divorces and annulments per 1,000 population.....	0.29	0.27	0.26	0.28	0.32	0.31	0.24
Rate of marriage per 1,000 population.....	8.0	7.4	7.3	7.4	7.3	7.1	6.8

* Note that rates as given for these years vary slightly as a result of postcensal adjustments from the rates shown in the annual reports on Saskatchewan Vital Statistics for the years 1954 and 1955.

SASKATCHEWAN CANCER SERVICES

The following report on the Saskatchewan Cancer Commission is included in this annual report of the Department of Public Health. Detailed tables may be found in the annual report of the Commission, which is published separately.

The Saskatchewan Cancer Commission, charged with the administration of the Cancer Control Act under the Minister of Public Health, continued during the year the operation of the Allan Blair Memorial Clinic, located in the Regina Grey Nuns' Hospital, and the Saskatoon Cancer Clinic, located in the University Hospital. Both were staffed by full-time medical, nursing and office personnel.

Care and Treatment

The services of the cancer clinics for both diagnosis and treatment, as well as those diagnostic procedures and medical and surgical care, authorized by the clinics and provided by doctors in private practice, are furnished at the expense of the commission to those patients who were residents of Saskatchewan for at least three months immediately prior to admission to a cancer clinic.

Except for certain diagnostic procedures revealing the presence of malignant disease, or in the case of an operation where unsuspected cancer is discovered, financial responsibility is not accepted for services rendered before actual admission of the patient to a cancer clinic.

Payment of hospitalization of cancer patients is a responsibility of the Saskatchewan Hospital Services Plan in cases where the annual tax levied for that purpose has been paid by patients. However, this expense is assumed by the commission when the tax has not been paid and the patient is otherwise entitled to free care and treatment. The commission also pays for drugs listed as non-benefits of the Plan provided to in-patients. The patient is solely responsible for payment of out-patient drugs.

Except for authorized home visits of the Victorian Order of Nurses in terminal cases, special nursing services are not paid for by the commission.

Free services are not extended to patients for whom the federal government is responsible, nor, of course, to those who are not residents of Saskatchewan. Such patients are accepted by the clinics on a fee-for-service basis.

The Family Doctor

The commission bases its cancer program on the conception that the ultimate success of a province-wide plan of cancer management depends upon the partnership and co-operation of the family doctor. He is the first and most important detection centre and all patients coming to either clinic are required to be referred there by him.

Specialist Services

Each clinic has a roster of surgeons in private practice for the purpose of consultation and for referral of patients for surgery when patients have no particular choice of surgeon. Medical specialists are consulted, as well, when occasion demands.

Medical and Surgical Fees

Authorized medical and surgical services rendered to clinic patients by doctors in private practice are paid by the commission on a fee-for-service basis in accordance with the current schedule of fees of the College of Physicians and Surgeons of Saskatchewan.

Social Worker

The Saskatchewan Division of the Canadian Cancer Society provides funds for a social worker attached to each clinic. This worker assists the medical and nursing staff in the care and comfort of cancer patients, being particularly concerned with their social and psychological needs.

Lay Education

Lay education in cancer remains a responsibility of the Canadian Cancer Society in co-operation with the Division of Health Education of the Department of Public Health.

Technical Staff

Besides full-time medical, nursing and clerical staffs, each clinic has a full-time physicist. Part-time consultants are available in physics, pathology, diagnostic radiology, biochemistry and medical tariff. The operation of an emanation plant at the University of Saskatchewan for the production of radon is under the supervision of the consulting physicist, the commission assuming payment of a technician's salary.

Cost of Services

The total cost of operating the commission and the two clinics in 1960-61 was \$1,386,770.87, a national health grant contributing \$485,935.58 of the amount. Not included in this total expenditure was the cost of hospitalization of cancer patients who were beneficiaries of the Saskatchewan Hospital Services Plan. This was borne by the Plan.

Medical and surgical fees were \$588,319.04, staff salaries \$429,972.28 and payments to clinic hospitals \$229,318.61 for diagnostic, laboratory and x-ray facilities, as well as for various other services provided for the clinics.

TABLE 69. SUMMARY OF ALL PATIENTS SEEN AT THE CANCER CLINICS, SASKATCHEWAN, 1960

Cases	Both clinics	Regina clinic	Saskatoon clinic
All cases.....	23,012	11,450	11,562
Number of patients admitted to the clinics for the first time in 1960 for the diagnosis and treatment of cancer.....	3,870	1,902	1,968
Number of patients discharged from the clinics previous to 1960 with benign conditions, who returned to the clinics in 1960 with cancer.....	219	100	119
Number of patients seen in 1960 but not admitted to the clinics, as superficial examination appeared to exclude cancer.....	415	211	204
Number of patients admitted to the clinics in 1960 solely for the diagnosis or treatment of non malignant conditions*.....	656	118	538
Number of review examinations of all patients seen in 1960†.....	17,852	9,119	8,733

* Diagnosis refers to various radioactive isotope uptake studies.

† The above figures do not include attendance of patients for treatment only.

TABLE 70. NUMBER OF NEW PATIENTS ADMITTED TO CANCER CLINICS FOR DIAGNOSIS AND TREATMENT OF CANCER, SASKATCHEWAN, 1932 TO 1960

Year	All cases	Cancer	Pre-cancer	Not cancer	Not diagnosed
Both clinics					
All 29 years.....	70,553	31,876	4,264	32,741	1,672
1932.....	500	343	35	105	17
1933.....	579	338	20	199	22
1934.....	646	402	13	215	16
1935.....	692	415	12	243	22
1936.....	712	401	30	249	32
1937.....	801	428	25	323	25
1938.....	909	473	32	352	52
1939.....	1,094	520	60	364	150
1940.....	1,193	528	80	466	119
1941.....	1,245	598	77	508	62
1942.....	1,468	653	192	568	55
1943.....	1,698	756	275	601	66
1944.....	2,103	871	327	741	164
1945.....	2,613	1,042	273	1,043	255
1946.....	3,161	1,193	176	1,708	84
1947.....	3,632	1,362	207	1,998	65
1948.....	3,820	1,420	231	2,147	22
1949.....	3,366	1,312	190	1,842	22
1950.....	3,269	1,430	225	1,582	32
1951.....	3,378	1,502	230	1,606	40
1952.....	3,547	1,597	220	1,678	52
1953.....	3,502	1,594	192	1,680	36
1954.....	3,516	1,605	138	1,745	28
1955.....	3,679	1,662	146	1,846	25
1956.....	3,984	1,778	148	2,006	52
1957.....	3,909	1,824	135	1,929	21
1958.....	3,891	1,830	130	1,870	61
1959.....	3,776	1,948	196	1,593	39
1960.....	3,870	2,051	249	1,534	36

TABLE 70—(Concluded)

Year	All cases	Cancer	Pre-cancer	Not cancer	Not diagnosed
Regina clinic					
All 29 years.....	36,337	17,500	2,859	15,174	804
1932.....	301	207	21	63	10
1933.....	368	204	11	138	15
1934.....	389	250	4	125	10
1935.....	430	277	7	137	9
1936.....	440	255	19	144	22
1937.....	528	265	19	223	21
1938.....	570	279	24	234	33
1939.....	723	321	51	233	118
1940.....	829	352	72	325	80
1941.....	877	371	75	377	54
1942.....	1,072	444	183	409	36
1943.....	1,306	542	267	457	40
1944.....	1,445	544	304	526	71
1945.....	1,499	591	240	589	79
1946.....	1,837	707	141	963	26
1947.....	1,979	722	146	1,087	24
1948.....	1,991	784	131	1,060	16
1949.....	1,607	687	95	809	16
1950.....	1,489	774	93	604	18
1951.....	1,568	834	144	571	19
1952.....	1,574	824	122	611	17
1953.....	1,583	823	95	661	4
1954.....	1,588	866	73	637	12
1955.....	1,569	854	63	641	11
1956.....	1,721	912	66	720	23
1957.....	1,721	893	60	765	3
1958.....	1,703	919	52	729	3
1959.....	1,728	966	116	642	4
1960.....	1,902	1,033	165	694	10
Saskatoon clinic					
All 29 years.....	34,216	14,376	1,405	17,567	868
1932.....	199	136	14	42	7
1933.....	211	134	9	61	7
1934.....	257	152	9	90	6
1935.....	262	138	5	106	13
1936.....	272	146	11	105	10
1937.....	273	163	6	100	4
1938.....	339	194	8	118	19
1939.....	371	199	9	131	32
1940.....	364	176	8	141	39
1941.....	368	227	2	131	8
1942.....	396	209	9	159	19
1943.....	392	214	8	144	26
1944.....	658	327	23	215	93
1945.....	1,114	451	33	454	176
1946.....	1,324	486	35	745	58
1947.....	1,653	640	61	911	41
1948.....	1,829	636	100	1,087	6
1949.....	1,759	625	95	1,033	6
1950.....	1,780	656	132	978	14
1951.....	1,810	668	86	1,035	21
1952.....	1,973	773	98	1,067	35
1953.....	1,919	771	97	1,019	32
1954.....	1,928	739	65	1,108	16
1955.....	2,110	808	83	1,205	14
1956.....	2,263	866	82	1,286	29
1957.....	2,188	931	75	1,164	18
1958.....	2,188	911	78	1,141	58
1959.....	2,048	982	80	951	35
1960.....	1,968	1,018	84	840	26

UNIVERSITY MEDICAL CENTRE

THE UNIVERSITY HOSPITAL

During its sixth year of operation University Hospital was fortunate once more in being able to be of service to an increasing number of Saskatchewan people. Although the first patients were admitted in 1955, the hospital has been in full operation since 1957 only. The last four years, from 1957 to 1960 inclusive, have witnessed a steady increase in the number of persons treated and in the number of procedures carried out. A brief review of a few statistics is set out in Table 71 to demonstrate this point.

As the total number of patients discharged from hospital has grown, there has not been a proportionate increase in patient hospital days. This has been possible because the length of stay of the average patient has steadily decreased, as is shown by Table 72.

The decrease in average days stay indicates progressively more efficient use of costly hospital facilities. Nonetheless there is eventually a point of diminishing returns when, in order to accommodate larger numbers, patients may be discharged too soon for their own welfare. The provision of additional rehabilitative, convalescent, geriatric, mental health and home care facilities will make much shorter stays in general hospital possible and practicable and will obviate ill effects from too early discharge. Furthermore, patients will be treated in surroundings appropriate to their health needs and at lesser cost than in the general hospital.

It would appear possible to lower somewhat further the average stay at University Hospital without deleterious effects. Although the optimum average days stay is not known, it must be borne in mind that the more complicated and serious illnesses require longer periods of treatment. For this reason, no major hospital centre such as this that has a high proportion of seriously ill patients can reduce patient stay to the point attained by general hospitals that have a lower percentage of seriously ill patients.

Another point of interest in the statistics shown in Table 73 is that certain activities continue to increase much more rapidly than others and out of all proportion than the increase in numbers of patients. Technical and scientific procedures—laboratory tests, surgical operations, use of drugs, etc.—increase not only as the number of patients increases, but also as a direct result of improved methods of diagnosis and treatment. Thus, as modern methods make it possible to offer to the sick greater hope of improvement and cure, the costs of hospital operation go up. Quality may appear costly in the short run, but in the long run it is sound economy. Who can estimate the cash value of a life saved? How much is it worth to the community to have a man or woman returned to society as an active, self-supporting citizen rather than as a charge upon the state? Can we measure in dollars the benefit to a child, to his family and to the state, if he is saved from a lifetime of disability by hospital care, costly though it may be?

During 1960 University Hospital continued to play an important role in education. Medical students to the number of 87 took their clinical training in the wards of the hospital and 29 graduated and received their degrees in medicine at the University Convocation in May. Also serving in the wards, but in a more senior capacity, were 61 residents and internes, who came to the hospital for postgraduate training, leading in most cases, to higher certificates or degrees. This figure does not include two administrative residents who, after a year in this hospital, went on to appointments in hospital administration with the Department of Public Health. Among these residents and internes were graduates of 31 medical schools in 16 different countries, including Great Britain, the United States, New Zealand South Africa, India, China, the Philippines, Poland, Yugoslavia, Italy and many others.

In the School of Nursing there were 214 student nurses and 68 graduated at the University Convocation for nurses in August. Of these 24 will be going on to obtain their degrees in nursing from the University in May, 1961.

Besides these professional groups, training was provided on a more or less technical level for a great variety of students—

Laboratory Technicians	33 individuals
in all with an average of 20 at any one time	
Rehabilitation (4 in occupational therapy and 2 in physiotherapy)	6
X-ray Technicians	6
Dietary internes	4
Pharmacy internes	2
Medical records	1

In addition, training courses were provided for nine ward aides and 16 orderlies.

Many doctors, nurses and other persons, engaged in providing health services, visited the hospital for periods of observation and study. Members of the hospital staff participated actively in all of these educational efforts. In addition, many staff members held office in local, provincial and national professional organizations and participated as speakers in a wide variety of educational assemblies both here and elsewhere.

Classroom facilities were taxed to the utmost to provide accommodation for formal lectures and for special educational meetings. Some of the special sessions held during the year were—

- Annual refresher course for general practitioners
- Armed forces Extension Course in Pharmacy
- Saskatchewan Surgical Society
- Canadian Orthopaedic Association
- Saskatchewan Hospital Housekeepers' Association
- Saskatchewan Nursing Assistants' Association
- Centralized Teaching Program—Cost Study
- Institute in Child Psychiatry
- Saskatchewan Registered Nurses' Association—Institutes
- Saskatchewan Hospital Laundry Association Institute
- Convention Saskatchewan Nursing Schools
- Hospital Pharmacy
- Advanced First Aid Course for Ambulance Personnel

Activity Highlights in 1960

There were 56 professional writings published by members of the medical and hospital staff. The recovery room was increased in size by reconstruction which provided a two-bed intensive surgical nursing unit in space previously occupied by the Department of Anaesthesia offices.

The Department of Anaesthesia gained improved (but still inadequate) offices in two adjacent patient rooms on a surgical ward. The new intensive care unit replaces the two regular surgical wards and may be used in conjunction with the recovery room as necessary.

The University Hospital Women's Auxiliary continued to increase the amount of valuable service rendered the hospital. The Auxiliary contributed nearly 6,000 hours (equivalent to one hundred and fifty 40-hour weeks) of service to patients. Apart from the humanitarian value of their work, its value in dollars alone, at an average hospital salary, would approximate \$10,000. In addition, the members put in at least an equal number of hours in committee work and various money raising projects such as the Fall Fashion Show and the "Aux Cart". Out of these earnings are financed the scholarships offered in the School of Nursing and all expenses incurred in bringing much valuable service to our patients.

A dental section of the medical school library was begun as a project of the hospital dental staff with assistance from the hospital and the College of Medicine.

Active assistance was given to several hospitals in Saskatchewan, particularly in the Quill Plains, North Central and Northwest Regional Hospital Council regions by members of University Hospital staff acting in a consulting capacity. Members of the pharmacy, laundry and dietary staffs were particularly active in this new form of service.

A new Bacteriology Laboratory, including a large walk-in refrigerator was constructed in a former locker room. The lockers were moved to the basement.

The offices of the Department of Social Service were improved and an out-patient waiting room constructed for paediatrics.

Major renovations were completed in the out-patient department to improve space utilization. Although the total number of examining rooms is not increased, work flow is greatly improved.

The two main nurseries in the Department of Paediatrics were completely reconstructed in order to provide four smaller nurseries and thus facilitate isolation procedures.

Following numerous power failures, a new transformer was installed in the front section of the building doubling the supply available for that part of the hospital.

A start was made in installing heat controls on all radiators throughout the hospital. This project will extend over another year at least and is aimed at controlling excessive heat in many parts of the building.

During the year there were 11,000 maintenance jobs of repairs and service; 14,000 individual preventive maintenance checks on equipment; 935 jobs of manufacturing and construction performed by our staff and 308 items of work done by outside contractors.

The average amount of linen used per patient each day was 14½ pounds. This daily average would be more than equivalent to a week's requirements for one person at home.

A building extension to provide a new and greatly enlarged medical records department and storage space for 10 years of medical records and x-ray films was begun. Completion date is estimated at April 30th, 1961.

The Northern Saskatchewan Poliomyelitis Treatment Centre for cases with respiratory paralysis was moved to the Department of Medicine, University Hospital, during 1960. During the year there was a somewhat larger outbreak of the disease than in recent years and 22 new cases were admitted to the unit from Saskatoon and various parts of northern Saskatchewan for treatment of paralytic disease. In addition, several children with milder forms of poliomyelitis were admitted to the paediatric ward.

Tape recorded music has been introduced into the operating rooms for its soothing effect in certain types of procedure where the patient is under local anaesthesia.

Five thousand, six hundred and sixty-four mothers had been delivered by the end of 1960 without a single maternal death due to pregnancy or its management.

In the Cardiopulmonary Laboratory there has been continued development and testing of new techniques. In this regard, the appointment to the Medical College of a bio-medical engineer gives promise of a liaison between medicine and engineering leading toward the application of engineering principles to clinical problems. Further work has been done in catheterization of the left heart and the use of extra corporeal circulation in heart surgery. The new Image Orthicon television camera for use during cardiac catheterization arrived late in the year.

Revenue and Expenditure

Revenue for 1960 totalled \$4,686,040 and expenditures \$4,733,748, showing a deficit on the year's operations of \$47,708.

As in previous years, the bulk of the hospital's income was derived from service to patients, the balance being made up from a variety of other services. Of the total expenditure, \$3,172,627 or 67 per cent represents salaries, wages and prerequisites of employees and students.

Depreciation in 1960 amounted to \$350,083. Capital expenditure for 1960 for building and new equipment amounted to \$158,570.

Recommendations

A few years ago Saskatchewan was a young man's country, but this is no longer true and the number of elderly persons is growing steadily. Facilities for active care for this group of citizens are urgently needed at University Hospital and, we presume, elsewhere. Treatment facilities should provide *active* care with a view to full or partial rehabilitation of the individual to his home and community wherever possible.

As medical skills increase, as they have done very rapidly, many, both old and young, are saved from death. Of these, a goodly number are left with disabilities which wholly or partially prevent them from taking their rightful place in society and from full enjoyment of life. Extended facilities and planned programs for active rehabilitative care for these persons is urgently required at University Hospital.

The complexities of providing good, up-to-date, medical and hospital care demand space for highly technical equipment and personnel. Development of new and improved methods must go on. Available space at University Hospital for laboratory work, operating rooms, recovery room care and many other forms of vital service work is sorely taxed. Additional space and equipment and personnel for necessary service facilities should be provided and cannot be long delayed. Even though the hospital does not add to its bed complement in any way, additional services are required. If rehabilitative, long-term and mental health services are added, the service requirements will be further increased.

Northern Saskatchewan, indeed all of Saskatchewan, lacks a fully developed children's centre. Facilities for child care at University Hospital require considerable renovation at least and, if this should become a major child centre, further facilities should be added. As a minimum, the present paediatrics ward, which houses a total of 69 beds, cribs and bassinets on a single unit, should be replaced by three separate wards. An eventual total capacity of at least 80 to 100 children should be our objective as an effective service, teaching and research unit. Should University Hospital eventually provide a major child care centre, the size would require to be larger still.

Plans to provide a residence building for medical internes and residents in 1960 have not materialized. These "housemen" continue to occupy valuable potential patient space in the main building. Likewise, the present house staff quarters are not suited to homelike living. The matter of providing adequate house staff living quarters must be dealt with as soon as possible.

TABLE 25. GROWTH OF NUMBER OF PATIENTS DISCHARGED FROM THE UNIVERSITY HOSPITAL, SASKATCHEWAN, 1957-1961

Year	1957	1958	1959	1960	1961
Total patients discharged	11,451	10,800	10,400	9,800	9,200
Total patient days	109,907	127,928	127,928	121,421	121,421
Average days stay per patient	10.1	10.6	10.8	11.1	10.7

Year	1957-1958	1958-1959	1959-1960
Total patients discharged	2.2	2.1	2.1
Total patient days	1.0	1.0	0.9

TABLE 71. GROWTH IN SERVICE OFFERED AT THE UNIVERSITY HOSPITAL, SASKATOON, SASKATCHEWAN, 1956-1960

Service	1956	1957	1958	1959	1960
Patients discharged from hospital.....	8,309	9,802	10,406	10,669	11,183
Surgical operations.....	3,783	4,556	4,950	5,263	5,952
Births.....	947	1,020	1,069	1,126	1,088
Drug requisitions.....	91,000	111,340	131,876	146,048	154,247
Total meals—patients and staff.....	739,557	830,318	866,931	870,661	872,941
Units of laboratory work—pathology.....	387,233	471,434	614,509	689,881	846,036
Tons of laundry.....	890	986	1,052	1,157	1,218
	Percentage increase				
	1956-1957	1957-1958	1958-1959	1959-1960	
Patients discharged from hospital.....	18.0	6.2	2.5	4.8	
Surgical operations.....	20.4	8.6	6.3	13.1	
Births.....	7.7	4.8	5.3	-3.5	
Drug requisitions.....	22.4	18.4	10.7	5.6	
Total meals—patients and staff.....	12.3	4.4	0.4	0.3	
Units of laboratory work—pathology.....	21.7	30.3	12.3	22.6	
Tons of laundry.....	10.8	6.7	10.0	5.3	

TABLE 72. GROWTH IN NUMBER OF PATIENTS DISCHARGED FROM THE UNIVERSITY HOSPITAL, SASKATOON, SASKATCHEWAN, 1957-1960

Item	1957	1958	1959	1960
Total patients discharged.....	9,802	10,406	10,669	11,183
Total patient days.....	152,485	157,928	157,658	160,807
Average days stay per patient.....	17.2	16.8	16.6	16.1
	Percentage increase			
	1957-1958	1958-1959	1959-1960	
Total patients discharged.....	6.2	2.5	4.8	
Total patient days.....	3.6	-0.2	2.0	

TABLE 73. ANALYSIS OF CARE BY DEPARTMENTS, UNIVERSITY HOSPITAL, SASKATOON, SASKATCHEWAN, 1960

Department	Discharges	Percentage involving autopsies	Percentage involving consultations	Average stay
Departments				
Medicine.....	2,027	80.6	42.1	20.0
Neurosurgery.....	323	96.2	52.9	22.7
Obstetrics and gynaecology.....	2,431	66.7	36.3	8.5
Gynaecology.....	913	.....	.....	.....
Obstetrics (delivered).....	1,083	.....	.....	.....
Obstetrics (other).....	435	.....	.....	.....
Ophthalmology.....	525	.....	10.9	8.7
Paediatrics.....	1,315	92.1	24.0	15.9
Psychiatry.....	634	100.0	24.1	20.1
Rehabilitation medicine.....	125	.....	59.2	7.7
Surgery.....	2,715	78.9	30.1	17.1
Patients				
All patients.....	11,183	82.0	29.8	.....
Adults and children.....	10,095	83.0	32.9	6.1
Newborn.....	1,088	58.3	0.7	7.5

THE UNIVERSITY COLLEGE OF MEDICINE

Medical student enrolment during the year 1960-61 was as follows:

	<i>Total</i>	<i>First year</i>	<i>Second year</i>	<i>Third year</i>	<i>Fourth year</i>
All students _____	126	39	31	30	26
Men _____	114	36	27	25	26
Women _____	12	3	4	5	—

As stated in previous reports, the most serious problem is the shortage of qualified applicants from the homes and schools of Saskatchewan. Following a plethora of candidates after World War II, non-veterans as well as veterans, a slump developed in 1951.

The salient feature in this record is the small and relatively constant number of applicants for Medicine during a decade of unprecedented flocking of young people to the universities. Although this relative decline of interest in medical studies has been most noticeable in the three Canadian prairie provinces, it has been recognized as a trend throughout Canada and the United States. Over the past three years the numbers of students entering Canada's 12 medical schools were 1,011, 989 and 946 respectively. During the same period one-third of all newly licensed doctors came from other countries, a source of manpower unlikely to continue indefinitely. With a growing population and a demand for wider distribution of still more comprehensive services, it is obvious that a shortage of physicians in Canada will ensue. It is the opinion of the faculty of the College of Medicine that the situation is serious and in urgent need of remedial action.

It is clear that various factors militate against the selection of a career in medicine by the young men and women of today. Until further study reveals their relative magnitude, several preliminary steps are obviously advisable. Recruiting campaigns should dispel the impression that one must be extraordinarily gifted to gain admission to Medicine. School teachers, pupils and parents should learn that the great competition of the postwar years has disappeared. More difficult, however, is the counter attraction of other technical fields. In comparison with engineering, chemistry and physics, medicine suffers badly from the standpoint of greater length of course and vastly greater financial cost. This year the medical faculty placed on record their conviction that the high cost of medical education, both in medical school and in subsequent hospital training, was a serious deterrent.

Examination results were as follows:

- Fourth year* — Entire class of 26 students graduated, two with great distinction.
- Third year* — All 30 students promoted without condition.
- Second year* — Of 31 in class, 26 promoted without condition; four conditional upon supplementals; one required to repeat the year.
- First year* — Original enrolment was 40. One withdrew before registration; four students withdrew during term, three from Saskatchewan and one from Hong Kong. Of those who took examinations, 27 were promoted without condition; three conditional upon supplementals; one forced by illness to partial student status (will complete Year I next session along with other profitable work); four required to repeat the year, all of whom have decided to do so.

These results reveal considerable improvement over recent years with the exception of the first year. It is suspected its high drop-out and failure rates reflect defects in the admissions procedure and in counselling resources.

The Class of 1961-62

Acceptances have been received for a full class of 40 in September, 1961. These include four repeaters and one who had withdrawn during term; four non-residents from Ghana via University of Arkansas, from Hungary via Pittsburgh, from Poland via McGill and one from the U.S.A., Michigan and Pittsburgh, and 31 from the University of Saskatchewan, of whom two had come earlier from the British West Indies.

The Saskatchewan acceptances included all who were academically eligible in a group of 44 new applicants; half a dozen of these had come earlier from other countries.

The four non-residents were picked from approximately 70 applicants whose cases were examined in some detail. Half of these reached the stage of scrutiny of the academic record by the Registrar. Altogether, some 370 enquiries were acknowledged. About 250 of these did not pursue the matter after receipt of our description of requirements for admission. Another 50 required one or more letters in further correspondence.

Internships

A rotating internship in a hospital approved by either the Canadian Medical Association or the American Medical Association is required before a graduate is licensed for practice. The 26 members of the class of 1961 received appointments as follows:

<i>In Saskatchewan</i>	
Saskatoon City Hospital	7
St. Paul's Hospital	5
University Hospital	5
<i>Elsewhere in Canada</i>	
Royal Columbian Hospital, New Westminster, B.C. —	1
St. Paul's Hospital, Vancouver	1
Calgary General Hospital, Calgary	1
St. Boniface Hospital, Winnipeg	1
Toronto Western Hospital, Toronto	1
<i>In the United States</i>	
Albany Hospital, Albany, N.Y. (an American student)	1
St. Joseph's Hospital, Flint, Michigan	3

Location and Activities of Medical Graduates

A survey of the first three classes of medical graduates, 1957, 1958 and 1959 (the class of 1960 was interning) revealed that 37 of the 99 graduates had spent one or more years in general practice in Saskatchewan, 19 in urban centers and 18 in rural communities. Advanced hospital training was being taken by 36 graduates, at least six of whom were known to be planning to do general practice. No doubt some of the others will do so also. Since specialty training for

the 1957 class, in the case of those choosing to become medical specialists, will not be complete until 1962 it is not known how many will return to Saskatchewan. It is gratifying to note how many graduates still in hospital training keep in touch with their former teachers or with members of the profession of the province.

Research

Reports from the 18 departments or semi-autonomous divisions reveal an increase in research activity in slightly over half of them. Over 100 authors contributed over 150 published reports on investigative work, in addition to review articles, case reports and abstracts of communications to scientific meetings. Worthy of special mention is the publication of the first monograph from the clinical departments established in 1954-55. Dr. Sidney P. Traub, Associate Professor of Diagnostic Radiology is the author of Roentgenology of Intracranial Meningiomas. This analysis of 170 examples of a particularly important type of tumor, studied at the Montreal Neurological Institute, has received high commendation in both clinical and x-ray circles.

One measure of a department's research interest and of the general acceptability of its accomplishment is obtained by comparing the total amount of money received in outside grants with the amount of its regular operating budget. For the College of Medicine as a whole the budgets of the academic departments add up to \$751,495, outside research grants amount to \$756,399, an excess of 6.5 per cent. On closer scrutiny, however, it is seen that only five departments had outside research revenue exceeding their university budgets — Bacteriology, Cancer Research, Physiology, Pharmacology, Psychiatry and Rehabilitation Medicine. Three of these are special cases. The Department of Cancer Research is co-extensive with the research unit of the National Cancer Institute, which pays almost all the bills. By custom, the research grants of the Provincial Government's Psychiatric Research Unit in the University Hospital are cited by the University Department of Psychiatry. Most of the provincial group are university teachers and the College of Medicine enjoys a degree of reflected glory from the research accomplished by its affiliated but administratively separate neighbor. Rehabilitation Medicine derives its major financial support from the University Hospital and its fairly large grant for research on Home Care was made to the Hospital.

The growth of scientific activity in a majority of the departments, however, is satisfactory. Perhaps one of the most wholesome developments is that of further collaboration between basic science and clinical departments. Five extramural research grants have been made jointly to paired teams in Anatomy, Biochemistry, Paediatrics and Ophthalmology. Outside research support for these departments amounts to a total of \$143,945, or 71.6 per cent of their combined university budgets. In view of the heavy teaching and/or service duties of most of these departments, in relation to their numbers of staff, this is regarded as admirable progress.

Significant Developments

A review of all the good work being done is not feasible, but developments of more general interest may be mentioned. Innovations in the diagnosis and treatment of heart disease are among a number of

the accomplishments. In this connection, one should cite the completion of facilities for full scale open heart surgery. Many individuals have contributed but special praise goes to Dr. C. L. N. Robinson for highly satisfactory results in this difficult field.

Problems in haemorrhage and thrombosis continue to receive major attention from a large research team. The results have attracted wide recognition. In medicine, Dr. L. Horlick has also been working on this aspect of coronary heart disease, while Professor R. Altschul in anatomy is extending his studies on the degenerative changes in blood vessels and on the influence of nicotinic acid on factors predisposing to this blight on middle and old age. Studies on the peripheral blood vessels in health and disease are being undertaken by Dr. N. J. Jackson of Surgery with new facilities in the Saskatchewan Cancer and Medical Research Institute. Whether the next big break-through in cardiovascular disease occurs in Saskatchewan or not, there will be teams here ready to accelerate the advance.

Host reactions to infection, toxins and antigens of diverse origin are being studied in three departments — Bacteriology, Anatomy and Physiology. Dr. B. B. Wiley is concerned with the determinants of virulence in the staphylococci, pus-forming organisms that sometimes threaten life. Work on sensitivity reactions to penicillin has aroused wide interest. Starting with the search for toxic substances in the serum of patients with schizophrenia, Dr. S. Fedoroff has found himself involved in the antigen-antibody reactions of both mammalian cells and bacteria. Joining physiology, Dr. G. B. Sutherland has brought with him an interesting technique for work on the immunochemistry of certain antibody reactions, one aspect of which concerns changes under environmental stress in aviation.

Of vital interest to veterinary as well as human medicine are the basic studies being done on a group of viruses which affect the brain, the heart and other tissues. A consideration of the chemical composition of the brown fat of prairie rodents and of the effect of hibernation is entailed. The reception accorded the published results so far suggest not only distinction for the trio of authors, but also a growing reputation for the University of Saskatchewan as a center for imaginative, substantial research in virology.

It is now a full decade since the present dean embarked on a preparatory year of travel to various centers of medical education, returning every month or two to Saskatoon to confer with officers of the University and faculty, the University Hospital Board and with members of the medical profession. The intent was to plan the new University Hospital and the expansion of the Old School of Medical Sciences into the new College of Medicine according to the most constructive trends of the time. It was both reassuring and exciting to come across teachers or departments here and there in the medical schools of Canada, Britain and the United States who were "discovering" a viewpoint already adopted many years earlier at the University of Saskatchewan.

This was the view that the real mission of a university was unfulfilled if its concern ceased after teaching the young and winning reasonable success in scholarly studies. A university could be fully alive, it was argued, only if acutely sensitive to the needs of its constituency and actively engaged in appropriate effort to meet them. It

should be experimental and it should be constantly peering ahead, constantly trying to describe the shape of things to come. This aspect of the responsibility of a professional school in the university setting was well described at the opening of the medical college session last September. In his address, Dr. Lester Evans of New York University illustrated the distinctive difference between the responsibility of a university and that of a service institution. "The university is the one institution in society committed, through action, to anticipate the future".

History is extending its study on the department's changes in kind... studies on the history of medicine and on factors influencing... in the field on medical and other studies on the technical field... research and practice are being undertaken by Dr. J. Jackson... of surgery with new facilities in the Department of Surgery and Medical... research facilities. Whether the next big break-through in cardiovascular... disease occurs in pathology or not there will be teams here ready... to undertake the challenge.

That progress in research, teaching and analysis of diverse origin... are being studied in three departments — Pathology, Anatomy and... Physiology. Dr. H. B. Wiley is concerned with the determinants of... structure in the respiratory system, particularly organs that sometimes... physiological function on research. Studies in pathology are advanced... wide interest. Research with the search for toxic substances in the... system of fishes with schistosomiasis. Dr. S. H. Huxford has found... benefit involved in the experimental reactions of both mammalian... cells and bacteria during physiology. Dr. C. B. Sutherland has brought... with him an extensive technique for work on the immunology of... various kinds of reactions, the aspect of which concrete changes under... experimental stress are investigated.

Of vital interest to research as well as human medicine are the... basic studies being done on a group of viruses which attack the brain... the part and other organs. A consideration of the chemical composition... of the protein of the virus is being made and the effect of substitution... is studied. The program described the published results so far toward... the only distinction for the time of authors, but also a growing... reputation for the laboratory of Sackelshorn as a center for... investigative experimental research in virology, virology changes from... studies of the virus.

It is now a full circle with the present year embarked on a... preparatory year of travel to various centers of medical education... returning every month or two to Saskatoon in order with officers... of the University and through the University Hospital Board and... departments of the medical profession. The intent was to plan the... new University Hospital and the expansion of the Old School of... medical centers into the new College of Medicine according to the... most contemporary trends of the time. It was both reassuring and... exciting to come across teachers or department heads and their... medical students of Canada, Britain and the United States who were... conducting a vigorous, almost ideal, type of work at the... University of Saskatchewan.

This was the view that the real mission of a university was... fulfilled if its concern centered after teaching the young and winning... responsible citizens in scholarly studies. A university could be fully... alive if it was concerned only if scholarly research in the field of its con... activities and activities of its members.

SASKATCHEWAN ANTI-TUBERCULOSIS LEAGUE

Through the courtesy of the Board of Directors and G. D. Barnett, M.D., Director of Medical Services and General Superintendent, the following report is included in this annual report of the Department of Public Health.

This is the 47th Annual Report of the Medical Services provided by the Saskatchewan Anti-Tuberculosis League, and covers the services provided during 1960. The year began with 388 patients in the three sanatoria. As usual the census increased as the year went by and at the end of June there were 406 patients on strength; at the end of the year the census was 390, an increase of 2 compared to December 1959.

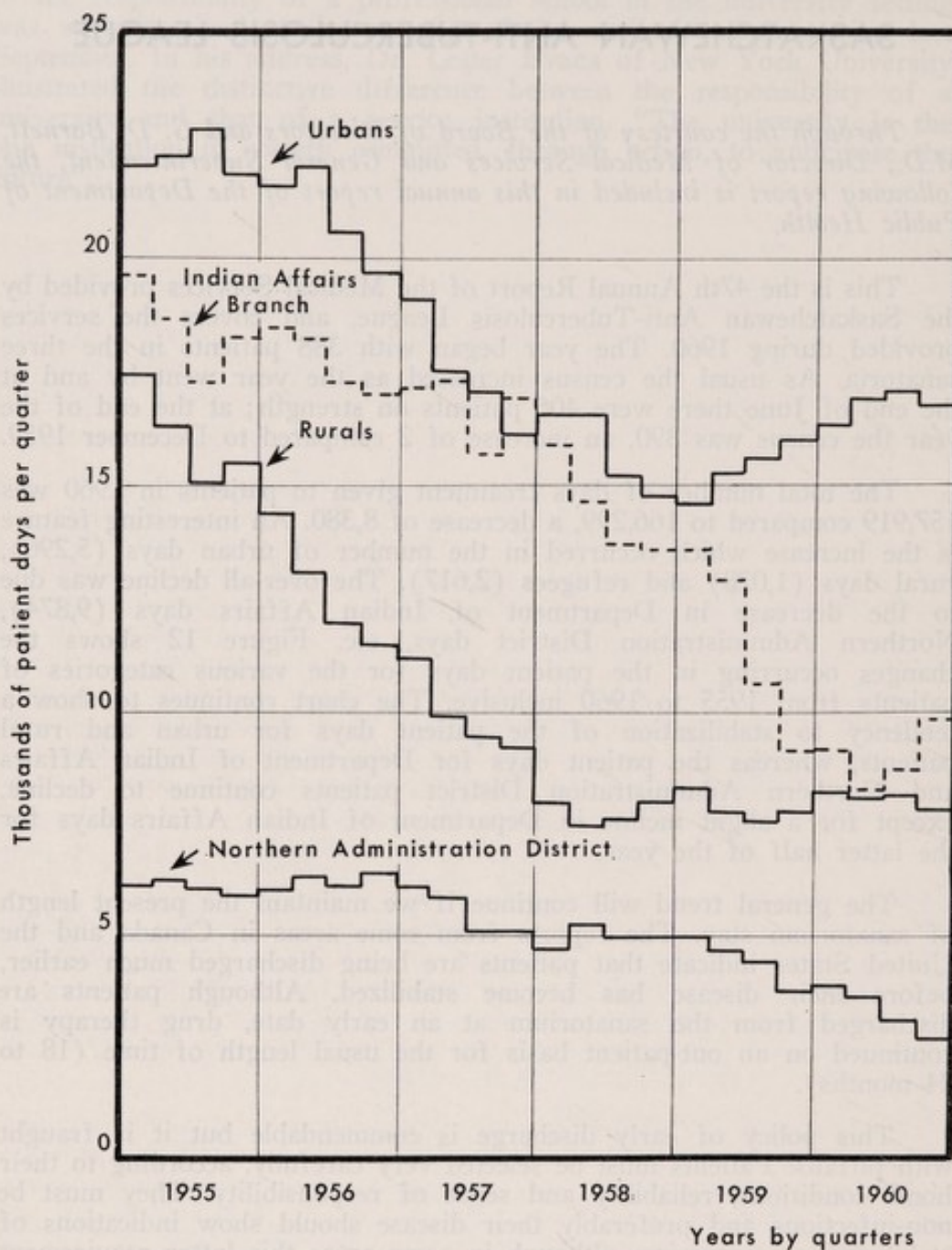
The total number of days treatment given to patients in 1960 was 157,919 compared to 166,299, a decrease of 8,380. An interesting feature is the increase which occurred in the number of urban days (5,296), rural days (1,028) and refugees (2,617). The over-all decline was due to the decrease in Department of Indian Affairs days (9,874), Northern Administration District days, etc. Figure 12 shows the changes occurring in the patient days for the various categories of patients from 1955 to 1960 inclusive. The chart continues to show a tendency to stabilization of the patient days for urban and rural patients, whereas the patient days for Department of Indian Affairs and Northern Administration District patients continue to decline, except for a slight incline in Department of Indian Affairs days for the latter half of the year.

The general trend will continue if we maintain the present length of sanatorium stay. The reports from some areas in Canada and the United States indicate that patients are being discharged much earlier, before their disease has become stabilized. Although patients are discharged from the sanatorium at an early date, drug therapy is continued on an out-patient basis for the usual length of time (18 to 24 months).

This policy of early discharge is commendable but it is fraught with pitfalls. Patients must be selected very carefully, according to their home conditions, reliability and sense of responsibility. They must be non-infectious and preferably their disease should show indications of stabilizing or regressing, although in some areas this latter requirement is not necessary. In spite of the careful selection of patients, disturbing reports are beginning to appear in the literature of the failure of patients to follow the prescribed drug and rest routine at home. As a result many of these patients will develop resistant organisms and will fail to heal their disease.

The average length of stay in sanatorium for patients in Saskatchewan has shown a decline. In 1960 average length of treatment in sanatorium was 12.08 months (365.5 days) compared to 12.93 months (393.3 days) in 1959. We expect that the decline will continue but it is not our intention to abandon sanatorium treatment, even for minimal

FIGURE 12. PATIENT DAYS SPENT IN TUBERCULOSIS SANATORIA,
SASKATCHEWAN, 1955-1960



The average length of stay in sanatoria for patients in Saskatchewan has shown a decline in 1960 average length of treatment in sanatorium was 15.08 months (452.5 days) compared to 15.93 months (481.7 days) in 1959. We expect that the decline will continue but it is not anticipated to abandon sanatorium treatment even for minimal

cases. The decline in the length of sanatorium treatment affects mainly the urban and rural patients, but not the Department of Indian Affairs or Northern Administration District patients. This latter group does not lend itself to proper supervision on an out-patient basis.

The number of new active cases discovered in 1960 has shown an increase of 16 over 1959; 208 in 1960 compared to 192 in 1959. Old cases admitted in 1960 were 99 compared to 111 in 1959, a decrease of 12. These 99 comprise 18 old cases admitted for the first time and 81 old cases readmitted. Comparable 1959 figures are 8 first admissions for old cases and 103 old cases readmitted. The increase in new cases is partly accounted for by the fact that we have included the ten tuberculous refugees detained for treatment during 1960. In addition, a goodly proportion of the increase in new cases is accounted for by the number of active cases of tuberculosis discovered as a result of the follow-up contact examination from one open case of tuberculosis. From February 1960 to the end of the year we examined 121 persons named as contacts to one case and to date we have discovered 25 new active cases.

This experience should serve as a warning that tuberculosis still presents a threat to our population. It points out that to-day an open case of tuberculosis in the community constitutes a much greater hazard than it did 30 or 40 years ago. Since 80 per cent of the population has never been exposed to tuberculosis, this means the general level of resistance in the community is lower. Therefore, although we have fewer active cases in the community, those that are present constitute a greater hazard. We must never relax our preventive program. It must continue to be directed towards the early discovery and segregation of all active cases.

The age distribution of the new active cases (non-Department of Indian Affairs) is interesting when compared to previous years. The table below shows the age distribution for the years 1950, 1959 and 1960.

Year	Total										Percentage
		0-4	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	over age of 60
1950	415	27	39	72	98	69	42	25	26	17	10.4
1959	192	14	16	15	30	25	21	18	21	32	27.6
1960	208	15	21	24	27	32	21	23	16	29	21.6

It is apparent that there has been a decided shift in the incidence of tuberculosis from the young adult (49 and under) to the older age groups, particularly in the age group 70 and over.

We believe that this change is the result of less infection in the community which in turn is the result of our early case-finding program (mass surveys, hospital admission x-rays, contact examinations, etc.). The question may be asked: If fewer cases are arising from individuals recently infected what then is the main source of new cases? In our last annual report we recorded our experience with a mass x-ray survey carried out in 1958 and 1959 among individuals with a previously known positive tuberculin. In this survey we discovered 10 new active cases of tuberculosis out of 33,229 x-ray examinations, which is equivalent to a rate of one new case for every 3,323 x-rays, about double the rate of our general mass surveys. However, in spite of the higher rate we decided not to continue with this type of survey.

It was our opinion that with the same effort a general survey could be held which would cover a larger group of people and hence discover more cases. Also it was thought that the ten cases discovered by this special survey would have or should have been discovered by our regular contact examination program, and that a general survey is required to detect new cases as they develop among the large tuberculin negative section of the population.

In spite of this decision not to continue with the positive tuberculin survey, it was suspected that this section of the population (positive tuberculin) or a portion of it was responsible for many of the new cases of tuberculosis. In order to identify this reservoir a study was made of the new cases of tuberculosis discovered in the Fort Qu'Appelle sanatorium zone covering the years 1958 and 1959. The preliminary results from this study show that out of 91 new active cases of pulmonary tuberculosis, 28 or 30.8 per cent arose from individuals recently infected (tuberculin converters) and 51 or 56.0 per cent came from individuals who had previous radiological evidence of infection with tuberculosis — that is, we had previous x-rays in which old tuberculous scars could be demonstrated. The source of the remaining 12 cases (13.2 per cent) could not be determined. The previous x-rays were all considered negative but sufficient information on the previous tuberculin reaction was lacking. In all probability most of this group developed tuberculosis as a result of recent infection.

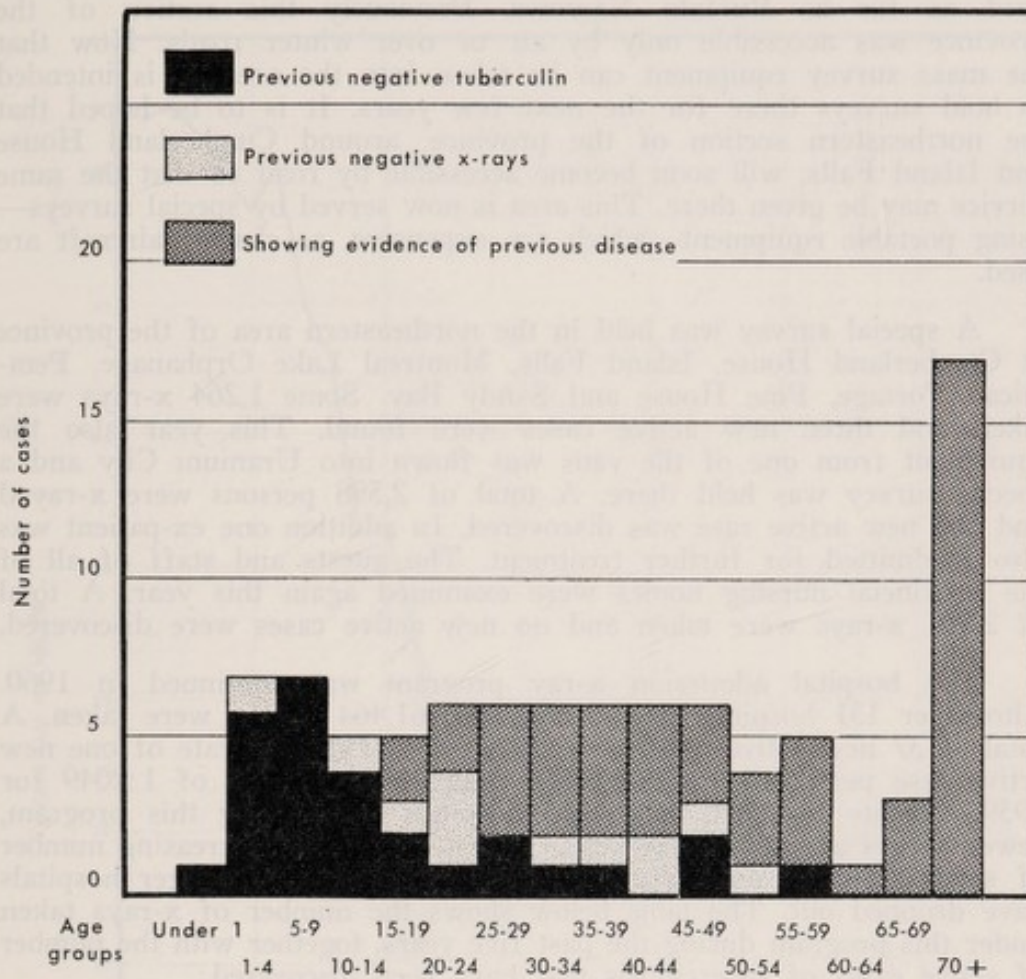
These results indicate that most of our new cases (56 per cent) arise from individuals with previous inactive disease. This also accounts for the shift in the age incidence of tuberculosis. Figure 13 shows the age distribution of the new active cases according to their source. This chart shows that in the younger patients recent infection is the main cause of tuberculosis, whereas in the older age groups the majority of new cases arise from individuals that had been classified as "tuberculosis inactive". This latter group actually is a reservoir of infection in the community from which new cases develop.

This then is the situation in Saskatchewan today. On one hand we have a large section of the population that has never been exposed to tuberculosis, and hence the general level of resistance in the community is lower: on the other hand, and living side by side with this first group, we have a smaller section of the population that has had tuberculosis but have never received specific treatment. Active cases of tuberculosis will continue to arise from this latter group. If they are not detected early, infection will spread to the unexposed population. It is our responsibility to keep the reservoir under constant surveillance in order to detect active cases as early as possible. Therefore this reservoir of active cases should have regular follow-up x-rays and sputum examinations. This is the same procedure followed for patients once they have been discharged from the sanatorium and have been classified as "inactive tuberculosis".

The number of deaths from tuberculosis in Saskatchewan in 1960 totalled 34 which includes 8 registered Indians. In 1959, the corresponding figures were 19 White deaths and 9 Indian deaths. That is, there has been an increase of seven in the White deaths and a decrease of one among the Indian population. The age distribution of patients dying from tuberculosis is:

Year	Total	0-4	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	Not stated
1958	23	1	0	1	1	3	4	1	6	6	0
1959	28	2	0	2	2	1	1	5	4	11	0
1960	34	2	0	1	1	5	4	5	5	11	0

FIGURE 13. ACTIVE PULMONARY LESIONS, FORT SAN ZONE, 1958-1959



One of the deaths that occurred under the age of ten was an Indian child, age two, — the cause military tuberculosis; the other death was in a two year old Metis child — the cause tuberculous meningitis. This year 47 per cent of the deaths occurred in the individuals 60 years and over. Seventeen deaths occurred in sanatoria, 14 in general and mental hospitals and three at home.

Mass tuberculin and x-ray surveys were carried out successfully in 111 rural municipalities, two Local Improvement Districts and the following cities: Moose Jaw, Swift Current, Melville and Lloydminster. Altogether 200,506 persons attended the surveys; 117,024 were x-rayed and 168,781 were tuberculin tested. Individuals under the age of 20 with a negative tuberculin test were not x-rayed unless they requested it. In this latter group there were 83,482 persons. The results of the tuberculin survey are shown in Table 74. This table includes the school population in the city of Moose Jaw, and it will be noted that the percentage of positive reactors is 19.5 per cent. This is the first year that this rate has fallen below 20 per cent and it may be due to the inclusion of the Moose Jaw school population. If the latter figures are excluded, the over-all percentage of positive tuberculin reactors would be 20.2 per cent. The number of new active cases discovered by the surveys was 29. This is equivalent to a rate of one new active case per 6,914 examinations, compared to a rate of 1:5452 for 1959. This year,

for the first time, it was possible to take one of the vans into the northwestern section of the province. The van was able to travel by road as far as Buffalo Narrows. Previously this section of the province was accessible only by air or over winter roads. Now that the mass survey equipment can be taken into the area, it is intended to hold surveys there for the next few years. It is to be hoped that the northeastern section of the province, around Cumberland House and Island Falls, will soon become accessible by road so that the same service may be given there. This area is now served by special surveys—using portable equipment—which are expensive, as charter aircraft are used.

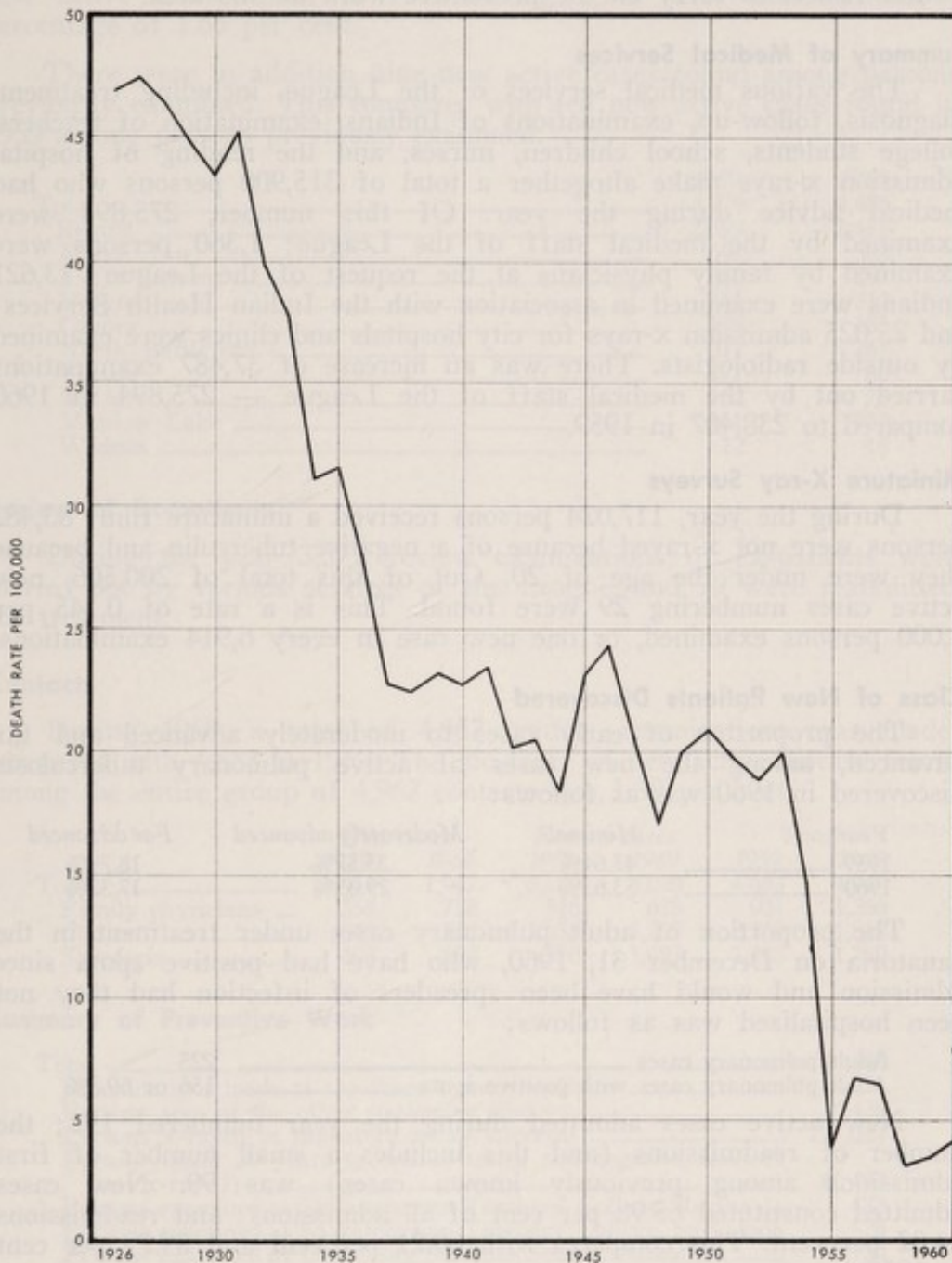
A special survey was held in the northeastern area of the province at Cumberland House, Island Falls, Montreal Lake Orphanage, Pemican Portage, Pine House and Sandy Bay. Some 1,264 x-rays were taken and three new active cases were found. This year also the equipment from one of the vans was flown into Uranium City and a special survey was held there. A total of 2,598 persons were x-rayed and one new active case was discovered. In addition one ex-patient was also readmitted for further treatment. The guests and staff of all of the provincial nursing homes were examined again this year. A total of 2,791 x-rays were taken and no new active cases were discovered.

The hospital admission x-ray program was continued in 1960. Altogether 131 hospitals participated and 61,464 x-rays were taken. A total of 37 new active cases were discovered. This is a rate of one new active case per 1,661 examinations, compared to a rate of 1:2049 for 1959. Despite the fact that more hospitals are joining this program, fewer x-rays are taken each year. This is because an increasing number of small hospitals are participating, and a few of the larger hospitals have dropped out. The table below shows the number of x-rays taken under this program during the past five years, together with the number of active cases of tuberculosis that have been discovered:

<i>Year</i>	<i>Number of x-rays</i>	<i>Number of active cases discovered</i>	<i>Ratio</i>
1955	70,192	45	1:1560
1956	73,243	44	1:1665
1957	74,959	46	1:1629
1958	64,214	47	1:1366
1959	65,558	32	1:2049
1960	61,464	37	1:1661

In 1960 the League co-operated with the federal government and the Provincial Department of Public Health in accepting responsibility for treatment of tuberculous refugees from displaced persons camps in Europe. Altogether we received 19 patients for treatment. The first group of ten patients arrived on January 21st, the second group of nine arrived on August 2nd. Each group was admitted to the sanatorium until the activity of their disease was determined. Those that were considered to have inactive disease were discharged, the remainder were detained for treatment. Altogether ten cases, five from each group, were considered to have active tuberculosis; at the year end there were still seven patients under treatment in the sanatorium. During the year this special group accounted for 2,680 days of treatment. An adult education class in English was established soon after the arrival of the first group, and this has been worthwhile as most of the refugees have acquired a basic understanding of English before being discharged from the sanatorium.

FIGURE 14. TUBERCULOSIS DEATH RATE PER 100,000 POPULATION, SASKATCHEWAN, 1926-1960



During the year, 13,621 Indian x-rays were interpreted by the staff of the sanatoria, and 27 new cases of active tuberculosis were discovered. Of this number, 13,316 films were taken by the department and the remainder by the League.

The special committee established by the League and the Provincial Department of Public Health to study the future of tuberculosis in the province completed its work in time to submit a report to the Board of Directors of the League in August 1960. At a special board meeting in October the board decided to discontinue operating the Prince Albert sanatorium as a tuberculosis institution. This property

will now revert to government control to be utilized for some other purpose. It is expected that a tuberculosis clinic will be established in Prince Albert to carry on the preventive work in this area.

Summary of Medical Services

The various medical services of the League, including treatment, diagnosis, follow-up, examinations of Indians, examination of teachers, college students, school children, nurses, and the reading of hospital admission x-rays make altogether a total of 315,900 persons who had medical advice during the year. Of this number, 275,894 were examined by the medical staff of the League; 1,360 persons were examined by family physicians at the request of the League; 13,621 Indians were examined in association with the Indian Health Services; and 25,025 admission x-rays for city hospitals and clinics were examined by outside radiologists. There was an increase of 37,487 examinations carried out by the medical staff of the League — 275,894 in 1960 compared to 238,407 in 1959.

Miniature X-ray Surveys

During the year, 117,024 persons received a miniature film; 83,482 persons were not x-rayed because of a negative tuberculin and because they were under the age of 20. Out of this total of 200,506, new active cases numbering 29 were found. This is a rate of 0.145 per 1,000 persons examined, or one new case in every 6,914 examinations.

Class of New Patients Discovered

The proportion of early cases to moderately advanced and far advanced, among the new cases of active pulmonary tuberculosis discovered in 1960 was as follows:

Year	Minimal	Moderately advanced	Far advanced
1959	45.64%	35.57%	18.79%
1960	53.63%	29.05%	17.32%

The proportion of adult pulmonary cases under treatment in the sanatoria on December 31, 1960, who have had positive sputa since admission and would have been spreaders of infection had they not been hospitalized was as follows:

Adult pulmonary cases	225
Adult pulmonary cases with positive sputa	156 or 69.3%

New active cases admitted during the year numbered 192; the number of readmissions (and this includes a small number of first admissions among previously known cases) was 99. New cases admitted constituted 65.98 per cent of all admissions; and readmissions 34.02 per cent. This compares with 60.21 per cent and 39.79 per cent in 1959.

There were 208 new cases of active tuberculosis discovered in 1960, both pulmonary and non-pulmonary — 16 more than in 1959.

The percentage of non-pulmonary new cases discovered during 1960 was 13.94 per cent compared with 22.39 per cent in 1959.

Of the new cases of active tuberculosis discovered in 1960, 16 or 7.69 per cent were treated or observed outside the sanatoria.

Stationary Clinics

The following table shows the total number of examinations made at the clinics for the past two years. There was a decrease of 553 in the total number examined.

In 1960, 16 new active cases were discovered among 1,031 first examinations—a percentage of 1.55 per cent. This compares with 19 new active cases found in 1959 among 1,147 first examinations, a percentage of 1.65 per cent.

There were in addition nine new active cases found among persons previously examined. This compares with ten new active cases found in 1959 among persons previously examined.

	1959	1960
Total	4,979	4,426
Regina	2,659	2,451
Moose Jaw	697	582
Swift Current	360	297
Yorkton	461	313
Canora	178	186
North Battleford	312	261
Tisdale	77	86
Melfort	62	73
Meadow Lake	161	159
Wadena	12	18

Review of Ex-patients

During the year 3,575 review examinations of ex-patients were carried out by various services of the League, and 99 were readmitted for treatment.

Contacts

During 1960, a total of 4,967 contact examinations was made, compared with 4,633 in 1959. The incidence of new active disease found among the entire group of 4,967 contacts was 1.89 per cent.

	New cases		Review cases		Total	
	1959	1960	1959	1960	1959	1960
Total	1,464	1,947	3,169	3,020	4,633	4,967
Family physicians	355	732	546	628	901	1,360
Clinics	616	521	1,653	1,297	2,269	1,818
Sanatoria	493	694	970	1,095	1,463	1,789

Summary of Preventive Work

Total	304,400
Examinations made at the three sanatoria clinics	4,571
Persons seen at the other stationary clinics	4,426
Persons x-rayed in miniature x-ray surveys ¹	117,024
Persons under 20 years tuberculin tested and negative reactors (not x-rayed)	83,482
Persons examined at Saskatchewan Teachers' College, Regina	423
Persons examined at Saskatchewan Teachers' College, Saskatoon	526
Persons examined at University Summer School, Saskatoon	1,130
Persons examined in school surveys	1,362
Persons examined in nursing homes	2,791
Persons examined in miscellaneous surveys	5,998
Nurses examined in hospitals	1,109
Contacts examined by family physicians	1,360
Non-treaty persons examined	3,273
Indian films read by the League staff in co-operation with the Indian Health Services	13,316
Staff and staff families at Indian schools, reserves and hospitals	210
Hospital and Medical Arts Clinic admission films taken and interpreted by League staff, and radiologists	63,399

This is an increase of 35,164 examinations over 1959 and the service cost \$200,774.50.

¹ In addition 168,781 tuberculin tests were given.

Length of Treatment

The average period of treatment of the tuberculosis cases discharged in 1960 was 12.08 months.

Examination of Indians

During 1960 Indian children in the Lebret, Duck Lake, and Prince Albert Residential schools were examined, a total of 929. Among these 929 children examined, no new active cases were found.

A total of 12,387 Indians (adults, preschool and day school children) were examined at the following reserves: Beardy's, Big River, Black Lake, Canoe Lake, Clear Lake, Co-op Point, Cowesses, Cree Lake, Cumberland House, Dillon, Fond du Lac, Gordon, Kahkawistahaw, Keeseekoose, Key, Kinistino, James Smith, John Smith, Joseph Bighead, LaLoche, La Ronge, Little Island, Little Pine, Little Red River, Loon Lake, Meadow Lake, Mistawasis, Montreal Lake, Moosomin, Mosquito, Muskeg Lake, Nut Lake, Ochawapace, One Arrows, Onion Lake, Patuanak, Pelican Lake, Pelican Narrows, Piapot, Poorman's, Poundmaker, Red Earth, Red Pheasant, Sakimay, Sandy Lake, Saulteaux, Shoal Lake, South End Reindeer, Standing Buffalo, Stony Lake, Sturgeon Landing, Sturgeon Lake, Sweetgrass, Thunderchild, Uranium City, Waterhen, Whitebear, Witchigan Lake, Wollaston Lake.

Among this group of 12,387, there were 27 who required treatment, or 0.22 per cent.

The usual fine co-operation of the Indian Health Services was obtained throughout the year.

Admission X-rays

The following table gives the number of admission x-rays taken by various hospitals during 1960. The figures in brackets indicate the number of new active cases of tuberculosis discovered.

<i>Hospital</i>	<i>No. of X-rays</i>	<i>Hospital</i>	<i>No. of X-rays</i>
Total (37 including 11 Indians) ..	61,464	Esterhazy (0) ..	654
Arborfield (0) ..	94	Estevan (0) ..	1,460
Assiniboia (0) ..	382	Eston (0) ..	485
Balcarres (0) ..	711	Fillmore (0) ..	421
Beechy (0) ..	140	Foam Lake (0) ..	113
Bengough (0) ..	136	Frontier (0) ..	72
Bienfait (0) ..	236	Goodsoil (0) ..	334
Biggar (0) ..	488	Gravelbourg (0) ..	672
Big River (0) ..	268	Green Lake (0) ..	6
Birch Hills (0) ..	110	Grenfell (0) ..	175
Broadview (1) ..	430	Gull Lake (0) ..	155
Buffalo Narrows (0) ..	16	Hafford (1) ..	317
Cabri (0) ..	210	Herbert (0) ..	542
Canora (0) ..	1,101	Hodgeville (0) ..	62
Carrot River (1) ..	277	Hudson Bay (0) ..	159
Central Butte (0) ..	278	Humboldt (0) ..	579
Climax (0) ..	17	Ile a la Crosse (4) ..	636
Coronach (0) ..	31	Imperial (0) ..	198
Cudworth (0) ..	437	Indian Head (0) ..	445
Cumberland House (0) ..	17	Invermay (0) ..	31
Cunar (0) ..	239	Kamsack (0) ..	321
Delisle (0) ..	50	Kelvington (0) ..	237
Dinsmore (0) ..	126	Kerrobert (0) ..	268
Doddsland (0) ..	74	Kindersley (0) ..	412
Eastend (0) ..	114	Kipling (0) ..	431
Edam (0) ..	57	Kyle-White Bear (0) ..	104
Elrose (0) ..	125	LaFleche (0) ..	233

<i>Hospital</i>	<i>No. of X-rays</i>	<i>Hospital</i>	<i>No. of X-rays</i>
Lampman (0)	244	Prince Albert (Victoria) (0) ..	1,896
Langenburg (0)	586	Qu'Appelle (0)	257
LaRonge (2)	143	Quill Lake (0)	79
Lashburn (0)	121	Rabbit Lake (0)	55
Leader (0)	188	Radville (0)	390
Leoville (2)	239	Redvers (1)	332
Lestock (0)	811	Regina General (6)	10,628
Lloydminster (0)	18	Regina Grey Nuns (0)	541
Loon Lake (1)	367	Rockglen (0)	31
Lucky Lake (0)	144	Rose Valley (0)	258
Macklin (0)	252	Rosthern (0)	413
Maidstone (0)	240	Saltcoats (0)	33
Mankota (0)	147	Sandy Bay (0)	11
Maple Creek (0)	780	Saskatoon University (0)	5,441
Meadow Lake (0)	182	Shaunavon (0)	321
Melfort (0)	1,087	Shellbrook (1)	290
Melville (1)	944	Smeaton (3)	221
Midale (0)	29	Spiritwood (0)	73
Montmartre (0)	146	Swift Current Union (0)	360
Moose Jaw Providence (0)	1,098	St. Walburg (0)	123
Moose Jaw Union (2)	853	Stony Rapids (0)	4
Moosomin (0)	340	Theodore (0)	16
Mossbank (0)	245	Tisdale (0)	245
Neilburg (0)	285	Turtleford (2)	245
Nipawin (0)	1,276	Unity (0)	449
Nokomis (0)	297	Uranium City (0)	89
Norquay (0)	174	Val Marie (0)	88
North Battleford Saskatchewan Hospital (2)	1,833	Vanguard (0)	312
North Battleford (Notre Dame) (1)	1,438	Wakaw (1)	558
Outlook (0)	199	Watrous (0)	348
Oxbow (0)	172	Watson (0)	114
Pangman (0)	60	Wawota (0)	165
Ponteix (1)	141	Weyburn (0)	97
Porcupine-Carragana (0)	546	Whitewood (1)	173
Portage la Loche (0)	164	Wilkie (0)	2
Preeceville (2)	541	Willowbunch (0)	63
Prelate (0)	85	Wolseley (0)	558
Prince Albert (Holy Family) (1)	2,273	Wynyard (0)	341
		Yorkton (0)	1,262
		Zenon Park (0)	208

It will be seen from the above that the incidence of new active cases is one in every 1,661 hospital admission films.

In addition, 1,935 admission x-rays were taken at the Medical Arts Clinic in Regina. No new active cases of tuberculosis were discovered.

Examination of Students in Teachers' College

During the year 1960, the students at the Teachers' College at Regina and Saskatoon were examined.

In the Regina group, 317 students were tuberculin tested, 12 had a positive tuberculin reaction on account of previously having had B.C.G. vaccine. Of the remainder, 3.9 per cent were positive tuberculin reactors.

In the Saskatchewan group, 526 students were tuberculin tested, 17 had a positive tuberculin reaction on account of previously having had B.C.G. vaccine. Of the remainder, 9.6 per cent were positive tuberculin reactors.

No new active cases were discovered in the entire group of students.

The arrangement made through the co-operation of the Department of Education and the teachers, for the examination for tuberculosis of all the teachers in the schools of Saskatchewan in the clinics of the League, is progressing satisfactorily. It is important that both the teachers and pupils be protected against the spread of the disease.

Co-operation of Teachers

We wish to express our appreciation and gratitude to the teachers for their co-operation in the preventive work of the League. They are the basic group that will instill among the children of the province the role of prevention.

Forty-four medical students from the University of Saskatchewan attended lectures and clinics at the Saskatoon Sanatorium during the year.

Affiliation Course in Tuberculosis Nursing

This course for student nurses was continued at both Saskatoon and Fort San during 1960.

At Fort San during the year 167 students attended the affiliation course, while at Saskatoon 135 students received instruction in tuberculosis nursing and prevention. Each course is of four weeks' duration and the majority of students expressed favourable comments regarding this period of affiliation.

The Regina General Hospital has discontinued sending student nurses to the affiliation course. The reason given was the recent introduction of a two-year nursing course for students rather than the customary three years. Apparently the present curriculum under the two-year program at the Regina General Hospital does not allow sufficient time to permit the students to attend the course at Fort San.

B.C.G. Vaccination

The total number of vaccinations done by the League in 1960 was 1,435. This compares with 1,142 done in 1959.

The number of B.C.G. vaccinations reported to the League in 1960 by the Saskatchewan Hospitals at Weyburn and North Battleford, and the Saskatchewan Training School at Moose Jaw, totals 579. The number of B.C.G. vaccinations carried out by the Indian Health Services in 1960 was 269.

Financial

During the year 1960, 157,919 days treatment were given in Sanatoria and hospitals, compared with 166,299 days during the preceding year — a decrease of 8,380.

The per diem cost of treatment advanced to \$12.097 in 1960 from \$11.772 — an increase of \$0.325 per patient day.

The net cost of treatment was \$1,910,460.55 compared with \$1,957,681.03, a decrease of \$47,220.48.

TABLE 74. SASKATCHEWAN TUBERCULIN SURVEY, 1960

Age	All tuberculin tests	Tuberculin negative	Tuberculin positive	Percentage negative	Percentage positive
All ages.....	168,781	135,902	32,879	80.5	19.5
Male.....	87,165	68,313	18,852	78.4	21.6
Female.....	81,616	67,589	14,027	82.8	17.2
Under 1 year.....	2,926	2,923	3	99.9	0.1
Male.....	1,484	1,482	2	99.9	0.1
Female.....	1,442	1,441	1	99.9	0.1
1 year.....	4,034	4,025	9	99.8	0.2
Male.....	2,077	2,074	3	99.9	0.1
Female.....	1,957	1,951	6	99.7	0.3
2 years.....	4,808	4,792	16	99.7	0.3
Male.....	2,424	2,415	9	99.6	0.4
Female.....	2,384	2,377	7	99.7	0.3
3 years.....	5,032	5,019	13	99.7	0.3
Male.....	2,617	2,612	5	99.8	0.2
Female.....	2,415	2,407	8	99.7	0.3
4 years.....	5,065	5,035	30	99.4	0.6
Male.....	2,604	2,588	16	99.4	0.6
Female.....	2,461	2,447	14	99.4	0.6
5-9.....	26,213	25,913	300	98.9	1.1
Male.....	13,487	13,321	166	98.8	1.2
Female.....	12,726	12,592	134	98.9	1.1
10-14.....	23,248	22,641	607	97.4	2.6
Male.....	11,985	11,668	317	97.4	2.6
Female.....	11,263	10,973	290	97.4	2.6
15-19.....	14,236	13,376	860	94.0	6.0
Male.....	7,635	7,144	491	93.6	6.4
Female.....	6,601	6,232	369	94.4	5.6
20-24.....	6,661	5,864	797	88.0	12.0
Male.....	3,399	2,980	419	87.7	12.3
Female.....	3,262	2,884	378	88.4	11.6
25-29.....	7,798	6,471	1,327	83.0	17.0
Male.....	3,697	3,076	621	83.2	16.8
Female.....	4,101	3,395	706	82.8	17.2

Age	All tuberculin tests	Tuberculin negative	Tuberculin positive	Percentage negative	Percentage positive
30-34.....	9,443	7,434	2,009	78.7	21.3
Male.....	4,557	3,542	1,015	77.7	22.3
Female.....	4,886	3,892	994	79.7	20.3
35-39.....	10,202	7,098	3,104	69.6	30.4
Male.....	4,938	3,263	1,675	66.1	33.9
Female.....	5,264	3,835	1,429	72.9	27.1
40-44.....	10,354	6,936	3,418	67.0	33.0
Male.....	5,057	3,131	1,926	61.9	38.1
Female.....	5,297	3,805	1,492	71.8	28.2
45-49.....	9,613	5,800	3,813	60.3	39.7
Male.....	4,903	2,802	2,101	57.1	42.9
Female.....	4,710	2,998	1,712	63.7	36.3
50-54.....	7,783	3,875	3,908	49.8	50.2
Male.....	4,172	1,937	2,235	46.4	53.6
Female.....	3,611	1,938	1,673	53.7	46.3
55-59.....	6,186	2,614	3,572	42.3	57.7
Male.....	3,441	1,308	2,133	38.0	62.0
Female.....	2,745	1,306	1,439	47.6	52.4
60-64.....	4,844	1,867	2,977	38.5	61.5
Male.....	2,600	834	1,766	32.1	67.9
Female.....	2,244	1,033	1,211	46.0	54.0
65-69.....	4,092	1,536	2,556	37.5	62.5
Male.....	2,310	704	1,606	30.5	69.5
Female.....	1,782	832	950	46.7	53.3
70 and over.....	6,151	2,602	3,549	42.3	57.7
Male.....	3,729	1,388	2,341	37.2	62.8
Female.....	2,422	1,214	1,208	50.1	49.9
Not stated.....	92	81	11	88.0	12.0
Male.....	49	44	5	89.8	10.2
Female.....	43	37	6	86.0	14.0

TABLE 75. STAFF OF THE TUBERCULOSIS SANATORIA, SASKATCHEWAN, DECEMBER 31, 1960

Staff	Total	Sanatoria		
		Fort San	Saskatoon	Prince Albert
Total.....	444	174	133	137
Administrative and clerical.....	39	22	12	5
Salaried doctors (full-time).....	12	6	3	3
Graduate nurses.....	47	17	18	12
Nurses' assistants.....	105	37	31	37
Graduate dietitians.....	1	1	.....	.....
Orderlies and cleaners.....	52	17	17	18
Instructors.....	6	2	1	3
Academic.....	4	1	1	2
Vocational.....	2	1	.....	1
Technicians.....	14	5	6	3
X-ray.....	6	2	2	2
Laboratory.....	8	3	4	1
All other employees.....	168	67	45	56

TABLE 76. SURGICAL, RADIOLOGICAL AND LABORATORY SERVICES RENDERED TO PATIENTS IN THE TUBERCULOSIS SANATORIA, SASKATCHEWAN, 1960

Type of service	Total	Sanatoria		
		Fort San	Saskatoon	Prince Albert
Surgical operations.....	429	150	239	40
Major.....	92	16	75	1
Minor.....	337	134	164	39
Pneumoperitoneum and pneumothorax treatments.....	11	1	10	.....
Laboratory examinations.....	32,346	11,483	11,042	9,821
X-ray examinations in sanatoria.....	13,492	3,779	7,070	2,643
Mass miniature x-ray survey films*.....	117,024	67,818	26,217	22,989
Miniature x-ray special survey films.....	8,638	2,792	2,259	3,587
Special x-ray surveys—large films.....	3,114	1,615	1,049	450
Kahn tests.....	927	471	213	243
Autopsies performed.....	5	2	1	2

* In addition 83,482 tuberculin tests were done.

TABLE 77. PREVENTIVE SERVICES PROVIDED AT THE TUBERCULOSIS SANATORIA, SASKATCHEWAN, 1960

Type and place of preventive services	Total	Sanatoria		
		Fort San	Saskatoon	Prince Albert
Clinics conducted within sanatoria				
Cases diagnosed.....	1,321	286	773	262
Cases reviewed.....	3,256	913	1,332	1,011
Pneumothorax, pneumoperitoneum and special treatments.....	11	4	7	....
Clinics in outside hospitals				
Cases diagnosed and reviewed.....	4,291	3,694	18	579
X-ray examinations.....	3,512	2,929	18	565
Photofluorographic surveys				
Persons examined (mass surveys)*.....	117,024	67,818	26,217	22,989
Persons examined (special surveys).....	8,638	2,792	2,259	3,587
Special surveys using large films				
Persons examined.....	3,114	1,615	1,049	450

* In addition 83,482 tuberculin tests were done.

TABLE 78. NUMBER OF PERSONS SEEN WITH ACTIVE TUBERCULOSIS BY TYPE OF CASE AND TYPE OF TUBERCULOSIS, SASKATCHEWAN, 1960

Type of case	Total	Type of tuberculosis	
		Pulmonary	Non-pulmonary
All active tuberculosis cases.....	307	257	50
New cases.....	208	179	29
Admitted to sanatoria.....	192	168	24
Not admitted to sanatoria.....	16	11	5
Old cases.....	99	78	21
Readmissions.....	81	64	17
First admissions (previously diagnosed).....	18	14	4

TABLE 79. BED COMPLEMENT AND MOVEMENT OF PATIENTS OF TUBERCULOSIS SANATORIA, SASKATCHEWAN, 1960

Item	Total*	Sanatoria		
		Fort San	Saskatoon	Prince Albert
Bed complement.....	662	300	143	219
Infirmery beds.....	536	174	143	219
Pavilion beds.....	126	126	....	....
Movement of patients				
Total patients under care during this year†.....	1,028	321	331	376
Patients in sanatoria, January 1, 1960.....	388	120	107	161
Admissions during year.....	535	158	181	196
Transfers from other sanatoria.....	105	43	43	19
Discharges, deaths and transfers.....	638	213	208	217
Discharges.....	530	177	159	194
Deaths.....	25	9	8	8
Transfers to other sanatoria.....	83	27	41	15
Patients in sanatoria, December 31, 1960.....	390	108	123	159
Total patient days.....	157,919	49,135	45,291	63,493
Average daily census.....	432.65	134.61	124.08	173.95

* The average length of treatment for active tuberculosis cases discharged in 1960 was 12.08 months.

† This includes tuberculosis patients cared for in general hospitals at the expense of the Saskatchewan Anti-Tuberculosis League.

TABLE 80. INCOME AND EXPENDITURES, TUBERCULOSIS SANATORIA, SASKATCHEWAN, 1960

Income, 1960	
Municipal levy.....	\$ 1,082,000.08
Rural.....	515,498.71
Urban.....	541,501.37
Northern Saskatchewan Administration District.....	25,000.00
Patients' fees.....	456,968.16
Provincial government grants.....	423,292.00
Total income.....	\$ 1,962,260.24
Expenditures, 1960	
Net expenditure for the year.....	1,910,460.55
General reserve special allocation.....	40,000.00
Total expenditures.....	\$ 1,950,460.55
Surplus, December 31, 1960.....	\$ 11,799.69

TABLE 81. DETAILS OF OPERATING COSTS OF THE TUBERCULOSIS SANATORIA, SASKATCHEWAN, 1960

Item	Total	Sanatoria		
		Fort San	Saskatoon	Prince Albert
Administration.....	\$ 101,497.13	\$ 30,780.78	\$ 32,772.62	\$ 37,943.73
Interest and discounts.....	13,071.41	4,076.82	3,693.04	5,301.55
Hospital.....	788,568.74	290,898.87	255,610.31	242,059.56
Dispensary.....	34,576.21	9,810.92	17,467.96	7,297.33
Laboratory.....	35,115.39	10,925.12	16,935.26	7,255.01
X-ray.....	29,228.98	10,244.52	11,242.44	7,742.02
Kitchen.....	357,070.90	129,831.62	108,203.48	119,035.80
Stewards.....	20,294.69	7,329.41	6,507.12	6,458.16
Housing.....	77,688.34	36,270.86	21,647.11	19,770.37
Maintenance of buildings.....	35,638.01	15,975.76	11,480.86	8,181.39
Power house.....	235,332.35	96,097.81	60,537.03	78,697.51
Laundry.....	61,586.77	16,394.95	19,254.75	25,937.07
Grounds.....	25,642.69	7,670.42	7,357.90	10,614.37
Garage.....	10,397.07	5,999.33	587.58	3,810.16
Stable.....	1,906.98	1,906.98	.....	.....
School grants.....	5,281.49	5,281.49	.....	.....
Staff insurance.....	15,000.00	4,666.50	4,302.00	6,031.50
Replacements (under Sec. 12 Sanatoria Act).....	1,000.00	311.10	286.80	402.10
League patients in other hospitals.....	18,880.63	9,015.36	5,098.77	4,766.50
Superannuation fund.....	122,421.06	38,085.19	35,110.36	49,225.51
Compensation.....	5,930.20	1,781.60	728.03	3,420.57
Liability insurance.....	2,500.00	777.75	717.00	1,005.25
	\$ 1,998,629.04	\$ 734,133.16	\$ 619,540.42	\$ 644,955.46
Less				
Accounts charged to health grants.....	67,807.22	32,251.68	19,527.70	16,027.84
Accounts charged to preventive fund.....	17,387.24	11,693.86	3,901.36	1,792.02
Canteen and postal revenue.....	362.05	362.05	.....	.....
S.H.S.P. (re patients' fees).....	2,588.98	2,017.40	338.60	232.98
Miscellaneous and service charges.....	23.00	3.00	.....	20.00
	\$ 88,168.49	\$ 46,327.99	\$ 23,767.66	\$ 18,072.84
Total net expenditure.....	\$ 1,910,460.55	\$ 687,805.17	\$ 595,772.76	\$ 626,882.62
Number of patient days.....	157,919	49,135	45,291	63,493
Cost per patient day.....	\$ 12.10	\$ 14.00	\$ 13.15	\$ 9.87

TABLE 82. PATIENTS' FEES AND GOVERNMENT GRANTS, TUBERCULOSIS SANATORIA, SASKATCHEWAN, 1960

Source of revenue	Total	Sanatoria		
		Fort San	Saskatoon	Prince Albert
Total grants and fees.....	\$ 880,260.16	\$ 232,419.83	\$ 206,950.10	\$ 440,890.23
Provincial government grants.....	423,292.00	153,188.00	145,794.00	124,310.00
Patients' fees.....	456,968.16	79,231.83	61,156.10	316,580.23
Federal government.....	404,261.68	43,989.63	62,570.05	297,702.00
Indian Affairs.....	349,894.25	20,978.70	44,738.80	284,176.75
Veterans' Affairs.....	54,367.43	23,010.93	17,831.25	13,525.25
Provincial government.....	32,944.19	32,355.69	588.50	.....
Re immigrants and refugees.....	30,458.59	29,870.09	588.50	.....
Workmen's compensation fund.....	2,485.60	2,485.60	.....	.....
Yukon Territory.....	2,950.00	2,950.00	.....	.....
Estimated additional earned income (re difference in rates paid and actual rates).....	16,812.29	-63.49	-2,002.45	18,878.23

TABLE 83. SUMMARY OF MEDICAL SERVICES OF THE TUBERCULOSIS SANATORIA, SASKATCHEWAN, 1959 AND 1960

Medical service	Sanatoria	1959	1960							Refugees
			Total	Rural	Urban	Local Improvement Districts	Northern Administration District	Department of Indian Affairs	Department of Veterans' Affairs		Yukon
Reception cards.....	Total.....	4,522	5,160	1,242	3,003	60	77	527	229	22
	Fort San.....	1,381	626	677	1	2	28	42	21	
	Saskatoon.....	1,772	328	1,771	9	7	44	158	1	
	Prince Albert.....	1,369	288	555	50	68	455	29	.....
Admissions.....	Total.....	513	572	120	240	7	45	127	12	21
	Fort San.....	156	194	105	44	2	20	3	3	20
	Saskatoon.....	214	206	105	4	6	26	7	1	1
	Prince Albert.....	143	172	30	3	37	81	2	.....
Diagnosis.....	Total.....	1,113	1,321	275	910	11	5	119	1	.....
	Fort San.....	248	123	160	.....	.....	3	.....	.....	.....
	Saskatoon.....	621	773	651	1	.....	8	.....	.....	.....
	Prince Albert.....	244	262	99	10	5	108	.....	.....	.....
Reviews.....	Total.....	2,887	3,256	847	1,848	41	27	276	216	1
	Fort San.....	973	459	412	1	.....	1	39	1	1
	Saskatoon.....	932	1,332	1,010	3	.....	9	150	.....	.....
	Prince Albert.....	982	229	426	37	26	266	27	.....	.....
Pneumothorax, pneumoperitoneum, or special treatment.....	Total.....	9	11	5	1	1	.....	5	.....	.....
	Fort San.....	4	.....	.....	.....	.....	.....	4	.....	.....
	Saskatoon.....	5	.....	.....	1	.....	.....	1	.....	.....
	Prince Albert.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Discharges.....	Total.....	4,607	5,158	1,245	3,004	58	89	509	236	15
	Fort San.....	1,410	634	689	1	2	22	45	2	2
	Saskatoon.....	1,757	318	1,765	6	10	42	160	2	14
	Prince Albert.....	1,440	293	550	51	77	445	31	.....	.....
Patients on strength as at December 31, 1959.....	Total.....	.....	388	76	162	4	39	91	14	.....
	Fort San.....	.....	120	30	79	.....	.....	3	6	2
	Saskatoon.....	.....	107	25	61	1	4	11	5	.....
	Prince Albert.....	.....	161	21	22	3	35	77	3	.....
Patients on strength as at December 31, 1960.....	Total.....	.....	390	73	161	6	27	109	7	7
	Fort San.....	.....	108	22	67	.....	.....	9	3	.....
	Saskatoon.....	.....	123	35	67	4	1	13	3	.....
	Prince Albert.....	.....	159	16	27	2	26	87	1	.....
Hospital days for the year 1960	Total.....	166,299	157,919	32,562	66,993	1,864	13,349	35,901	4,333	2,680
	Fort San.....	51,371	49,135	12,318	30,485	1	202	1,509	1,754	2,630
	Saskatoon.....	39,293	45,291	12,712	26,060	896	773	3,315	1,484	50
	Prince Albert.....	75,635	63,493	7,532	10,448	967	12,374	31,077	1,095	.....

APPENDIX A

**ACTS ADMINISTERED BY
THE DEPARTMENT OF PUBLIC HEALTH**

The Anatomy Act
The Change of Name Act
The Cancer Control Act
The Health Services Act, 1950
The Hospital Standards Act
The Marriage Act
The Mental Hygiene Act
The Mutual Medical and Hospital Benefit Associations Act
The Public Health Act
The Saskatchewan Hospitalization Act
The Union Hospital Act
The Venereal Disease Prevention Act
The Vital Statistics Act

(The Tuberculosis, Sanatoria and Hospitals Act is administered by the Saskatchewan Anti-Tuberculosis League.)

NATIONAL HEALTH GRANTS

During the fiscal year 1960-61, National Health Grant funds were made available to the province as in former years but with some minor revisions. The Crippled Children's Grant which had been available since 1948, the year the program was inaugurated, was combined with the Medical Rehabilitation Grant, and the Venereal Disease Control and the Laboratory and Radiological Services grants were abolished as such, but funds continued to be made available for these purposes out of the General Public Health Grant.

The total expenditure for the fiscal year amounted to \$2,561,851. Succeeding paragraphs will provide information concerning the expenditures under the individual grants.

Professional Training Grant

In keeping with the recognized need for training additional people in the health field in order to keep abreast with scientific and technical advances the funds made available in this grant were materially increased from some \$29,000 last year to \$94,856 for 1960-61. Of the latter sum, it was possible to utilize \$64,514 for training personnel in a variety of fields. Some difficulty was encountered in interesting persons with the basic qualifications to take further training and this is the main reason for the under-expenditure of the available funds.

Fourteen public health nurses received financial assistance to take university training as well as 15 nurses engaged in hospital service. The latter group were assisted to take postgraduate training in the fields of teaching and supervision, nursing service administration, midwifery, paediatrics and obstetrics. A hospital administrator, speech therapist, three physicians, eight physiotherapists and a teacher psychologist were assisted in taking university courses as well. In addition, a number of persons were assisted in taking short-term specialized courses in keeping with the demands of their positions. A clinical seminar in children's dentistry and the implications of Dental Public Health in programs for children was also financed out of this grant and attended by practising dentists in Saskatchewan.

Hospital Construction Grant

The actual expenditure under this grant for the year under review amounted to \$878,925. The funds available amounted to \$1,857,967 made up of the annual allotment for 1960-61 which amounted to \$897,103 and a revote from previous years of \$960,864.

The expenditure of \$878,925 assisted in meeting the cost of construction of some 42 hospital projects involving about 440 general hospital beds and 123 staff beds. Construction was completed and final grants were paid for extensions or new hospitals at Gull Lake, Lafleche, Prince Albert, St. Walburg and Whitewood. Construction was continuing on additions or new hospitals at Carrot River, Fillmore, Kipling,

Leader, Melfort, Melville, Moose Jaw, Norquay, Outlook, Oxbow, Pangman, Rose Valley, Rosthern, Tisdale, Wakaw, Weyburn and Yorkton and payments were made to hospital boards at each of these points depending on the progress of construction.

Hospital staff accommodation was constructed at Arborfield, Davidson, Kamsack, Kelvington, Lloydminster and Watrous, and grants were made to assist in meeting the cost. At the year end, construction was continuing on accommodation at Dinsmore, Moosomin and Rabbit Lake and progress payments were made to the boards of these hospitals.

Assistance was also provided towards construction of a health centre at Southey which was completed during the year and construction was continuing on a health centre at Ogema.

Mental Health Grant

The funds made available under this grant were increased over the previous year with \$464,936 being available and to be utilized for extending existing programs for the prevention and treatment of mental illness including rehabilitation and free treatment.

Some \$238,000 of the available funds were utilized to extend services in the clinical programs. Practically all was used for the employment of staff in the Mental Hospitals, the Training School for mental defectives and the out-patient clinics throughout the province. Nearly \$69,000 was utilized for training of staff who were either employed in the program prior to undertaking the training or persons who were sought out to take training and who returned to the staff after completion of training in the different disciplines. Physicians, clinical psychologists, nurses, psychiatric social workers, occupational therapists, and physiotherapists were again trained, some 46 in all. Personnel with the special qualifications needed to carry out the programs in the mental health field are still in extremely short supply and it would seem that training of staff to meet the need will have to continue for many years to come.

Research programs related to mental illness being carried on in Saskatchewan continued to receive financial assistance out of this grant. In the year under review nearly \$87,000 was spent for this purpose. This represented an increase of about \$25,000 over the previous year. These funds, supplemented by money provided out of the provincial budget as well as funds secured from foundations, have enabled the research program to expand and delve into the causes of mental illness, its treatment and prevention. There seems to be no question that even greater amounts of money will be needed for research in this field in the years to come as it is extremely time consuming, and securing competent and highly skilled staff remains a real problem, due mainly to the attractive openings available to such people in other parts of the world where this work is being carried on.

Tuberculosis Control Grant

Funds made available to Saskatchewan under this grant were reduced in 1960-61 by approximately 25 per cent. The reason for this was due, primarily, to the reduction in the number of deaths from tuberculosis and a reduction in the incidence of the disease in Canada. The funds allocated to Saskatchewan, amounting to \$151,035, were spent in their entirety.

As in previous years, the Saskatchewan Anti-Tuberculosis League utilized the money to employ additional staff at the sanatoria, to assist in defraying the cost of the mass x-ray screening program, for B.C.G. vaccinations, to extend surgical services and to pay hospitals for x-rays taken of patients on admission.

Public Health Research Grant

Projects submitted under this grant were approved in an amount of \$62,522 and at the end of the year \$49,496 was spent.

The policy respecting this grant is unchanged from previous years. Each province submits projects considered to be worthy of financial support to the federal officials and they are considered on their merits by appraisers and consultants appointed by the federal government. The province is subsequently advised of those projects approved and the amount of funds to be made available.

The research work carried out under this grant was all done at the University of Saskatchewan under direction and supervision of members of the faculty of the Colleges of Medicine, Agriculture and Science.

General Public Health Grant

The fiscal year 1960-61, saw a considerable increase in the funds made available to Saskatchewan in this grant. The Venereal Disease Control Grant was discontinued as a separate grant, but funds for this activity could be used out of the General Public Health Grant allotment. The Laboratory and Radiological Services Grant was also discontinued as most of the funds formerly used out of that grant related to hospital services, and such costs became shareable under the Hospital Insurance and Diagnostic Services Act (Canada). There were, however, a number of projects which were transferred to the General Public Health Grant and the increased allotment made it possible to carry on the activities formerly provided for out of those grants. The allotment for 1960-61 was \$744,881 and \$675,045 was actually spent.

As in former years, funds available in this grant made it possible to provide assistance to health regions and cities to expand their public health programs. A total of nearly \$235,000 was used for this purpose.

Staff training was another area in which funds from this grant were utilized. Personnel in the fields of nutrition, hospital administration, nursing, physiotherapy and occupational therapy, medical records, physical medicine, laboratory technology and sanitation received financial assistance to equip them academically to return to Saskatchewan and make a better contribution in their respective fields. A sum of just over \$120,000 was expended for this purpose.

Projects to enable extended services to be carried on in the field of health education, laboratory services, statistical studies, sanitary engineering, glaucoma clinic, home care services, venereal disease control, hospital counselling services and the provision of poliomyelitis vaccine were made possible by funds from this grant. Some \$225,000 was spent on these activities.

In addition it was possible to finance the cost of a series of studies and surveys in specialized fields by using funds available in this grant.

Such studies were in the fields of hospital accounting, the aged and long-term ill, the effects of ingestion of highly mineralized water, institutional and hospital facilities and a trial of oral poliomyelitis vaccine. These accounted for an expenditure of nearly \$60,000 and some are being continued into the next fiscal year in order that they may be fully completed and reports prepared.

Cancer Control Grant

The funds available in this grant were only slightly less than in the previous fiscal year and amounted to \$185,656. The total amount was expended.

The terms under which the funds are made available remain unchanged from previous years and make provision for assisting in a program for the detection and treatment of cancer provided the province spends an amount equal to the grant. Details of the provincial expenditures on the cancer control program are found elsewhere in this report.

Medical Rehabilitation and Crippled Children's Grant

Reference was made earlier in this report to this grant which in reality embraces the funds formerly made available in separate grants. It is specified that it may be utilized to assist in an approved program for medical rehabilitation, prevention, and treatment of crippling conditions in children and adults including rehabilitation and training up to an amount equal to one-half of the amount expended on such programs by the province. It is pointed out that utilization of these funds must be made in such a manner as to supplement any program financed out of provincial funds. The amount available was \$140,406 and a total of \$81,516 was expended.

Projects were submitted to the federal officials and approved for the expenditure of nearly \$105,000 but this was not fully expended. These projects provided for staff to be engaged in the Physical Restoration Centres in Regina and Saskatoon. The department continued to be faced, however, with the problem of securing the services of staff who possessed the qualifications and training needed to fill the positions in these centres. The demand for personnel with specialized training in this field continues to exceed the supply on this continent and as a result, several of the positions remained unfilled for varying periods of time during the year. Efforts to seek out persons for training were accelerated and this is reflected in the greater expenditures referred to under the Professional Training Grant report. It is anticipated that some additional services in this program may be made available in the coming year if the funds are again made available.

Child and Maternal Health Grant

This grant was reduced for 1960-61 to \$93,276 as against \$118,700 for the previous year. Formerly, it had been possible to utilize some of these funds for the purchase of hospital equipment as related to maternal and child care, but with the federal government sharing the costs of hospital expenditures under the Hospital Insurance and Diagnostic Services Act, the reduction in this grant was effected to prevent duplication of the amount available. Just over \$80,000 was expended.

Medical research in the paediatric field utilized approximately \$31,000 and the remainder was spent in providing for staff salaries, children's dental services, preventive ophthalmological services, pre-school hearing consultants and training institutes for physicians and nurses.

It is emphasized that before any funds made available in these grants can be spent, it is necessary to make detailed submissions to the federal officials which outline the program to be carried on and estimate the probable expenditures. It seems to be inevitable that no matter how carefully these plans are made and executed, there is a residue of unspent funds at the end of the year. It is noteworthy, however, that this is the pattern in all other provinces as well, and might well be attributed to a large extent for the difficulty in utilizing funds under the conditional grant system in a specific period of time such as a fiscal year. Unspent funds in one year may not be carried forward to the next.

TABLE 84. GRANTS ALLOCATED AND AMOUNTS EXPENDED UNDER THE NATIONAL HEALTH GRANTS PROGRAM, SASKATCHEWAN, 1951-52 TO 1961-62

Name of grant	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
	Amount made available										
Total.....	\$2,175,435	\$3,446,194	\$3,711,811	\$3,037,159	\$2,307,250	\$3,061,043	\$3,296,896	\$4,088,063	\$3,603,465	\$3,733,013	\$3,727,547
Crippled children.....	34,120	33,476	31,874	31,792	31,571	31,190	30,801	29,285	28,858	94,856	.....(a)
Professional training.....	34,120	34,881	31,874	31,792	31,571	31,190	30,801	29,285	28,858	1,857,967(k)	95,713
Hospital construction.....	843,823	2,105,732(e)	2,066,522(d)	1,220,206(e)	385,551(f)	1,101,018(g)	1,295,775(h)	2,156,988(i)	1,685,363(j)	1,857,967(k)	1,855,706(l)
Veneral disease control.....	34,120	32,476	31,874	31,792	31,571	31,190	30,801	29,285	28,858	.....(m)	.....(m)
Mental health.....	335,247	379,963	372,459	431,607	428,373	422,805	417,118	416,932(n)	418,682(o)	464,936	459,549
Tuberculosis control.....	194,819	216,002	236,535	228,065	227,582	222,476	220,290	209,688	201,969	151,035	151,234
Public health research (p).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Health survey (q).....	472,000	428,879	411,500	430,500	439,000	489,500(r)	528,500(s)	489,500(n)	569,000(o)	744,881	751,565
General public health.....	227,186	214,785	210,244	209,625	207,958	205,087	202,156	190,717	187,495	185,656	183,505
Laboratory and radio- logical services.....	.....	.....	.....	301,350	351,200	355,050(r)	368,500(s)	367,500(n)	279,000(o)	140,406(a)	.....(m)
Medical rehabilitation.....	.....	.....	33,134	62,192	61,777	61,063	60,333	57,485	56,682	.....(m)	138,807(a)
Child and maternal health.....	.....	.....	32,895	58,238	111,096	110,474	111,821	111,398	118,700(o)	93,276	91,468
Total.....	\$1,538,755	\$1,980,964	\$1,931,165	\$2,561,443	\$2,813,399	\$2,067,582	\$2,231,368	\$2,901,361	\$2,170,633	\$2,561,851	.....
Crippled children.....	32,803	32,815	24,229	26,173	22,875	30,070	29,490	24,762	25,320	.....	.....
Professional training.....	28,894	29,997	22,739	29,243	25,710	24,636	21,286	23,157	26,812	64,514	.....
Hospital construction.....	297,295	776,645	499,585	889,908	1,005,723	258,217	320,446	1,147,491	561,978	878,925	.....
Veneral disease control.....	33,132	29,258	30,647	31,792	31,571	31,190	30,801	29,285	28,858	.....	.....
Mental health.....	319,622	339,275	338,890	396,491	400,298	398,471	401,824	402,663	392,312	395,567	.....
Tuberculosis control.....	194,819	216,002	236,523	228,061	227,538	222,476	220,290	209,688	201,968	151,035	.....
Public health research.....	18,925	25,788	26,664	22,385	19,692(t)	20,736	39,929(t)	46,288(t)	29,839	49,496	.....
Health survey.....	500	3,150	.....	.....	.....	.....	.....	.....	.....	.....	.....
General public health.....	385,529	313,249	352,289	373,347	388,673	416,624	502,575	436,844	462,215	675,045	.....
Cancer control.....	227,186	214,785	210,244	209,625	207,958	205,087	202,156	190,717	187,495	185,656	.....
Laboratory and radio- logical services.....	.....	.....	154,483	279,936	336,925	316,675	344,480	281,168	95,110	.....	.....
Medical rehabilitation.....	.....	.....	4,042	41,588	57,987	57,987	53,999	48,653	47,115	81,517	.....
Child and maternal health.....	.....	.....	30,830	32,894	108,141	106,148	104,022	106,934	111,611	80,096	.....
Total.....	70.7	84.1	51.3	83.5	76.8	58.3	67.7	71.0	60.2	68.6	.....
Crippled children.....	96.1	98.0	76.0	82.3	72.4	96.4	95.7	84.6	87.7	.....	.....
Professional training.....	84.7	85.9	71.3	91.9	81.4	79.0	69.1	79.1	92.9	68.0	.....
Hospital construction.....	35.2	36.8	24.1	72.9	57.7	16.3(u)	24.7	53.2	33.3	47.3	.....
Veneral disease control.....	97.1	90.0	96.1	100.0	100.0	100.0	100.0	100.0	100.0	.....	.....
Mental health.....	95.3	89.2	93.4	91.8	93.4	94.2	96.3	96.6	93.7	85.1	.....
Tuberculosis control.....	100.0	100.0	99.9	99.9	99.9	100.0	100.0	100.0	100.0	100.0	.....
Public health research.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Health survey.....	92.8(v)	99.9(v)	.....	.....	.....	.....	.....	.....	.....	.....	.....
General public health.....	81.7	73.0	85.6	86.7	88.5	85.1	95.1	89.2	81.2	90.6	.....
Cancer control.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	.....
Laboratory and radio- logical services.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medical rehabilitation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Child and maternal health.....	.....	.....	61.0	92.8	95.9	89.2	93.5	76.5	34.1	58.1	.....
.....	.....	.....	12.1	66.8	93.8	95.0	89.5	84.6	83.1	85.9	.....
.....	.....	.....	93.7	56.4	97.3	96.1	93.0	96.0	94.0	.....	.....

Expenditure from grants

Per cent of grants expended

Sources: Unless otherwise noted, statements on operations of the health grants program for Saskatchewan were prepared by the Directorate of Health Insurance Studies, Department of National Health and Welfare.

- (a) Combined with "Medical Rehabilitation" in 1960-61. Now called "Medical Rehabilitation and Crippled Children Grant".
- (b) The hospital construction grant was cumulative. The amount not utilized during the year in which it was allocated could accumulate from year to year.
- (c) The figure for the fiscal year 1952-53 includes an allotment for that year plus unexpended portions of previous 3 allotments for the years 1948-49 to 1949-50.
- (d) The hospital construction allotment for 1953-54 is composed of: Allocation for new projects \$ 389,772
Revoke \$ 1,676,750

(e) This total is made up as follows: Allocation for new projects \$ 388,643
Revoke \$ 831,503
\$ 1,220,206

(f) Ottawa's final statement for the fiscal year 1955-56 shows amount of hospital construction grant available as \$1,741,291. Percentage figured on amount available shown on Ottawa's final statement for the fiscal year 1955-56.

(g) Amount available for hospital construction for 1956-57: Allocation for new projects \$ 380,229
Revoke \$ 720,789
\$ 1,101,018

(h) Ottawa's final statement for 1956-57 shows the amount of Hospital Construction Grant available as \$1,587,085.

This total is made up as follows:
New projects
Annual allocation \$ 374,794
Revoke \$ 747,204
\$ 1,121,998
Revoke \$ 173,777
\$ 1,295,775

(i) This total is made up as follows:
New projects
Annual allocation \$ 919,123
Revoke \$ 1,212,865
\$ 2,131,988
Revoke \$ 25,000
\$ 2,156,988

(j) This total is made up as follows:
New projects
Annual allocation \$ 903,581
Revoke \$ 756,782
\$ 1,660,363
Revoke \$ 25,000
\$ 1,685,363

(k) This total is made up as follows:
Annual allocation \$ 887,103
Revoke \$ 900,864
\$ 1,857,967

(l) This total is made up as follows:
Annual allocation \$ 886,208
Revoke \$ 969,498
\$ 1,855,706

- (m) Discontinued.
- (n) Includes transfer of \$50,000 and \$22,000 from Laboratory and Radiological Services Grant to General Public Health Grant and Mental Health Grant respectively.
- (o) Includes transfer of \$165,000 from the Laboratory and Radiological Services Grant to the Mental Health, General Public Health, and Child and Maternal Health Grants in the amounts of \$30,000, \$125,000, and \$10,000 respectively.
- (p) Various amounts for public health research were made available nationally each year and were apportioned among the provinces on the basis of projects submitted and approved. One allocation of \$43,506 was made in 1948-49 to conduct a health survey. The allocation was spent over a 5-year period.
- (q) A transfer of \$45,000 from Laboratory and Radiological Services Grant to the General Public Health Grant is considered in figures shown for these two grants.
- (r) Includes transfer of \$80,000 from Laboratory and Radiological Services Grant to General Public Health Grant. (Transfer not included in the 1956-57 annual report table.)
- (s) Amount excluded from total.
- (t) Percentage figured on amount available shown on Ottawa's final statement for the 1956-57 fiscal year.
- (v) Cumulative percentages of original allocation of \$43,506.





