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DEPARTMENT OF
NATIONAL HEALTH AND WELFARE

ANNUAL REPORT

FOR THE FISCAL YEAR ENDED MARCH 31, 1964

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THE DEPARTMENT OF NATIONAL HEALTH AND WELFARE

*His Excellency Major-General George F. Vanier, D.S.O., M.C., C.D.,
Governor General and Commander-in-Chief of Canada*

MAY BE PLEASE YOUR EXCELLENCY

*The undersigned has the
honour to report to you
on the Department of
National Health and Welfare
for the fiscal year ended
March 31, 1964.*

ANNUAL REPORT

for the fiscal year ended March 31, 1964

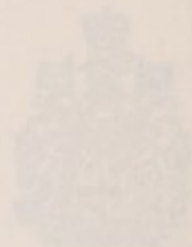
JUDY LAMARSH

Minister of National Health and Welfare

OTTAWA

*Regina Doherty, P.R.S.C.,
Queen's Printer and Controller of Stationery,
Ottawa, Canada*

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THE DEPARTMENT OF NATIONAL HEALTH AND WELFARE

ANNUAL REPORT

for the fiscal year ended March 31, 1965

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To the Honourable Judy LaMarsh,
Minister of National Health and Welfare, Ottawa

MADAM:

The significant expansion of many complex areas of the Department's work during the year would not have been possible without the co-operation and aid so freely extended by other government and private agencies. We wish to express our grateful appreciation to all who contributed so much to the progress achieved.

Major emphasis was placed during the year on the development of the Canada Pension Plan, a comprehensive measure of old age, disability, and survivors insurance, and the Smoking and Health Program, which was planned in consultation with the representatives of government and private interests.

Legislation was passed on December 1st, 1963, raising Old Age Security pensions, as well as the maximum monthly assistance under the Old Age Assistance, Disabled Persons Allowances and Blind Persons Allowances programs, from \$65 to \$75.

Participation in international health and welfare matters has continued at an active pace. In addition to meeting our regular obligations, departmental officers have fulfilled important commitments in the executive bodies of the World Health Organization and U.N.I.C.E.F. as well as other U.N. agencies.

Problems related to the improvement of existing social assistance programs were under continuing study and discussion with the provinces. Aid under Welfare Grants, which totalled \$500,000 in the year under review, continued to contribute to the extension of training and the support of welfare research.

The Department continued to give assistance to the Royal Commission on Health Services which held hearings during the year, and information, as well as studies, were made available to the Commission's staff.

The Hospital Insurance and Diagnostic Services program was marked by a further increase in the number of persons covered, so that by the end of the year the number of persons not insured was less than one per cent of the eligible population. Programs were also extended somewhat during the year by the provision of some provinces of a broader range of out-patient services.

Under the Fitness and Amateur Sport program aid was increased to national sports governing bodies and other national agencies, to the scholarship, research and informational work of the program and to the provinces.

Plans were completed for moving the administrative divisions of the Department to the new Brooke Claxton Building; the Radiation Protection Division occupied its new building; the Environmental Health Centre was commenced as were additions to the Food and Drug and Laboratory of Hygiene Buildings.

In proportion to these increased outlays, and to expanding programs and increasing costs, departmental expenditures rose to \$2,012,245,897, from \$1,857,802,315 in 1962-63.

Again we wish to commend to you the devoted service of the hard working staff of this Department, which have contributed in full measure to a year of considerable achievement.

Respectfully submitted,

G. D. W. CAMERON,
*Deputy Minister of National
Health and Welfare (Health)*

JOSEPH W. WILLARD,
*Deputy Minister of National
Health and Welfare (Welfare)*

Ottawa, Canada

HEALTH BRANCH

FOOD AND DRUG

General

New legislation included regulations: giving the Directorate wider controls over drug manufacture and the distribution of drug samples; tightening the requirements for new drugs and empowering the Directorate to stop clinical trials of new drugs or ban their sale; governing the quality of milk used in dairy products and providing against drug residues in food products.

Three new posts were created in the Directorate as follows: Assistant Director, Foods; Assistant Director, Drugs; and Assistant to the Director. These officers work at the policy level and in broad contact with the greatly expanding food and drug industries.

Program planning was continued and included direction in the greatly increased work of technical review of new drug submissions. Considerable time was spent on requests for guidance from manufacturers in connection with the new drug regulations. Applications were processed for the approval of institutions for the clinical and experimental trials of lysergic acid diethylamide and, for experimental work in the laboratory only, on thalidomide.

The Biometrics Section, which provides services and consultation with relation to the statistical problems of the Directorate, prepared statistical data on the manhours spent on various food and drug commodities and general activities and drew up programs including the estimated manhours necessary to carry them out. Information obtained on the number and types of industries in the different regions of the Directorate provided valuable estimates of coverage of various industries. In addition, studies were continued to obtain an estimate of the work load on imported foods and drugs. Consultation services were provided in the design of research programs and data were analysed on numerous projects. A sampling scheme was developed for determining the net weight compliance of loaves of bread and also a sampling scheme and criteria for determining the meat content of canned meat stews.

Administrative Services

The large increase in the staff and activities of the operational divisions of the Directorate resulted in unprecedented demands for the various services provided by Administrative Services. These range from the usual procurement and financial activities to the processing of amendments to the Food and Drug Regulations and the operation of an Information Retrieval Service. The latter is now fully operational insofar as rulings and decisions are concerned and is now being expanded to include a detailed product information index and to carry out searches of the scientific literature for research and enforcement purposes. The first stage in

mechanizing this system has been taken with the acquisition of an optical incidence card punch and reader.

During the year plans were completed for the construction of an additional wing to the Ottawa Headquarters building and major changes and renovations to the existing laboratory areas to enable them to accommodate the increased staff anticipated by 1967. This stage of construction is scheduled for completion by the end of 1964. Steps were also taken to substantially enlarge the Montreal, Toronto and Vancouver facilities to accommodate the increased staff and work requirements.

Consumer Division

A telephone survey of the consumers' understanding of permitted claims for the vitamin content of foods was undertaken in Ottawa, Hull and vicinity. Results will guide the Directorate in the revision of vitamin regulations. A series of lectures was delivered to nearly 600 students at the Manitoba Teachers College. Other work of the division included speaking engagements, dealing with consumer complaints and enquiries, preparing material for articles in consumer publications, and attending conventions, exhibitions and consumer and educational gatherings.

Medical Services

One hundred and forty-one new drug submissions were received from pharmaceutical manufacturers and 134 submissions were carried over from the previous year. During the period under review, 105 new drugs were cleared while one was withdrawn and three declared inactive. At the end of the year there were 166 new drug submissions under review.

Regulations governing the sale of new drugs in Canada were introduced on October 23, 1963 and these regulations, among other new requirements, stipulate that substantial evidence of effectiveness must be presented to the Minister before an experimental drug may be distributed for clinical investigation. Permission must now be given before the experimental drugs may be used on human subjects, and 14 such preclinical new drug submissions were received before December 31, 1963.

The variety of new drugs continues to be impressive. New drug submissions received since October 23, 1963 are being reviewed to ensure that there is substantial evidence of clinical effectiveness, as well as the safety data previously required.

In the past years it has become evident that voluntary reporting of side-effects observed in the use of drugs could not be relied upon to provide adequate information. In order to improve the lines of communication between physicians and the Directorate a system for reporting the observation of adverse reaction is being developed, with the assistance of the deans and professors of medicine at the medical colleges and other interested individuals and associations.

During 1963, six new Poison Control Centres joined the national network bringing its total to 228 centres. The clearinghouse distributed to each centre 616

product reference cards on drugs and household products. A meeting of directors of Poison Control Centres was held to coincide with the annual convention of the Canadian Paediatric Society. Other meetings participated in included those of: The Ontario Federation of Home and School Associations, The Canadian Society of Forensic Sciences, and manufacturers' associations.

Protecting the Supply of Foods and Drugs

Of priority interest were the examination of a number of foods for pesticide residues and a critical review of some drugs on the market.

Following reports that Podophyllin had caused severe side effects, manufacturers were asked to omit this drug from their medicines registered under the Proprietary or Patent Medicine Act and a draft regulation was prepared to prohibit its use in drugs advertised to the general public.

Four thousand three hundred manufacturing establishments were inspected; 40,000 samples of domestic and imported foods and drugs were examined; nearly 60,000 labels and advertisements and about 33,000 radio and television commercials were reviewed and Headquarters recorded nearly 600 interviews with the trade.

There were 233 applications for registration of new products under the Proprietary or Patent Medicine Act, of which 84 were refused. Licences were issued to 928 manufacturers. The official register included 3,008 preparations at the end of the year.

Two new District Food and Drug Offices were opened, namely, in Hull, Que., and Cornwall, Ont., bringing the total to 23.

Legal Action

One hundred and four prosecutions were completed. Fines levied by the courts totalled \$13,440. There were 256 seizures of foods, drugs, cosmetics and medical devices valued at \$386,817. Included was a large quantity of cheese contaminated with organisms associated with raw sewage. One hundred and twenty-eight seizures which could not be reconditioned were destroyed. In addition, voluntary destruction was made under supervision of food stuffs valued at \$63,195 and drugs valued at \$2,366, all of which were in violation of the Food and Drugs Act and Regulations. A death was attributed to botulism toxin found in a brand of liver paste and the suspected product was immediately recalled from the market.

Arising out of a survey of dairy products, fifteen prosecutions were instituted for the presence of pesticides in cream. This involved seizure and destruction of 8,000 pounds of butter. There were 64 prosecutions for the sale of adulterated meat.

There were only seven prosecutions of drug stores for illegal sale of prescription drugs, as against twelve in the previous year, and twenty-five in the fiscal year ended March 1962. A critical review of drugs for potency, excessive disintegration time and misleading advertisements resulted in the prosecution of four manufacturers.

Investigation and Research

The Scientific Services of the Directorate consist of the central laboratory in Ottawa and five regional laboratories in Halifax, Montreal, Toronto, Winnipeg and Vancouver. The central laboratory is responsible for carrying out basic research on foods and drugs and on the development of analytical procedures for enforcement purposes. The regional laboratories concentrate on the examination of all products which come under the Act and also carry out investigational work on methods of analysis. During the year the work of Scientific Services has resulted in more than 60 publications in the scientific literature. Members of the staff have written comprehensive reviews or contributed chapters to scientific texts. They have also taken part in collaborative studies of food and drug methods sponsored by organizations such as the Association of Official Agricultural Chemists.

The central laboratory consists of 11 sections in the biological, chemical and physical sciences, each headed by an expert in his particular field. The scientific work of the Directorate is internationally recognized and many requests have been received from scientists who wish to receive training or conduct research in specific areas of investigation. It has been possible to provide facilities for scientists for varying lengths of time. During the year scientists have come from Chile, Denmark, China and India. Three National Research Council Post-Doctorate Fellows carried out research in the laboratories, one in Vitamins, one in Pharmacology and one in Pharmaceutical Chemistry. These training and research programs were financed by the institutions to which the scientists were attached, the Colombo Plan, the World Health Organization and the National Research Council.

Personnel from the Directorate have been asked to serve on various international organizations. One scientist spent a year with the World Health Organization, dealing with international legislation on food additives, and another at the American University of Beirut setting up a research program in protein evaluation. Other members of the staff have served on expert committees or on short assignments with the World Health Organization, the National Academy of Sciences, the Food and Nutrition Board, and similar organizations.

A scientific advisory unit was established in the central laboratory, to provide technical advice on pesticides, food additives, medicated feeds, packing materials and other matters of a scientific nature. This unit also acts in an advisory capacity to other governmental agencies on matters relating to the responsibilities of the Directorate under the Food and Drugs Act. In the past year, the section processed over 70 pesticide submissions and procured and collated the data for establishment of a list of acceptable food additives.

Animal Colony

The animal colony is responsible for the production, procurement, care and maintenance of all animals used in the Directorate. Animals raised in the air-conditioned colony include about 26,000 rats and 10,000 mice. Technical assistance was supplied to the various laboratory sections in carrying out special

experiments involving breeding, diets and other tests requiring special knowledge in the handling of the animals.

Animal Pathology

Gross and histological studies were made on tissues from animals that had been used in toxicity studies of a variety of foods, drugs and components of food and drugs.

Studies were continued of the effect on rats of various forms of housing. The response to injections of ACTH in isolated and community caged animals was investigated. Differences were observed in plasma corticoids, blood cellular elements, liver glycogen, adrenal cholesterol and organ weights. Toxicological changes accompanying prolonged isolation include an increased tolerance for potassium chloride but a greater sensitivity to thiourea. Isolated rats also displayed a shorter induction period for ether anaesthesia and a consistently slower growth rate. Methods of overcoming the stress of isolation were examined and the data is being statistically analysed. Preliminary findings suggest that handling of individually caged animals overcomes to some degree the effects of isolation.

Studies relating to the age of the animal and the period of time taken for tumors to develop (latent period) were continued. Tumor producing agents that affect the kidney and liver were administered. The time lapse between dosing and tumor development is being determined. Various enzyme systems are being used to aid in the diagnosis of tumors before overt clinical symptoms develop.

Cosmetics and Food Colours

Studies on the identification of the active ingredients of paraphenylenediamine-type hair dyes were completed. These materials have a long history of causing severe allergic reactions. A method of analysis was developed which involves separation by paper chromatography and detection by various reagents specific for the different classes of active ingredients. Twenty-nine reference compounds were studied and the method was applied successfully to a number of commercial products.

In studies of the constituent pigments of annatto butter and margarine colours, a new technique was developed for determining the structures of carotenoid pigments by thermal degradation and gas chromatographic analysis of the products.

Food Chemistry

Gas phase chromatographic procedures have been developed for pesticide residue research. These new procedures make possible the analysis of several pesticides in one operation, with a consequent saving in manpower. General methods of analysis of the organophosphate pesticides have been developed for the detection and quantitative measurement of very small quantities of these materials on a wide variety of biological extracts. A chemical index for the determination of insect infestation in foods has been developed. Certain acute problems relating to possible fraudulent practices have been pursued. This has involved

a detailed compositional analysis of such foods as hams, sausages and vanilla extracts.

Studies on the composition of natural fats and oils are continuing, using thin layer chromatography and gas phase chromatography.

Instrumentation

The survey of residual radioactivity in Canadian foods is continuing; this year the strontium 90 content of more than one hundred samples of various foods was reported, and the total values for a number of others were determined. Progress was made on the development of a method for the determination of lead in food samples, with the aid of radioactive tracer techniques. In collaboration with the Dutch and New Zealand Dairy Research Institutes, the infra-red characteristics of butter from these two countries were determined. The special services and instruments of the section were used on various projects of the Directorate.

Microbiology Section

Research projects were continued on the elucidation of bacterial toxins related to food poisoning, and on the effect of gamma-irradiation upon food-borne bacteria.

Human botulism from commercially processed canned liver paste was shown to be related to severe underprocessing. Types A and B, *Clostridium botulinum*, were recovered from the same production unit of the food. Each caused disease.

Hitherto unknown toxic substances were detected in two types of foods. Cheese deteriorating at an abnormally high rate was shown to contain an acutely emetic substance, believed to be of bacterial origin. It was shown that the toxins of staphylococci and clostridia, residues of chlorinated hydrocarbon or organic phosphate pesticides, heavy metals, cadmium, and various amino-acid residues including tyramine were not involved. During investigations of the distribution of type B *Clostridium botulinum* in smoked fish, a non-specific toxic substance was encountered apparently associated with microbial activity in the fish. The fluid expressed from the fish at a dilution of 1:500 was lethal to mice.

Salmonellae were found in 52 of 1,600 specimens of egg products. All positive lots were withheld from sale. Dessicated coconut, formerly a common source of salmonellae, is now rarely found to contain these organisms.

No staphylococci were found in 200 specimens of baby food packed in screw-capped glass jars, and selected from shelves of retail stores.

Microbiological examination of dairy products revealed need for improvement in the quality of milk used for manufacture and further surveillance of the product.

Organic Chemistry and Narcotics

Thin-layer chromatography, a rapid, specific method for detecting carbamates, was applied in the detection of meprobamate, a tranquillizer found in illicit drug traffic, as well as in narcotics, barbiturates, and amphetamines in drug enforcement cases.

A study of the more than 12,000 capsules of heroin seized by the R.C.M.P. in 1959-60 showed them to contain on an average 1.44 grains of powder, of which 0.77 grains were heroin and the rest adulterant or diluents, usually lactose. It was further found that, in the same year, the average addict used 6.4 capsules per day, and that the addict's dose of heroin could have been three to nine times the medicinal dose. The estimate, 2.6 to 7.3 grains of heroin per day, is three to four times the dosage usually cited by narcotic control authorities in Canada and the United States.

Morning Glory seeds which contain psychomimetic drugs have been studied. Methods for the identification of LSD and ergot type alkaloids have been developed. A collaborative study of chemotaxonomic methods for marihuana was completed. Work was continued on more rapid and sensitive methods for detecting the origin of narcotics.

Pharmaceutical Chemistry

Collaborative studies were continued with regional laboratories to determine the desintegration time of tablets and establish characteristic criteria of product acceptance. Rates of solution of active ingredients present in pharmaceutical dosage forms were assessed under controlled conditions as parameters for correlating pharmaceutical formulation and therapeutic efficacy.

Thin-layer chromatography was used extensively for qualitative and semi-quantitative analysis of complex formulations including proprietary medicines, plant extractives and synthetic compositions. Sensitive and selective procedures for determining micro-amounts of sulfonamides and anti-coagulants were developed. The technique also proved informative in the recognition of specimens marketed in violation of regulations of the Food and Drugs Act.

Sensitive identification tests were perfected for three Schedule F drugs marketed widely as hypnotics — Dormison (methylparafynol), Placidyl (ethchlorvynol) and Valmid (ethinamate). Tetracycline preparations were investigated by paper chromatography and the amount and type of buffer determined.

Different brands of ophthalmic ointments on the Canadian market were examined for extraneous matter. Infra-red spectra of drugs covered by Schedules F, G and H were assembled and supplied to regional laboratories as part of a collection of authenticated reference standards. Polarography was applied to the assay of both pure drugs and pharmaceutical dosage forms. Weight-potency relationships were determined for tablets and capsules and experimental data evaluated as indicators of manufacturing and control practices.

Pharmacology and Toxicology

Experiments, using laboratory animals, are in progress to develop a procedure to screen drugs and other chemical compounds for potential teratogenic action. In other experiments, rats fed sodium fluoride (7 p.p.m. in terms of fluoride in the diet) were more susceptible to the respiratory depressant action of morphine and codeine. Some pesticides tested, though not all, were found to be much more toxic in the young rat than in the adult.

A clinical investigation was carried out in collaboration with a hospital on the absorption, excretion and effectiveness of five brands of tolbutamide, (two sold under proprietary names and three under the non-proprietary name). No differences were found between the brands tested. Work is underway to ascertain the safety of nordihydroguaiaretic acid, a preservative, and any possible synergism between it and acetylsalicylic acid which is one of the most commonly used drugs.

A biological assay using ducklings was employed to detect in peanuts the possible presence of aflatoxin, a cancer-producing substance. A sulfa drug which had been reported to cause generalized convulsions was found to sensitize the central nervous system of rats. Dextran solutions after storage for four to ten years were found to be essentially stable. Two lots of digitalis tablets were found to possess potencies significantly different from the labelled strength, and were removed from the market.

Physiology and Hormones

The procedure for the separation and determination of the active thyroid hormones, thyroxine and lio-thyronine, was improved and the results obtained were employed in a collaborative study of a "thyronine iodine" procedure for commercial thyroid preparations which is being carried out by the United States Pharmacopoeia. Highly purified thyroglobulin was separated by gel filtration from saline extracts of beef, pork, and rat thyroid glands. The role of thiouracil in the goitre prevention assay of thyroid hormones was investigated. Certain progesterone derivatives were shown to behave like adrenocortical steroids when administered orally to test animals.

Work is continuing on the isolation and identification of estrogenic hormones from pharmaceutical formulations and from animal tissues, employing chromatography on columns and paper. Thin-layer chromatography, ultra-violet spectroscopy, and photofluorometric analyses are being investigated for the separation and determination of adrenocortical steroids.

Vitamins and Nutrition

Studies with fish protein concentrate showed that the solvent used during processing may react with protein components in fish muscle, reducing the availability of amino acids contained therein. Data obtained with human volunteers and rats fed various meals indicate that the amino acid which is limiting in the diet falls to an inordinately low level in the blood. Screening procedures with micro-organisms are being developed to test for possible drug-induced alterations in metabolism of vitamins or nucleic acids.

Progress has been made on developing rapid quantitative procedures for Vitamin D in foods and pharmaceuticals, using chromatography and other techniques. Biologically inactive forms of Vitamin A were detected in certain liquid multivitamin preparations. Specialized chromatographic procedures were used to separate ten derivatives of Vitamin A in fish oils and pharmaceuticals. The kind and level of dietary fat and duration of its administration were shown to exert marked effects on the proportions of various fatty acids present in the body and

liver of rats. Tissue levels of linoleic acid were related to the amounts of linoleate consumed and to the proportion of linoleate in the dietary fat.

Vitamin C was found to be unstable in fruit drinks, leading to rapid loss of the vitamin from certain products under normal conditions of use. A close correlation was observed between urinary excretion of riboflavin by human subjects and the rate of dissolution of riboflavin tablets in simulated digestive juices. Fluorine administered to rats at four day intervals was utilized as efficiently as that given once daily, as measured by retention of fluorine in bones and teeth.

NARCOTIC CONTROL

The division continued to maintain the required control over both narcotic and controlled drugs during the year 1963. Every effort was made to ensure that these controls did not, in any way, interfere with the necessary distribution of supplies of these drugs for medical purposes. Additionally, senior officers of the division, through the medium of lectures to university students in medicine and pharmacy, have assisted in all related professions striving to co-operate in the prevention of addiction.

Work in the comparatively new field of controlled drugs continued to grow in volume and importance, and every effort was made to ensure that adequate supplies of amphetamines and barbiturates were available to meet the needs of that section of the population whose well-being required them. It has, however, been definitely established that abuse of these drugs is of far greater proportion than was realized.

Licensed Dealers

During 1963, 186 firms were licensed to deal in narcotics and 289 in controlled drugs. Almost one-half of each of these groups acted solely as distributors, and the remainder were authorized to manufacture pharmaceutical specialties in each field.

Retail Pharmacies

The division's policy of obtaining sales reports covering transactions in narcotic and controlled drugs from all retail pharmacies in Canada at stated intervals continued during the year. The results of carefully screening these reports, particularly in the field of controlled drugs, meant a very substantial increase in correspondence with members of those professions authorized to handle and prescribe them. The reception by professional people of our letters of inquiry has, in the main, been good, and in fact, many professional people have expressed their appreciation of the information that has been made available to them in respect to the necessity of adequate control over drugs and prevention of addiction.

Addiction

Canada's narcotic addict population in 1963 was 3,355. For statistical purposes the addicts have been divided into three classes: street or criminal, of

which there were 2,963; medical, 262; and professional, 130. As well, as seen from the chart below, there has been very little change in the overall addict population in the last five years. The figures covering the years 1959 to 1963 inclusive are as follows:

1959 — 3,408	1962 — 3,576
1960 — 3,295	1963 — 3,355
1961 — 3,395	

Consumption Statistics

Imports and consumption statistics are set forth on appended charts. Insofar as consumption of controlled drugs is concerned authoritative figures are not available.

Convictions

Heroin continued to be, by far, the main drug of addiction with narcotic addicts. The material involved was smuggled into the country by various criminal groups. The fact that there were no major thefts from licensed dealers of the type of narcotic drugs normally used by addicts is a clear indication that the addicts' supply comes from illicit import.

During 1963 there were 335 convictions under the Narcotic Control Act. Three hundred and five of these were for illegal possession and the balance for trafficking, possession for the purposes of trafficking and similar offences. Two hundred fifty-seven of the total number of cases involved the drug heroin.

Insofar as controlled drugs are concerned, there were 49 convictions under Part III of the Food and Drugs Act, 46 of which were for trafficking, and three for possession for the purposes of trafficking. There is no charge for possession of controlled drugs in this particular legislation.

As opposed to the situation with narcotics, the controlled drugs found in the illicit market in Canada are largely originated from thefts from legal channels, misuse and forgery of prescriptions. This is further evidenced by the fact that individuals convicted of trafficking in controlled drugs often obtain their supplies by means of prescriptions.

Co-operation by Enforcement Agencies

The R.C.M. Police and other law enforcement agencies continue to make every effort to keep the illicit traffic in both drug areas to a minimum. The fact that our total convictions over recent years have maintained a constant, if not a declining, level, indicates the success of these efforts, particularly when it is taken into consideration that our population continues to increase steadily.

Liaison With Medical, Pharmaceutical and Related Professions

The division continued to extend to, and receive from, the professional registrars of the medical, pharmaceutical and related professions every possible assistance. As a result we are in receipt of a constant flow of information as to the status of members of various related professions, and, in turn, supply regis-

trars, where it is deemed necessary, with information of interest to their organization.

As a result of this exchange of information problems faced by professional people were dealt with, and in many cases, resolved by reason of this co-operation.

Inspectional Work

At the end of 1963 the division had, in the field, 15 inspectors. During the calendar year 7,360 audits, inspections and special interviews were carried out.

International Co-operation

In the narcotic field all required reports of information were submitted to interested organizations within the United Nations, and our liaison with narcotic authorities of other countries proved most satisfactory.

Table 1
IMPORTS OF MAIN NARCOTICS FOR PERIOD 1954-1963 INCLUSIVE
Unit of Weight — Kilogramme (Pure)

Year	Raw Opium	Medicinal Opium and Preps.	Morphine	Hydro- codone	Hydro- morphine	Ethyl- morphine	Codeine	Phol- codeine	Cocaine	Alpha- prodine	Levor- phanol	Metha- done	Norme- thadone	Pethidine
1954	5,897	149,688	60,499	17,775	0.198	39,378	2814,390	17,775	48,308	1,587	0.567	9,185		592,061
1955	31,525	149,688	52,192	5,301	0.425	24,182	2396,624	5,698	29,597	6,548	0.567	9,554		430,665
1956	17,236	145,350	47,332	13,012	0.471	55,291	1893,242	2,602	32,865	2,464	0.338	3,911		323,104
1957	2,000	90,902	30,857	20,013	0.355	19,941	2039,416	3,872	31,536	5,548	0.353	6,489	2,700	534,702
1958	0,567	108,864	28,342	33,338	0.174	19,978	2445,569		33,474	4,488	0.414	6,788	12,600	407,728
1959		111,630	35,094	15,282	0.267	21,036	2813,256	3,580	19,482	5,984	0.370	4,063	9,120	546,189**
1960	0,284	117,596	44,889	18,588	0.053	14,032	3039,153		31,257	3,344	0.302	3,236	12,172	636,846
1961		141,977	44,356	27,639	0.320	12,907	2995,255		30,462	3,411	0.320	8,950	8,900	666,420
1962	2,000*	145,152	40,063	36,814	0.481	26,485	2816,950	1,745	26,486	4,853	0.370	2,696	10,680	491,716
1963		127,008	47,184	35,337	0.001	22,768	3289,241	1,290	24,884	4,709	0.558	2,879	15,130	650,336

*For scientific research.

**53,950 Kg. returned to Great Britain, discoloured material.

Table 2

CONVICTIONS UNDER THE NARCOTIC CONTROL ACT DURING THE CALENDAR YEAR 1963

Province	3(1)	4(1)	4(2)	5(1)	6(1)	Total	Heroin	Morphine	Marijuana	Pethidine	Codeine	Demerol	Oxy-Pimcodone	Methadone	Opium	Dilaudid	Alvoldine	Cocaine	Leritine	Total
Nfld.																				
P.E.I.																				
N.S.	1					1		1												1
N.B.																				
Que.	13		3		1	17	1	2	13			1								17
Ont.	52	3	4			59	32	4	12			1	2	3			4	1		59
Man.	3					3		2				1								3
Sask.	4					4		1*		1		1							1	4
Alta.	7	2			1	10		1	5						2	1		1		10
B.C.	226	7	7	2		242	225	4	7	3	1	1		1						242
Total	306	12	14	2	2	336	258	15	37	4	1	5	2	3	1	2	4	2	1	336

*Poppy Heads

Of the above there were 10 males and 7 females with two convictions and 2 males with 3 convictions in B. C. as well as 2 males in Quebec and 1 male in Alberta with two convictions.

N. C. Act 3(1) — Possession

4(1) — Trafficking

4(2) — Possession for the purpose of trafficking

5(1) — Importing narcotics illegally

6(1) — Illegal cultivation.

Table 3
ESTIMATED CONSUMPTION OF THE MAIN NARCOTICS FOR THE PERIOD 1954-1963 INCLUSIVE
Unit of Weight — Kilogramme (Pure)

Year	Raw Opium	Medicinal Opium and Preps.	Morphine	Heroin	Hydro-morphine	Codeine	Ethyl-morphine	Phol-codine	Cocaine	Alpha-prodine	Levor-phanol	Metha-done	Pethidine
1954	51.568	158.023	70.024	28.123	0.085	1819.701	16.812	5.670	33.198	3.147	0.368	10.858	335.324
1955	20.950	112.294	49.329	12.616*	0.425	2286.994	31.780	4.649	35.693	4.111	0.624	5.953	372.434
1956	28.306	185.820	50.402	6.158	0.390	1885.903	28.835	6.358	34.507	3.262	0.478	7.530	478.143
1957	21.500	112.519	43.348	5.605	0.319	2407.116	30.284	4.270	31.921	5.945	0.413	5.583	333.078
1958	3.648	140.819	44.645	2.971	0.245	2501.709	27.966	1.788	30.188	3.634	0.355	6.768	406.990
1959	.539	157.120	36.373	0.473	0.270	2571.228	25.825	3.435	31.171	4.977	0.335	5.290	547.115
1960	.114	140.551	41.912	0.144	0.206	2675.452	18.485	1.194	30.514	4.262	0.355	3.487	637.941
1961		109.906	43.743	0.081	0.155	2800.388	17.137	0.470	29.252	3.931	0.437	5.562	472.076
1962		137.739	44.571	0.067	0.194	3334.749	24.154	2.107	31.306	4.233	0.274	3.324	605.168
1963		132.603	52.151	0.075	0.422	2899.046	19.414	1.214	28.644	4.086	0.366	3.571	592.603

*Import of Heroin banned as of 1st January, 1955.

Table 4

EXPORTS 1963

	STRAIGHT			PREPARATIONS		
	Kg.	Gm.	Mg.	Kg.	Gm.	Mg.
Amphetamine	17	459	222		679	343

BARBITURIC ACID AND ITS SALTS AND DERIVATIVES

<i>Short Acting</i>						
Pentobarbital	6	321	700		3	750
Secobarbital	5	708	300			
TOTAL	11	1029	1000		3	750
<i>Intermediate</i>						
Amobarbital	58	243	520			
Butobarbital	18	698	250	18	832	733
TOTAL	76	941	770	18	832	733
<i>Long Acting</i>						
Barbital	49	815	750			
Phenobarbital	9	311	662	8	692	267
TOTAL	58	1126	1412	8	692	267
Miscellaneous	12	267	750		51	400
TOTAL EXPORTS OF BARBITURIC ACID AND ITS SALTS AND DERIVATIVES	157	3363	3932	26	1578	2150
Methamphetamine		230			212	581

Table 5

IMPORTS 1963

	STRAIGHT			PREPARATIONS		
	Kg.	Gm.	Mg.	Kg.	Gm.	Mg.
Amphetamine	354	383	860	72	325	120

BARBITURIC ACID AND ITS SALTS AND DERIVATIVES

<i>Short Acting</i>						
Allybarbituric Acid	247	750			90	
Heptabarbital	526	400				
Hexobarbital	20					
Methohexital	201	250		6	425	
Pentobarbital	3639	133	350	15	074	360
Secobarbital	4139	371	460			
Thiamylal	22					
Thiopental	680	637	500		414	
TOTAL	9474	2541	1310	21	1003	360
<i>Intermediate</i>						
Allobarbitone	72	500				
Amobarbital	5457	912	140	79	520	500
Butabarbital	2025	325		10	591	650
Butobarbital	255	400				
Delvinal		7	500	7	510	
TOTAL	7809	2144	640	96	1621	1150
<i>Long Acting</i>						
Barbital	1553	882	908			
Barbituric Acid	1	625				
Mephobarbital	110	460		60	534	040
Phenobarbital	8664	618	050	97	393	248
TOTAL	10328	2585	958	157	927	288
Miscellaneous	680	637	500		414	
TOTAL IMPORTS OF BARBITURIC ACID AND ITS SALTS AND DERIVATIVES ..	28291	7908	3408	274	3966	1798
Methamphetamine	61	773			283	

Table 6

CONVICTIONS UNDER THE FOOD AND DRUGS ACT PART III
DURING THE CALENDAR YEAR 1963

Food and Drugs Act

Province	Sect. 32(1)	Sect. 32(2)	Total	Amphetamines	Seco- barbital	Tuinal	Pheno- barbital	Nembutal	Pento- barbital	Total
Newfoundland										
Prince Edward Island										
Nova Scotia	1		1			1				1
New Brunswick										
Quebec	8	1	9		3	2		1	3	9
Ontario	5	1	6	2			4			6
Manitoba	16	1	17	2	12		3			17
Saskatchewan										
Alberta	3		3		3					3
British Columbia	13		13		2	10			1	13
Total	46	3	49	4	20	13	7	1	4	49

Food and Drugs Act Part III.

Section 32(1) Trafficking.

32(2) Possession for the purpose of trafficking.

HEALTH SERVICES

INTRODUCTION

The responsibilities of the Health Services Directorate cover a broad field which includes matters relating to the provision of technical and financial assistance to the provinces in the development of their special health services and the administration of shared cost programs such as hospital insurance and diagnostic services and the National Health Grants; certain statutory duties arising from the provisions of legislation such as the Public Works Health Act, the Atomic Energy Control Act, the Blind Persons Act; the co-ordination of extra-mural and intramural research activities; the provision of assistance and consultant services to other sections of the Department of National Health and Welfare and to other departments of the Federal Government; and obligations related to the international health field.

During the year under review, the Directorate, through the operation of its various sections and divisions, and in co-operation with other units of the Department, with other federal agencies, and with the provincial health authorities, continued its efforts to improve the quality and availability of health services throughout Canada. It continued, also, through participation in the activities of such agencies as the World Health Organization, the Food and Agriculture Organization, the Colombo Plan, and the International Joint Commission, to make its contribution in international health programs.

Matters of particular concern included the continuing development of programs designed to provide for the care and treatment of children suffering from congenital malformations, the measurement of radioactive fallout from nuclear weapons testing and the development of control measures to govern medical and industrial uses of X-rays and radioactive materials, emergency health services planning, and co-operation with the provinces and other interested agencies in a program of health education and research concerned with the hazards associated with cigarette smoking.

The Planning and Evaluation Unit, established during the previous fiscal year within the office of the Director of Health Services, has played an active part in all phases of the Smoking and Health Program. Other areas of study and evaluation have included projects concerned with oral cytology research, operational research in hospitals, assessment of the utilization of health services and of the quality of health care. In addition assistance has been extended to the University of Toronto School of Hygiene in relation to the development of an expanded program of graduate teaching and research. Consultant services were also provided to the Canadian Public Health Association in a field study of the functions of personnel in health units and health departments.

The Consultant in Laboratory Services continued during the year to provide technical advisory services, as required, on public health and clinical laboratory

arrangements, to the Director, to other officers of the Department, and to the provincial health authorities.

The joint Federal-Provincial fiscal conferences held in Ottawa in November 1963 and in Quebec City in January 1964 were of particular significance in relation to the shared cost programs for which the Health Services Directorate carries responsibilities. Officers of the Directorate attended the conferences in the capacity of advisers to the Minister of National Health and Welfare.

As in previous years, co-ordination of the work of the Directorate was facilitated by the annual review of the program of each division and section which, in collaboration with the Chief of the Division or Principal Medical Officer concerned, is carried out within the office of the Director.

Smoking and Health

The Directorate of Health Services had an active role in planning, organization, conduct and follow-up of the first Canadian Conference on Smoking and Health, held in Ottawa on the 25th and 26th of November, 1963. In addition to members of the Department of National Health and Welfare, the Conference was attended by representatives of all provincial governments, of the Canadian Medical Association, the Association des Médecins de Langue Française du Canada, the Canadian Public Health Association, the National Cancer Institute of Canada, the Canadian Cancer Society, the Canadian Heart Foundation, and of the tobacco industry and the tobacco growers. The Honourable Judy LaMarsh, Minister of National Health and Welfare, presided as chairman.

An outcome of the Conference was the formal acknowledgement by the representatives of the participating government departments and professional and voluntary health organizations that a causal, though not necessarily exclusive, relationship exists between cigarette smoking and lung cancer and possibly other diseases as well, and that health authorities have a duty to inform the public of the health hazards associated with cigarette smoking and to dissuade non-smokers, particularly children and young people, from acquiring the habit. On behalf of their respective departments, the representatives of the provincial health authorities agreed to support the Department of National Health and Welfare in the development of a nation-wide program of health education directed to these ends and research to provide information on the extent and nature of the smoking habit in Canada and on its motivational aspects — why the habit is acquired and why it persists so strongly. The Minister announced that the Federal Government was prepared to allot an amount of \$600,000 for this purpose over a five-year period, \$400,000 for health educational purposes and \$200,000 for research. A Technical Advisory Committee on Health Education concerning Smoking and Health and a Committee on Research concerning Smoking Hazards were established to assist the Department in planning this program, the basic objective of which was defined as: "To reduce the incidence of lung cancer and other diseases attributable to cigarette smoking, by the reduction or elimination of this health hazard."

In keeping with views expressed by the Technical Advisory Committee on Health Education, at its first meeting in January 1964, it was agreed that priority

in the health education aspects of the program should be given to health workers, including physicians, nurses and others, to whom the public may be expected to look for example and guidance. It was decided that the most urgent need was for a Reference Book which could be used by members of this group as a ready source of authentic information on the relationship between smoking and health. Preparation of such a book was undertaken immediately. In addition, work has been under way on the preparation of an informational kit suitable for use in answering general inquiries. As the program progresses appropriate action will also be taken to meet the need for other types of educational material and for visual aids such as films and filmstrips.

The Committee on Research met during the month of February 1964 and, as a result, an announcement was mailed to most of the universities across Canada, inviting applications for the support of research projects, preferably short-term studies, designed to provide information on (a) prevalence of the smoking habit, (b) methods of control, (c) attitudes toward smoking and social patterns of smoking. In an effort to obtain certain base-line information the Department has been in touch with the Dominion Bureau of Statistics with a view to the addition to their Labour Force Survey of several questions designed to provide information on the smoking habits of people across Canada. The possibility of a survey to provide information, on, among other things, recent changes in smoking habits is also under consideration.

HEALTH INSURANCE

The Health Insurance section continued to carry out administrative responsibilities in relation to the Hospital Insurance and Diagnostic Services program. The consultants attached to the unit were in constant demand throughout the year and their services were made available to the provinces. Members of Health Insurance took part in workshops, conferences and on a number of occasions addressed both professional and voluntary organizations.

During the year under review federal payments to the provinces in accordance with Agreements under the Hospital Insurance and Diagnostic Services Act totalled nearly \$400 million. By the end of the year, 99.1 per cent of the eligible population was insured.

During the year there was only one amendment made in the federal legislation and this was in the form of an amendment to the Hospital Insurance Regulations. The amendment was made following a recommendation of the Advisory Committee on Hospital Insurance and Diagnostic Services which had set up a Working Party to examine and report on the matter of income on activities of hospitals not directly related to patient care. The objective of the amendment was to provide hospitals with some measure of free funds derived from ancillary operations which are not financed under the general sharing arrangements, and applied to the operating costs of hospitals incurred on and after January 1, 1963.

There were not many significant changes in provincial legislation during the year. Amendments to the provincial regulations affecting the amount of the premiums paid by residents in Saskatchewan and Ontario were made although in the latter case the change did not take effect during the period under review.

The Saskatchewan amendment had the effect of reducing the annual premium from January 1, 1964 to \$20.00 and \$40.00 for single and family subscribers, respectively. The Ontario amendment provided for an increase in the monthly premium to come into force on October 1, 1964, to \$3.25 and \$6.50 for single persons and families, respectively.

A number of changes were made in the Agreements with the provinces, the majority of which related to the list of participating hospitals. There were also a number of amendments relating to out-patient services provided to insured persons under provincial law. For the first time since the conclusion of the Agreement with Alberta in 1958, some out-patient services have been included in the federal-provincial Agreement with that province: out-patient services provided in and by the provincial cancer clinics and the provincial laboratories.

Insured out-patient services were somewhat expanded in Manitoba by the inclusion of the services administered and provided by the Manitoba Cancer Treatment and Research Foundation; the services of the Pre-School Development Clinic were also included as insured services.

The amendments relating to insured out-patient services in Saskatchewan, which were mentioned in last year's Report, were completed early in the fiscal year under review. The New Brunswick Agreement was also amended so as to expand to some extent the insured out-patient services in that province.

At the end of the fiscal year under review amendments to the Prince Edward Island Agreement were being completed to reflect the changes which had been made in the provincial law when the province altered its method of financing from a premium method to a program of universal coverage financed through general revenue.

The Advisory Committee on Hospital Insurance and Diagnostic Services held three meetings during the year under review, on April 22 and 23, 1963; October 21 and 22, 1963; and January 30 and 31, 1964.

At the meeting of the Advisory Committee held in the spring of 1963, in addition to discussions relating to a wide variety of technical problems, two experts in the hospital field from the United States discussed the question of assessment of hospital bed and service needs. Mr. J. Thewlis of the United States Department of Health, Education and Welfare, having responsibilities in that country for the field operation of the national Hospital Construction program, discussed the problem of estimating hospital bed and service needs from a national point of view, and Dr. R. Rorem, Executive Director of the Hospital Plan Association of Allegheny County in Pittsburgh, Pennsylvania, discussed the problem from a regional point of view. It has been found to be of considerable benefit to the federal and provincial authorities in the field of hospital insurance, to have technical experts address the Advisory Committee from time to time.

The second meeting during the fiscal year, of the Advisory Committee on Hospital Insurance and Diagnostic Services, was held in Ottawa on October 21 and 22, 1963. In addition to receiving reports of the work of its subcommittees and working parties, and dealing with a considerable number of technical problems, it was unanimously agreed to convene a special meeting for the sole purpose of discussing the question of hospital costs. In accordance with this decision,

Table 7
 PAYMENTS BY CANADA UNDER HOSPITAL INSURANCE AND DIAGNOSTIC SERVICES ACT

Province	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	Total
Newfoundland	\$2,857,886.84	\$4,707,692.94	\$5,094,934.21	\$6,258,287.26	\$7,472,463.28	\$8,724,909.88	\$35,116,174.41
Prince Edward Island		447,338.27	1,010,806.54	1,381,894.39	1,673,681.11	1,922,524.26	6,436,244.57
Nova Scotia	1,572,782.64	8,162,540.78	9,595,387.52	11,872,932.01	13,519,974.70	15,174,842.90	59,898,460.55
New Brunswick		4,575,374.90	7,914,412.71	9,546,774.26	10,894,711.87	12,611,337.91	45,542,611.65
Quebec			13,936,740.72	73,022,517.78	88,713,635.41	113,848,887.58	289,521,781.49
Ontario	13,140,213.12	71,892,833.66	84,484,271.86	104,498,880.55	122,103,382.61	136,039,776.87	532,159,358.67
Manitoba	7,148,534.97	11,324,466.35	13,048,916.19	15,245,924.23	17,348,934.08	19,664,963.78	83,781,739.60
Saskatchewan	8,430,441.93	13,378,379.43	14,453,463.99	15,953,810.19	18,278,458.50	21,312,084.05	91,806,638.09
Alberta	8,774,575.68	15,698,727.86	16,905,597.57	19,730,547.07	25,784,973.30	28,310,623.43	115,205,044.91
British Columbia	12,784,038.88	20,406,091.56	22,493,438.52	25,697,550.94	30,049,147.43	33,687,396.64	145,117,663.97
Yukon			168,683.75	296,036.35	310,267.36	349,443.34	1,124,430.80
Northwest Territories			261,849.89	377,941.52	523,148.02	597,444.71	1,760,384.14
Total	54,708,474.06	150,593,445.75	189,368,503.47	283,883,096.55	336,672,777.67	392,244,235.35	1,407,470,532.85

the Advisory Committee convened in a special session on January 30 and 31, 1964. This meeting drew up a specific recommendation concerned with present and future costs of hospital services across Canada. The Committee's recommendation pointed out that it had considered such factors as the numbers and types of hospital beds; the services and levels of service in the hospital system; staffing patterns and salary scales; utilization and trends in utilization; efficiency in hospital administration and operation, with possible modification to improve functional efficiency and methods used to review hospital budgets. These matters were discussed in terms of essential services and with a view to assessing the impact of such essential services on present and future costs.

The only subcommittee meeting held during the year under review was that of the Subcommittee on Finance and Accounting which met on September 18 and 19, 1963.

Most of the working parties were active during the year. The Working Party on Hospital Standards, to which reference has been made in previous reports, met on June 18 and 19, 1963 and the Working Party on Operational Research held its second meeting on June 20 and 21, 1963.

Although the Working Party on Laboratory Units did not hold a formal meeting, the small continuing group met several times during the year and two of these meetings were held with representatives of the Canadian Association of Pathologists.

For the first time a meeting was held of a new Working Party on Radiology which was established by the Advisory Committee with a view to devising radiological units on a standardized basis as a measurement of the volume of services for use across the country. This meeting was attended by technical personnel and, in addition, the Canadian Association of Radiologists sent representatives.

For the first time since the inauguration of the Hospital Insurance and Diagnostic Services program, a meeting was held on October 2 and 3, 1963 in Ottawa of the federal and provincial hospital nursing consultants. This meeting was attended by provincial representatives and was chaired by the Consultant in Hospital Nursing of Health Insurance. The purpose of the meeting was to provide an opportunity for these consultants to share information, knowledge and experience by discussing topics in nursing services that are of common interest. The meeting dealt with a wide range of topics. The consensus at the close of the meeting was that the interchange of views which had been made possible by the meeting was of great value to all those concerned with hospital nursing.

INTERNATIONAL HEALTH

International Health interests and activities have continued progressively to develop and expand as a departmental responsibility. They involve two main areas — Canada's membership and thereby its obligations to the World Health Organization and the health aspects of other United Nations Agencies, and the provision as the designated government agency of advice and practical assistance to the External Aid Office in connection with the health aspects of bilateral aid programs.

Unusual circumstances necessitated the convening by W.H.O. of two Assemblies during the fiscal year under review. The 16th World Health Assembly met at its usual time and place, May 7th to 23rd in Geneva, and the Canadian Delegation was led by Dr. B. D. B. Layton, Principal Medical Officer, International Health, with Mr. S. F. Rae, Permanent Representative of Canada to the European Office of the United Nations as Alternate Head, and Dr. A. D. Kelly, General Secretary, Canadian Medical Association, delegate. Dr. G. Mailloux, Immigration Medical Officer stationed at Berne, Switzerland, was an alternate delegate, and Mr. W. E. Bauer, First Secretary, and Miss L. Gauthier, Second Secretary in the Permanent Mission, were advisers. At the Assembly the appointment of the Director-General, Dr. M. G. Candau, was extended by unanimous agreement for an additional term of five years and a budget in the amount of U.S. \$34,682,140 for 1964 was approved, Canada's share being U.S. \$981,500.

At its 32nd Session following the Assembly, Dr. Layton, the designated Canadian member, was elected Chairman of the Executive Board for the succeeding year. This marked the second occasion upon which a Canadian has served in that capacity, Dr. P. E. Moore, Director of Medical Services, having been elected for 1957-58.

Due to the United Nations Trade and Development Conference, convened late in March 1964, and because of its planned duration of approximately three months, the dates for the 17th World Health Assembly were advanced to March 3rd to 20th, the meeting held also in Geneva. The Canadian Delegation was headed by Dr. G. D. W. Cameron, Deputy Minister of National Health, with Mr. S. F. Rae, Alternate Head, and Dr. Leonard Miller, Deputy Minister of Health, Newfoundland, the third delegate. Dr. William H. MacMillan, Member of Parliament, was an alternate delegate and Mr. W. E. Bauer again acted as adviser. On this occasion Dr. B. D. B. Layton in his capacity of Chairman of the Executive Board, was named as one of its representatives to the Assembly. Dr. Layton has also been designated the Assembly representative to the U. N. Joint Staff Pension Board during the ensuing year. At this Assembly, four associate members were admitted to W.H.O. bringing the total to 125, including six associates. Special consideration was given to intensification of malaria and smallpox eradication programs, international quarantine measures, prevention of adverse drug reactions and the extension of W.H.O.'s research activities. A budget totalling U.S. \$39,396,370 was approved for which Canada's contribution will amount to U.S. \$1,114,920.

Dr. Stanley Haidasz, Parliamentary Secretary to the Minister of National Health and Welfare and the Principal Medical Officer, International Health, attended, as observers, the combined annual meeting of the PAHO/WHO regional policy and executive body in Washington, D.C., September 15th to 27th, 1963. As heretofore, participation was limited to scientific and technical matters. The Department was also represented at a number of conferences, panel discussions and committee meetings in Canada and the U.S.A., dealing with international health matters. By invitation, the P.M.D. International Health served on the A.P.H.A. Committee which revises and produces, each five years, the Association's publication "The Control of Communicable Diseases in Man".

Continuing its service to various international agencies, International Health arranges programs of visits of both short and long-term nature, as well as placement of trainees for special studies in Canadian health institutions.

Of more immediate concern, under the External Aid Program, the numbers of trainees continue to increase, as indicated in the following tabulation:

	1959	1960	1961	1962	1963
Arriving in Canada	49	66	90	67	89
In Canada during year	91	128	178	186	206
Departing for home country	29	40	59	69	57

Reports on health scholars under the External Aid Program during the fiscal year showed a total of 114 following degree, diploma or certificate, with the major groups being: undergraduate medicine — 50, public health, including hospital administration, etc., — 25, graduate nursing studies — 16, and pharmacy — 7.

NATIONAL HEALTH GRANTS

The sixteenth year of the National Health Grants program was marked by the continuation of advances made possible by federal grants-in-aid to the provinces specifically for the development of public health services, research and hospital construction.

Public Health Progress

The various specialists within the Health Branch act as consultants to the Health Grants Administration on the public health aspects of projects within their special fields. References to the impact of the grants on particular public health problems will, accordingly, be found in appropriate sections of this report.

In general, the grants are contributing to the extension of local health services for both rural and urban areas; the training and employment of many categories of health workers; the expansion and renovation of existing hospital buildings and the erection of new ones; the control of tuberculosis, venereal and other communicable diseases; the development of improved cancer diagnostic and treatment facilities; the extension of medical rehabilitation services (including home care) to restore patients to the maximum degree of health and productivity; the treatment of crippling conditions in children; the extension of services to prevent and treat mental illness; the improvement of care given to mothers and their children; and the encouragement of sound research in public health.

Administration

During the year two changes were made in the basic structure of the grants program. The first was an increase of \$200,000 in the Medical Rehabilitation and Crippled Children Grant specifically to provide funds for the development and continuing support of three centres for research into new methods in prosthetics and orthotics and the training of personnel in any new techniques developed. This action was taken as the result of a recommendation of an expert committee

Table 8
EXPENDITURES UNDER THE NATIONAL HEALTH GRANTS 1963-64

Province	GENERAL HEALTH GRANTS										Total Health Grants
	Hospital Construction Grants	Professional Training	Mental Health	Tuberculosis Control	Public Health Research	General Public Health	Cancer Control (a)	Medical Rehabilitation and Crippled Children (b)	Child and Maternal Health	Total	
Newfoundland	\$ 958,929	\$ 110,609	\$ 177,863	\$ 147,890	\$ 4,988	\$ 348,958	\$ 12,879	\$ 61,406	\$ 56,610	\$ 921,203	\$ 1,880,132
Prince Edward Island	80,498	18,836	73,554	30,179		169,139	15,609	12,597	7,337	327,251	407,749
New Scotia	1,136,907	82,435	393,713	139,685	86,218	703,975	62,919	77,690	71,948	1,618,583	2,755,490
New Brunswick	1,072,846	49,450	278,855	104,816	7,465	518,655	109,576	86,363	38,142	1,193,322	2,286,168
Quebec	5,882,671	638,048	2,575,045	1,042,896	613,277	1,793,984	695,750	743,002	393,176	8,495,178	14,377,849
Ontario	7,500,482	410,981	2,699,846	784,069	496,731	2,703,471	1,416,184	335,733	347,157	9,194,172	16,694,654
Manitoba	957,816	87,368	435,223	178,353	82,458	728,886	163,382	158,904	64,187	1,898,761	2,856,577
Saskatchewan	1,510,470	75,163	435,763	145,665	31,461	602,619	162,562	44,955	75,206	1,573,394	3,083,864
Alberta	1,973,652	135,226	652,544	215,549	104,184	1,107,755	234,742	96,770	69,845	2,616,615	4,590,267
British Columbia	880,632	131,403	581,387	243,325	143,753	1,324,718	282,151	235,249	80,709	3,027,695	3,908,327
Northwest Territories	21,895	3,350		4,469	8,467	61,620	4,000	563		82,469	104,364
Yukon	3,202		27,310	19,000						46,310	49,512
Total	22,000,000	1,742,869	8,331,103	3,060,896	1,579,002	10,063,780	3,159,754	1,853,232	1,204,317	30,994,953	52,994,953

(a) Out of the special allocation of \$350,000, the following amounts were expended: N.S. — \$15,000; Quebec — \$218,292; Ontario — \$116,708.

(b) Out of the special allocation of \$200,000, the following amounts were expended: Quebec — \$52,835; Ontario — \$47,276; Manitoba — \$45,713.

on the habilitation of congenital anomalies associated with thalidomide, and the three centres have now been set up and are operating in Montreal, Toronto and Winnipeg.

The second change was in the Cancer Control Grant in which, without increasing the total grant, an amount of \$350,000 was specifically earmarked for research into possible causes and improved methods of treatment of cancer.

Provincial Co-operation

During the year, both at meetings of the Dominion Council of Health and on other occasions, opportunities have been utilized to discuss with provincial health authorities their plans and programs as well as day-to-day problems of administration. These exchanges of views have been most useful and have helped to maintain the spirit of federal-provincial co-operation which has characterized the grants program since its beginning.

Expenditures

Federal expenditures under this program totalled approximately \$52,994,000 during the fiscal year — \$22,000,000 for hospital construction and \$30,994,000 for the other eight grants. These figures represent an increase of \$2,000,000 for hospital construction and about \$700,000 for the other health grants over expenditures in 1962-63.

In almost all grants, the percentage of funds utilized by the provinces out of the total amounts available remained high. Pressures on the Hospital Construction Grant were particularly noteworthy, with four provinces committing more than 98 per cent of the amounts available to them.

RESEARCH DEVELOPMENT

The Research Development Section co-ordinates all aspects of the department's scientific and medical research programs, and maintains liaison with other federal government and national voluntary agencies that support medical research. Independent scientific appraisal of applications for research grants is arranged. Contact is maintained with recipients of such grants on technical aspects of their research work. Research grants under this program are made on a project basis, implying an application to a defined problem which is of interest to provincial and federal health services. They are, therefore, related to the "burden of disease" in Canada. Studies are conducted to aid in defining these diseases and the services involved.

Emphasis at present is being placed on: public health administration, epidemiological studies, communicable diseases, environmental sanitation, and some clinical research which may be of value for mental health, cardiovascular disease, child and maternal health, arthritis, neurological disease, etc. The application to establish Canadian health needs and health services, as sponsored by provincial and national health departments, helps to distinguish this research program.

Table 9
SUMMARY OF INTRAMURAL RESEARCH PROGRAM — 1963-64

Reporting Unit and Type of Cost	Estimated Research Budget: In \$(000's)	Per Cent of Total for Department
HEALTH BRANCH		
<u>Food and Drug Directorate</u>		
Research and Development Costs	718.0	33.0
<u>Health Services Directorate</u>		
Research And Development Costs		
Laboratory of Hygiene.....	283.0	13.0
Occupational Health Division.....	228.6	10.5
Radiation Protection Division.....	283.0	13.0
Nutrition Division.....	12.0	0.5
Public Health Engineering Division.....	8.0	0.4
Sub-total.....	814.6	37.4
Scientific Data Collection Costs		
Epidemiology Division.....	26.0	1.2
Mental Health Division.....	5.0	0.2
Dental Health Division.....	27.0	1.3
Medical Rehabilitation Division.....	0.8	0.0
Hospital Design Division.....	22.2	1.0
Health Insurance Division.....	6.7	0.3
Sub-total.....	87.7	4.0
Total Health Services Directorate.....	902.3	41.4
<u>Medical Services Directorate</u>		
Research Development Costs.....	150.0	6.8
Total Health Branch.....	1,770.3	81.2
ADMINISTRATION BRANCH		
Scientific Information Costs		
Library.....	66.0	3.0
Scientific Data Collections Costs		
Research and Statistics Division.....	343.0	15.8
Total Administration Branch.....	409.0	18.8
<u>Health and Administration Branch</u>		
Total Research and Development Costs.....	1,682.6	77.2
Total Scientific Data Collection Costs.....	430.7	19.8
Total Scientific Information Costs.....	66.0	3.0
Total Intramural Research Costs Estimated for the Department.....	2,179.3	100.0

Table 10
ALLOCATIONS FOR RESEARCH UNDER THE NATIONAL HEALTH GRANTS PROGRAM 1963-64

Province	Mental Health	Public Health Research	General Public Health (a)	Medical Rehabilitation and Crippled Children	Child and Maternal Health	Cancer Control Grant (b)	Total
Newfoundland	\$	\$ 11,370	\$	\$	\$	\$ 10,000	\$ 21,370
Prince Edward Island							
New Scotia	11,727	116,292			14,342	15,000	157,361
New Brunswick		7,465					7,465
Quebec	293,076	613,566	355,841	33,466	239,506(c)	220,507	1,755,962
Ontario	201,339	554,309	77,000	60,858	212,388	366,708	1,472,602
Manitoba	27,069	96,474(d)			8,887		132,430
Saskatchewan	115,039	44,701			18,810		178,550
Alberta		122,607		4,720	4,133		131,460
British Columbia	62,129	159,069	50,200	1,296	40,433		313,127
Northwest Territories		8,467					8,467
Yukon							
Total	710,379	1,734,320	483,041	100,340	538,499	612,215	4,178,794
Per Cent of Total	17.0	41.5	11.5	2.4	12.9	14.7	100.0

(a) The total for the General Public Health Grant includes purchases of research equipment: Quebec — \$55,670; Ontario — \$55,500; British Columbia — \$50,200.

(b) The amounts of the Cancer Control Grant used to assist research under the National Cancer Institute are as follows:

Newfoundland — \$10,000; Nova Scotia — \$15,000; Quebec — \$218,292; Ontario — \$116,708. Research assisted at the Ontario Cancer Treatment and Research Foundation — \$250,000.

(c) Includes \$10,000 for purchase of research equipment only.

(d) Includes \$13,591 for purchase of research equipment only.

Table 11

DISTRIBUTION OF RESEARCH FUNDS UNDER NATIONAL HEALTH GRANTS
TO DEPARTMENTS OF UNIVERSITIES, HOSPITALS, ETC. — 1963-64

Department	No. of Projects	Amount	Per Cent of Total Amount
Medical Research Institutes.....	30	\$532,472	18.0
Psychiatry.....	35	523,864	17.8
Public Health, Social and Preventive Medicine.....	22	235,209	8.0
Surgery.....	15	227,160	7.7
Medicine.....	20	202,124	6.9
Paediatrics.....	20	164,399	5.6
Obstetrics.....	14	132,717	4.5
Ophthalmology.....	12	131,111	4.4
Bacteriology.....	9	84,378	2.9
Psychology.....	10	81,107	2.8
Physiological Hygiene.....	3	49,050	1.7
Physiology.....	3	45,293	1.5
Schools, to include Hygiene, Nursing, etc.....	5	43,410	1.5
Pharmacology.....	4	41,235	1.4
Biochemistry.....	5	40,930	1.4
Dentistry.....	2	40,625	1.4
Pathology.....	4	39,793	1.3
Anaesthesia.....	6	31,433	1.1
Haematology.....	3	29,880	1.0
Clinical Investigation Unit.....	3	29,575	1.0
Allergy.....	2	26,105	0.9
Parasitology.....	2	23,200	0.8
Genetics.....	2	17,799	0.6
Microbiology.....	2	17,100	0.6
Social Work.....	1	16,275	0.5
Biomedical Engineering.....	2	14,850	0.5
Physics.....	1	14,500	0.5
Speech Pathology and Audiology.....	2	13,435	0.5
Physical Medicine and/or Rehabilitative Medicine.....	2	13,189	0.4
Anatomy.....	2	12,000	0.4
Nutrition.....	2	11,500	0.4
Other Departments.....	1	10,500	0.4
Neurology and Neurosurgery.....	1	10,000	0.3
Radiology.....	2	9,770	0.3
Laboratory (Hospital).....	2	8,850	0.3
Biophysics.....	1	7,300	0.2
Sociology and Anthropology.....	1	5,120	0.2
Biology.....	1	4,250	0.1
Histology.....	1	3,600	0.1
Pathological Chemistry.....	1	2,500	0.1
Total.....	256	2,947,608	100.0

Note: The sums stated in this Table are those initially approved at May 1, 1963. The total differs from that of Table 10 by exclusion of amounts approved by amendments or for projects submitted after May 1, 1963

Table 12

**DISTRIBUTION OF RESEARCH FUNDS UNDER NATIONAL HEALTH GRANTS
ACCORDING TO FIELD OF INVESTIGATION — 1963-64**

Field of Investigation	No. of Projects	Amount	Per Cent of Total Amount
Psychiatry.....	38	\$446,755	15.2
Medicine.....	21	334,506	11.3
Paediatrics.....	17	197,860	6.7
Physiology.....	18	197,521	6.7
Surgery.....	11	177,932	6.0
Environmental Medicine.....	10	143,581	4.9
Biochemistry.....	15	140,523	4.8
Ophthalmology.....	8	104,610	3.5
Bacteriology.....	12	102,389	3.5
Obstetrics.....	11	91,306	3.1
Pharmacology.....	10	88,865	3.0
Virology.....	8	84,331	2.9
Allergy.....	6	75,131	2.6
Epidemiology.....	6	72,562	2.5
Social Medicine.....	4	70,000	2.4
Medical Administration and Education.....	4	68,939	2.3
Immunology and Serology.....	3	64,350	2.2
Neurology and Neurosurgery.....	7	62,006	2.1
Gerontology.....	3	46,350	1.6
Radiobiology.....	4	40,734	1.4
Otorhinolaryngology.....	3	36,392	1.2
Dentistry.....	2	35,182	1.2
Parasitology and Mycology.....	4	33,790	1.1
Haematology.....	5	33,355	1.1
Genetics.....	4	27,430	0.9
Pathology.....	3	26,590	0.9
Unclassifiable.....	1	24,000	0.8
Sanitary Engineering.....	2	21,560	0.7
Preventive Medicine.....	1	20,114	0.7
Physical Medicine and Rehabilitation.....	3	20,039	0.7
Anaesthesiology.....	4	19,522	0.7
Endocrinology.....	2	10,620	0.4
Biophysics.....	1	7,300	0.2
Anthropology.....	1	7,108	0.2
Dermatology.....	1	6,000	0.2
Psychology.....	2	5,975	0.2
Anatomy.....	1	2,380	0.1
Total.....	256	2,947,608	100.00

Note: The sums stated in this Table are those initially approved at May 1, 1963. The total differs from that of Table 10 by exclusion of amounts approved by amendments or for projects submitted after May 1, 1963.

Table 13

**DISTRIBUTION OF RESEARCH FUNDS UNDER NATIONAL HEALTH GRANTS
ACCORDING TO DISEASE GROUPS — 1963-64**

International Classification	No. of Projects	Amount	Per Cent of Total Amount
Mental, Psychoneurotic and Personality Disorders.....	52	\$626,785	21.3
Diseases of Circulatory System.....	30	379,894	12.9
Infective and Parasitic Diseases.....	31	375,108	12.7
Diverse Disease Entities.....	23	275,261	9.3
Allergic, Endocrine, Metabolic and Nutritional Diseases.....	23	257,575	8.7
Diseases of Nervous System and Sense Organs.....	23	244,548	8.3
No Disease Entity Involved.....	13	146,694	5.0
Diseases of Respiratory System.....	11	120,302	4.1
Diseases of Early Infancy.....	8	110,824	3.8
Diseases of Digestive System.....	6	77,140	2.6
Diseases of Bones and Organs of Movement.....	8	67,216	2.3
Pregnancy, Childbirth, and Puerperium — Complications.....	8	65,987	2.2
Congenital Malformations.....	7	60,671	2.1
Accidents, Poisonings, and Violence.....	4	60,492	2.1
Diseases of Blood and Organs.....	5	39,481	1.3
Diseases of Skin and Cellular Tissues.....	2	16,000	0.5
Diseases of Genito-Urinary System.....	1	12,260	0.4
Neoplasms.....	1	11,370	0.4
Total.....	256	2,947,608	100.0

Note: The sums stated in this Table are those initially approved at May 1, 1963. The total differs from that of Table 10 by exclusion of amounts approved by amendments or for projects submitted after May 1, 1963.

Total Assistance for Research 1963-64

An aggregate of \$6,358,094 or 33 cents per capita, was allocated for intramural research activities plus the extramural research assisted by the National Health Grants. This represents a slight increase over total allocations for a similar period in 1962-63.

Intramural Research

Research is carried on within the Department, in well-equipped laboratories or clinic services of the Health Branch, while in the Administration Branch, studies are conducted in the socio-economic field. Estimates provided by the reporting units indicate a total intramural research budget of \$2,179,300.

Extramural Research

The Health Grants Program assists research under several separate grants. The Public Health Research Grant is made available through the provinces, in a common pool, on a non-sharing basis, at 10 cents per head of population. Other grants, allocated to the provinces in specified amounts and with certain conditions for various services, may also be used for research. The most extensive such assistance is given under the grants for mental health and for child and maternal health. An aggregate of \$4,178,794 was approved to assist extramural research

under National Health Grants. The total sum represents an increase of \$614,507 over the total project approvals for a similar period in 1962-63. Other assistance, as requested by the provinces, continued in such areas as purchase of equipment, training of staff, and other forms of support.

Departments of hospitals or of universities and names of special institutes or public health agencies which received funds under the Health Grants in 1963-64 and the extent of support by field of investigation are shown in accompanying tables.

The distribution of funds according to the International Statistical List of Diseases, Injuries, and Causes of Death is shown in an accompanying table, with two added categories "Diverse Disease Entity (More Than One)", and "No Disease Entity Involved" which, for Public Health Research, is largely confined to administrative research.

SPECIAL PROJECTS

Special projects are referred to this section as they arise. They may be of a temporary or continuing nature and involve responsibilities for a variety of health areas which do not fall within the fields of interest of the other sections or divisions of the Directorate of Health Services. More specifically, this section is concerned with environmental health activities. During the past year, the Principal Medical Officer of the section maintained a close relationship with the Divisions of Occupational Health and Public Health Engineering regarding certain of the administrative responsibilities of these units relating to the planning, organization and budgeting of their programs. The ultimate purpose of this collaborative effort is to promote a larger measure of co-ordination in the activities of these divisions as their programs are extended.

Educational and Technical Information Services

The Principal Medical Officer of this section continued to serve as Associate Editor of the "Medical Services Journal Canada", a professional and scientific medical periodical published monthly under the joint authority of the Ministers of National Defence, National Health and Welfare, and Veterans Affairs. It is devoted largely to the publication of papers on military medicine, clinical matters submitted by D.V.A. hospitals, as well as the publication of articles on the various public health programs of the Department of National Health and Welfare and the provincial health departments.

Abstracts of current research projects and reviews of the medical research program of the World Health Organization are also published regularly in the Journal. It is circulated to Canadian hospitals, medical researchers, medical officers of health, and others, and provides systematic and useful information on current research programs taking place in Canada and abroad.

Other activities of Special Projects Section have included reviews of French translations of educational materials and radio scripts produced by the Department, as well as of French reports, books, and reference materials received from outside sources.

Consultant and Advisory Services

During the past year, this section provided professional and technical assistance in the planning, allotment and operation of departmental programs concerned with cancer control in Canada, fitness and amateur sport, smoking and health, accident control, and organized home care programs. The section also served in an advisory capacity in the appraisal of health projects for which assistance had been requested under the Health Grants Program.

The Principal Medical Officer of the section served on various committees concerned with general departmental interests, including the Joint Departmental Committee on Canadian Government Participation in the 1967 Exhibition.

SPECIAL HEALTH SERVICES

Chief Nursing Consultant

The Chief Nursing Consultant's unit is responsible for provision of an advisory service in the broad general field of nursing, on a request basis, both within the Department and to the provinces. Professional staff of the unit presently comprises the Chief Nursing Consultant and a Public Health Nursing Consultant.

During 1963 the orientation of the Public Health Nursing Consultant to the provinces was completed. Also in 1963 a project entitled "A Study of the Functions of Nursing Personnel in Health Units and Municipal Health Departments", sponsored by the Canadian Public Health Association, got under way. The Public Health Nursing Consultant was assigned to conduct this study, under the direction of the Consultant in Planning and Evaluation.

Full-time commitment of the Public Health Nursing Consultant to this study has meant that certain plans for the development of the Chief Nursing Consultant's unit have had to be temporarily shelved.

Progress can, however, be reported in one area at least. In April 1963 a two-day conference was held in Ottawa, chaired by the Principal Medical Officer, International Health. The purpose of the meeting was to consider problems related to international nursing students studying at Canadian universities under the Colombo Plan. The group also explored ways in which the Chief Nursing Consultant's unit might be helpful in strengthening the liaison between the Department, the universities, External Aid and the Canadian Nurses' Association. Each of these groups was represented at the conference together with the Nurse Adviser, Fellowships Branch, Pan American-W.H.O. Regional Office, Washington.

One practical result of this exchange of views and information was an undertaking that the Chief Nursing Consultant or the Public Health Nursing Consultant would visit each university school of nursing at which Colombo Plan nursing students are enrolled. Two visits during the academic year were agreed to, at which time both faculty and students would have an opportunity to discuss problems. This modest approach, carried out in the autumn of 1963 and in late winter 1964, appears to be not without some value for all concerned — this Department, External Aid, the students and their faculty advisers.

A second result stemming from the April 1963 conference is a closer degree of co-operation between the Canadian Nurses' Association and the Chief Nursing Consultant's unit in planning programs for international nursing visitors.

In 1963-64, as for some years past, arrangements have been made for the visit to the Department of nursing students enrolled at the School for Graduate Nurses, McGill University, and at the School of Hygiene, University of Montreal. In addition, a small group of senior departmental nursing personnel were invited to McGill to interpret the role of nurse consultants at federal level.

The Chief Nursing Consultant continues her co-ordinating function as Chairman of the Departmental Nursing Committee. Plans are under consideration for the organization of the third Federal-Provincial Public Health Nursing Conference to be held, possibly, early in 1965.

Child and Maternal Health

The broad purpose of the Child and Maternal Health Division is to assist in the promotion of optimum health of mothers and children in Canada; its ultimate objective is healthier family life. Toward these objectives, consultation and advice to provincial and local health services continue to be of prime importance. By means of liaison, particularly with the Divisions of Maternal and Child Health and Public Health Nursing, assistance is given to planning comprehensive programs and services for mothers and children of all ages, including those with handicapping conditions. In addition, leadership is given in defining desirable standards of care; research is encouraged and supported; assistance is given in the field of health education.

The scope and diversity of the division's work are not readily appreciated, encompassing as it does, the major age groups, infants, children of all ages and their parents, their health status, care and services, as well as changes affecting the family as a unit and its individual members. Furthermore, the varied activities which make up maternal and child health programs involve collaboration with national, provincial and local authorities, both governmental and voluntary.

Population figures, mortality and morbidity statistics help to outline a general picture of this broad field of interest. In 1962, Canada's birth rate was 25.3 per 1,000 of the population, placing her foremost among nations with comparable standards of living. Live births totalled 469,693 and there were 5,882 stillbirths. About one-third of Canada's population is under the age of 15.

Infant Mortality

Infant mortality experience in Canada is a constant reminder of the magnitude and complexity of the unfinished work. Not only is infant mortality considered a sensitive index of the health of infants, but also of the general health status of the country. In 1962, Canada had 12,941 infant deaths or an infant mortality of 28 per 1,000 live births. This is a slight rise from 27 in 1961 and therefore is cause for concern among health workers. Also, there continue to be eleven countries with similar standards of living with lower infant mortality rates than Canada's; 60 per cent of infant deaths in the first year of life were in the first

week of life. The main causes of infant death, in order of importance were immaturity, congenital malformation, pneumonia, respiratory problems of the newborn, and birth injury. Positive efforts toward reduction of this toll include prevention of postnatal illness, as well as to neonatal and perinatal causes. Research and collaborative programming with related fields are urgently required.

Maternal Mortality

In 1962, 191 mothers died in Canada, a rate of 41 per 100,000 live births. The main causes of death were haemorrhage, sepsis and toxæmia. Little specific information is available on the health status of the surviving mothers.

Morbidity

Information on illness among children and mothers is not readily available but more attention is being directed to the early recognition and specialized treatment of conditions causing continuing disability. Additional data on morbidity of mothers and children are needed so that basic maternal and child health problems can be better defined; this provides for more guidance in health program development and highlights areas requiring research, service and education, for example, accident prevention.

Health Grant Program

This program provides a basic practical means of co-ordinating departmental and provincial information and policy. As might be expected, the present pattern of utilization of health grant funds varies widely among provinces, depending on the nature and extent of maternal and child health problems, existing resources and services, as well as provincial policy on utilization. Since April 1, 1960, the Child and Maternal Health Grant has been \$1,750,000 with a good proportion of the funds expended yearly.

Funds are assisting in the support of a number of provincial maternal and child health consultants' services and the specialist training of workers in the field. Prenatal education programs are assisted materially through support of in-service training programs for nurses and the provision of equipment and teaching aids for classes. Funds made available for maternal and perinatal mortality studies have drawn attention to maternal and newborn problems; they also are effective educational devices for physicians and nurses particularly. Other types of assistance provided by the grant are programs for children with speech, hearing and vision problems, administration of registries for handicapped children, dental care programs for children, poison control centres, rheumatic fever prophylaxis programs, genetic counselling, and management of erythroblastosis in newborn infants.

Although primarily a service grant, a high percentage of the Child and Maternal Health Grant supports research; in addition, almost a fifth of the maternal and some child health research projects are being supported under the Public Health Research Grant.

This grant probably represents the most important single source of support of obstetric and paediatric research in Canada. Trends indicate that research de-

mands will be increasing. Important areas being studied pertain to maternal health — placental function, causes of congenital anomalies, anaemias of pregnancy, renal problems of pregnancy, the newborn — respiratory distress syndrome, Rh disease and ABO incompatibilities. Some of the nutrition and metabolism studies relate to resistant rickets, cystic fibrosis of the pancreas, mental retardation associated with inborn errors of metabolism; surgical problems peculiar to children, and genetics — cytogenetic studies of various kinds.

Maternal and Child Health Advisory Committee

An important channel of communication is the Maternal and Child Health Advisory Committee set up in 1958. It provides a forum for discussion among federal and provincial maternal and child health workers and university departments of obstetrics, paediatrics, and nursing. This year the committee held its sixth annual meeting. Provincial reports formed a major part of the program; they serve to emphasize the broad and changing interest of the group, the need for continued study and for planning on a national scale. Some of the other topics discussed were legislation for Vitamin C fortification of milk, Poison Control, school health, health services for unmarried mothers, health supervision of the 2-6 year old group, health grants, and measles vaccines.

The committee has three subcommittees, Research, Standards of Care, and Statistics.

Subcommittee on Research

A one day meeting was held to discuss policy matters; it pointed out the need for continuing funds to support maternal and child health research including stimulation of the development of obstetric and paediatric research in Canadian medical schools, and for administrative or operational research. At its second meeting, the subcommittee reviewed 67 submissions, 33 of which were new, representing \$655,000, submitted under the Child and Maternal Health Grant, 14 applications, 9 of which were new, submitted under the Public Health Research Grant, and one under the Mental Health Grant.

Subcommittee on Standards of Care

The subcommittee met and set up four working parties. They will draw up recommendations on the specific areas of medical care, nursing care, facilities and housekeeping for incorporation into the proposed Recommended Standards for Maternity and Newborn Care in Canadian Hospitals being developed by the subcommittee.

Congenital Malformations

As a consequence of the thalidomide tragedy in 1961, an Expert Committee on the Occurrence of Congenital Anomalies continues its work. Initiated by the Dominion Council of Health, this committee is the prime responsibility of the division. Engaged in the exploration of the serious and complex problem of congenital malformations, the committee will continue to study various aspects

of case finding and surveillance systems, studying in greater depth the field of research needs, and defining research priorities in the field of human teratology.

Consultative Services

Unfortunately, the field consultation program was less extensive than usual during the year. Provincial liaison was maintained by committee work, collaborating on preparation of statements of school health policy, and other topics studied by the Advisory Committee. Liaison with voluntary and professional groups increased. This consisted of participation at meetings and consultation with such groups as the Canadian Medical Association, Canadian Paediatric Society, Canadian Conference on Children, Canadian Association for Retarded Children and Canadian Public Health Association. Lectures were given at Queen's University, University of Toronto School of Hygiene, and McGill University School of Nursing.

Health Education

An urgent request from one provincial health department resulted in the preparation of material on "Breast Feeding". It is now being studied by other health and medical authorities and will be made available to fill a long expressed need. Several of the division's booklets were reprinted to meet the provincial demand. A slight revision was made on the pamphlet "Posture and Rest Positions". Concentrated effort is being made to produce "The Canadian Mother and Child" in a rewritten form.

The Chief and Technical Officer are Chairman and Secretary respectively of the Directorate Subcommittee on Health Education. The main activity of this group was the survey of health education activities of the directorate and the formulation of a framework for a directorate policy in health education.

Liaison with Other Divisions

Liaison continued with Epidemiology, Mental Health, Research Development, Nutrition, Hospital Insurance, Hospital Design, Laboratory of Hygiene, and with the Food and Drug Directorate. Lectures on medical and nursing matters were given at the Civil Defence College, Arnprior, for both Emergency Health and Emergency Welfare Divisions.

Dental Health

The goal of this division is the improvement of dental health in Canada. The division promotes activities directed to prevention and control, particularly in children, of dental diseases and abnormalities. Close liaison and consultant services have continued to the provincial departments of health, other federal agencies, the Canadian Dental Association, voluntary health agencies, scientific and research bodies, universities and national and international health agencies, including W.H.O. The division conducts and encourages research in preventive and control measures, develops and makes use of epidemiological methods for the appraisal of dental disease and abnormalities and for the evaluation of pre-

ventive measures, and promotes health education and the production of health education materials.

Research

A report was published on the dental effects of water fluoridation presenting data obtained in the 1962 survey of the child population of Ingersoll (naturally fluoridated at 1.7 p.p.m.).

The groundwork was laid for a large scale research study on the use of exfoliative cytology in the diagnosis of oral cancer. As a direct result of the leadership provided by this division the Canadian dental profession has become interested in the subject of oral cytology and at this time oral cytology service programs are being organized in at least two provinces.

The division continued to collect extracted teeth from native-born Brantford children for analysis at the University of Toronto in a study to determine the effects of fluoride on tooth structure.

Health Education

The division co-operates closely with other divisions of the Department which have related health education interests, with dental and other voluntary agencies concerned with health education, and with the provincial dental division. This division is the chief source in Canada of dental health education materials used in schools and health units.

This year one new poster, one new folder and four radio scripts were produced.

Consultative Services

Consultant services on dental programs and related matters are provided to the provincial health departments through annual visits and correspondence.

The division collaborates closely with a number of departmental units whose activity has some bearing on dentistry.

Collaboration is maintained with the Canadian Dental Association and its related professional groups and with the seven Canadian dental schools.

Other Activities

A newsletter designed for the exchange of information among persons engaged in dental public health was published, with the co-operation of the provincial dental divisions.

Three articles were published in professional journals and one television appearance was made.

An information service involving a heavy volume of correspondence and enquiries is provided, within Canada and beyond, relating to dental public health, dental research and dental matters generally.

Emergency Health

The Emergency Health Services Division provides assistance and advice to provincial and municipal governments and to others, in connection with the

planning, organization and operation of health services in time of emergency. The division meets its responsibilities through five major programs.

Continuity of Government

Detailed Continuity of Government studies are now being undertaken by each of the Health Directorates.

Provincial emergency health planning is being encouraged and assistance given when required. The federal aim is to achieve standardization of health planning and procedures in all of the provinces.

To support this program extensive resources surveys have been conducted by Emergency Health Services. The objective is to create and maintain health resources availability information. Two major surveys have been carried out at the manufacturers' level: the first on pharmaceuticals and the second on surgical dressings.

Organizational Program

Emphasis was continued in the year on the creation of provincial emergency health planning staffs. Eight provinces have a fulltime emergency health planning organization. The remaining two provinces have assigned this responsibility to their existing staff. The officers of the division participated in numerous conferences, seminars and symposia. Assistance in organizing Hospital Disaster Programs continued throughout the year with the result that many hospitals have instituted disaster plans.

Disaster Institutes were conducted at: Victoria, Kelowna, Calgary, Winnipeg, Humboldt, Portage la Prairie, St. Boniface, Kingston, Quebec, Chicoutimi, Sherbrooke, Jonquiere, Bathurst, Charlottetown.

Amongst other projects, the Special Weapons Section has given priority to a major study on Fallout Contamination of Foodstuffs. This project is being conducted in conjunction with other agencies and divisions.

Information Program

The division continued to provide consultative advice to the Emergency Measures Organization, and other federal and provincial agencies. The assistance given to the provinces in particular, was greatly increased, over other years, as a result of the provinces' progress in internal organization, staffing and planning.

The division gave priority to extending its French language library and coverage. The following major publications were produced: "Control of Radioactive Fallout in Water Systems", "National First Aid Training Home Nursing and Hospital Experience Programmes", "Plan Hospitalier d'Urgence", "Emergency Delivery", "Family Health Planning for Disaster", "Your Basic List of First Aid Supplies", "EHS and EWS Display Catalogue".

In addition, the "NATO Handbook on Emergency War Surgery", was revised and copies were sent to all physicians and surgeons in Canada. Additional copies were also sent to health reference libraries.

In conjunction with Information Services, a number of releases were provided for T.V., radio and the press. An "Information Kit for Family Health Planning

for Disaster" was placed in approximately 2,000 retail pharmacies for free distribution to the public.

Educational Program

Priority and continuing emphasis was placed on First Aid and Home Nursing training. In all some 135,282 persons in Canada were trained in First Aid through the St. John Ambulance Association, of whom 978 were federal civil servants. An additional 5,182 persons completed courses in Home Nursing conducted under the auspices of the St. John Ambulance Association.

A St. John Ambulance First Aid Instructor's Course was conducted for 30 federal employees.

The Division conducted these courses at the Canadian Civil Defence College, Arnprior, Ontario: Health Operations and Administration (2); Emergency Public Health Services (3); Nurse Educators' (2); Casualty Simulation — Instructor's (1). Both English and French language courses were conducted.

The officers of the division undertook a large number of lecture assignments to undergraduate and post-graduate professional groups.

Health Supplies Program

As of March 31, 1964 orders have been placed to the value of approximately sixteen and one half million dollars of the eighteen million dollars authorized. Deliveries totalled approximately fifteen million dollars of which approximately nine million dollars worth of supplies have been distributed to regional depots. In the fall of 1963, Emergency Health Services organized a new depot at Brockville, Ontario, designed to support both eastern Ontario and western Quebec.

First Phase Agreements, for the pre-positioning of Hospital Disaster Supplies have been completed with nine provinces. Second Phase Agreements for the release of Advanced Treatment Centre Units and Casualty Collecting Units have been completed with four provinces and it is anticipated that agreements will be reached with the remaining six early in the new fiscal year.

Epidemiology

The primary functions of the Epidemiology Division are consultation, disease surveillance, research, and provision of technical information on epidemiological aspects of communicable and non-communicable disease and related public health programs.

Advisory Committee on Epidemiology

The national Advisory Committee on Epidemiology was established in 1962. Its purpose is to assist and advise the Minister and appropriate officers of the Department of National Health and Welfare on matters relating to the study and control of communicable and non-communicable diseases including chronic illness; and to assist in development of the most effective epidemiological services for the benefit of the country as a whole. The committee has met three times

and has made recommendations on several subjects to the Dominion Council of Health.

National Health Grants

As part of its consultant service, the division continued to review applications for National Health Grants respecting tuberculosis, venereal disease, poliomyelitis, local health services and epidemiological research projects, and undertook associated field visits.

Epidemiological Bulletin — Disease Surveillance

The purpose of the "Epidemiological Bulletin" is to present current epidemiological information to medical officers of health, public health laboratory workers, and other public health practitioners in Canada. Contributions are regularly made by bulletin readers in Canada. In addition, other Canadian and international sources of epidemiological information are routinely reviewed and appropriate authorities consulted to obtain current information for the bulletin and other division services.

Tuberculosis

Tuberculosis continues to be a serious problem in Canada. In 1962, there were over 6,000 new active cases and 785 deaths. There has been a trend to reduce the length of treatment of cases in sanatoria. Consequently, community case finding, treatment, follow-up and surveillance services have become more important. For effective community tuberculosis control, case registers are essential and the division has actively supported their development.

Venereal Disease

The resurgence of venereal disease is worldwide. Expressed in terms of reported incidence rates per 100,000 population, infectious syphilis increased in Canada from 1.2 in 1958 to 4.5 in 1963. Similarly, gonorrhoea increased from 85.0 in 1959 to 102.7 in 1963. The actual incidence rates may be higher and special measures are needed to reverse the rising trends.

Poliomyelitis

Since the introduction of Salk vaccine in 1955 and Sabin vaccine in 1961, there has been a dramatic decline in the incidence of paralytic poliomyelitis in Canada. In the three years 1952-1954, 6,963 cases were reported compared to 400 cases in the three years 1961-1963. The division was represented on the National Technical Advisory Committee on Live Poliovirus Vaccines which made its final report to the Dominion Council of Health in 1963.

E.coli Gastroenteritis

During 1963 an extensive epidemic of E.coli gastroenteritis in young infants occurred in Newfoundland involving over 1,000 cases and 100 deaths. On request, the division assisted in field investigations, consultation and formulation of recommendations for control.

Survey of Mortality in Relation to Smoking Habits, Residence and Occupation

In 1955, the Epidemiology Division, the Research and Statistics Division and the Department of Veterans Affairs undertook a continuing prospective study on the relationship of smoking habits, residence and occupation to death from lung cancer and other selected causes among recipients of pensions from the Department of Veterans Affairs. Two reports on this study have been published. In addition, original study data were made available to the Surgeon General's Advisory Committee on Smoking and Health. This information was analysed by the committee and results included in its report to the Surgeon General.

Accidents

Accidents are the third leading cause of death for all ages combined and are the leading cause of death for ages 1 to 35 years. Motor vehicles are the greatest single cause of accidental deaths followed by home accidents. The division assisted in planning for and obtaining a charter for the new Traffic Injury Research Foundation of Canada. The purpose of the foundation is to stimulate and co-ordinate research into the medical aspects of traffic accidents.

Local Health Services

In 1960 and 1961, the division was associated with others in the Department and the Schools of Hygiene in Toronto and Montreal in two questionnaire surveys of functions and practices in 194 health units and health departments in Canada. Final reports have been published. Again in 1963, the division in association with others undertook more detailed studies of functions and activities of public health personnel in two health units.

Hospital Design

The Hospital Design Division maintains, at the national level, a consulting and advisory service related to the planning and construction of hospitals and health institutions. There has been an increasing demand for consultation in the field of the engineering services in hospitals. This is because of the developments in air conditioning, the increased use of scientific equipment, developments in intercommunicating equipment, etc. Engineering services represent a large proportion of hospital construction cost. To meet the demand for technical assistance, the division now has an engineering consultant on the staff.

Information and Research

The division studied and made available information on hospital design and equipment, produced plans, reports and delivered lectures on hospital planning developments. It also assisted, promoted and guided research studies related to hospital buildings and equipment. Among the projects were setting up a seminar on Air Conditioning of Surgical Suites and other sensitive areas in hospitals; developing two operational research projects on this problem in two Canadian hospitals.

A paper was presented at the American College of Hospital Administrators on Effective Rehabilitation of Buildings, and another on the problems of Duplication of Health Facilities was given at the Western Institute, Winnipeg, by the division chief. A day of lectures was given to the students of the Graduate Course of the Department of Hospital Administration, Toronto University, by the chief and the division's consulting architect.

Architectural Consultation

The division chief served as follows: Chairman, Canadian Standards Association Committee on a Code for Use of Flammable Anaesthetics (CSA Standard Z32-1963); Chairman of the Royal Architectural Institute of Canada Committee on Code for Architectural Competitions; Consultant to the Armed Forces Hospital Requirements Committee and to the Treasury Board Advisory Committee; Consultant to City of Ottawa, Riverside Hospital Board; Member of the Medical Research Council Associate Committee on the Control of Hospital Infections.

Canadian Building Standards and Guide Material for Hospitals and Health Facilities

The division has continued the study of building standards. The section on Dietary Service is being printed and preliminary proofreading is completed on Long Term Active Treatment Hospitals and Mental Hospitals. The French translation of the section on Dietary Service has been completed. At the request of the Advisory Committee on Hospital Insurance and Diagnostic Services, the General Conditions referring to mechanical services have been enlarged and revised.

Hospital Construction Grants

The division reviewed and studied hospital construction projects involving grants and recommended amounts of federal grant assistance. It also rendered consulting services to provincial and other authorities in architectural and engineering replanning and also in estimating possible grants related to specific projects.

Table 14

HOSPITAL CONSTRUCTION GRANT APPROVALS SINCE 1948

	1948-64	1963-64
Patients' beds of all types approved for grant purposes ..	111,625	6,104
Newborn bassinets approved for grant purposes	14,179	839
Bed equivalent areas (diagnostic services) approved for grant purposes	19,941.4	1,478.2
Nurses' beds (residence) approved for grant purposes	22,073	867
Internes' beds (residence) approved for grant purposes ...	882	166
Net grants approved for renovations	20,278,870	5,318,000
Total grants approved for all construction	\$210,577,608	\$16,624,774

Laboratory of Hygiene

The Laboratory of Hygiene continued to provide technical services and advice to provincial departments of health, hospitals and research institutions in the public health and medical laboratory fields, and to the Food and Drug Directorate in the control of special "biological" drugs. Co-ordination between Provincial and Federal Governments is maintained through the Technical Advisory Committee on Public Health Laboratory Services and the Dominion Council of Health, to avoid duplication of effort.

Bacteriological Laboratories

The National Enteric Reference Centre continued to provide a diagnostic service to the provinces. A total of 2,665 specimens was referred to this centre for diagnosis. Amongst the salmonella cultures submitted, five serotypes not previously reported in Canada were identified, *S. bukavu*, *S. johannesburg* and *S. pharr* from human cases of illness and *S. gaminara* from a monkey and *S. pomona* from an alligator.

S. typhimurium was the serotype most commonly isolated from both human and animal sources. *S. thompson* and *S. heidelberg* were next in frequency in both human and animal isolates, further evidence of the role of animals and animal products in the transmission of salmonellosis to man.

This laboratory collaborated with the Division of Epidemiology in an investigation of an extensive and prolonged outbreak of infantile gastroenteritis in Newfoundland due to *Escherichia coli* type 0111:B4.

The National Reference Centre for the Bacteriophage Typing of staphylococci received 3,437 cultures for typing and distributed 172 standard phage preparations and 217 propagating strains to 20 laboratories in 8 provinces and 12 foreign countries. This centre continued to collaborate with the International Typing Centre and with other laboratories in a study of new phages for their usefulness in typing, particularly those strains, at present untypable, which appear to be of increasing importance as epidemic strains in hospitals in Canada, and in other countries.

Special typing (diagnostic) services for haemolytic streptococci and *C. diphtheriae* were provided to the provinces and 303 cultures were received for typing.

An important aspect of diagnostic assistance to the provincial departments of health is the provision of carefully standardized reagents. These laboratories prepared and distributed 358,000 ml. of standardized agglutinable suspensions for Widal Tests, 2,339 ml. of diagnostic antisera for enteric bacterial pathogens, and 648 ml. for the grouping of haemolytic streptococci.

At the request of the New Brunswick Water Authority, the Mobile Laboratory of the Sanitary Bacteriology unit carried out a bacteriological investigation of pollution in the St. John River and Harbour and the Kennebecasis River. A total of 793 specimens of water and sewage effluent was examined and a report of the data was submitted to the water authority.

The Sanitary Bacteriology Unit continued its participation in a joint engineering-chemical-bacteriological study of pollution in the St. Croix River and

Estuary. Two reports, summarizing the data, were prepared for the International Joint Commission on Boundary Waters

This unit continued to assist in the control of shellfish-growing areas. The Mobile Laboratory carried out bacteriological surveys in five shellfish areas, examining 1,106 samples of water and shellfish.

A total of 3,014 shellfish extracts were bioassayed for paralytic shellfish poison, as part of the area control programs in New Brunswick, Nova Scotia, Quebec and British Columbia. This is an increase of 80 per cent since 1961-62 and 284 per cent since 1957-58.

Since previous studies had indicated that seabirds may contribute materially to the coliform flora of sea water in some shellfish areas, a search was made for enteric bacterial pathogens in seagull droppings collected from five nesting islands in the Bay of Fundy. Of 450 specimens examined, no strains of salmonella or shigella were recovered.

Biologics Control Laboratories

The chief functions of these laboratories are the technical control of biological drugs, such as vaccines, toxoids, sera and antibiotics, under the Canadian Food and Drugs Act, and the provision of technical and consultative services to provincial departments of health and other agencies in relation to these products.

In order to sell in Canada vaccines, toxoids, sera and antibiotics for injection, the manufacturer must obtain a Canadian licence. Such a licence is granted by the Department only after inspections have shown that the manufacturer's plant, facilities, personnel, and operations meet satisfactory standards. Such inspections are carried out periodically and constitute an important aspect of the Department's control of these drugs. Of the 71 establishments now holding a Canadian Biologics Licence, 47 (16 Canadian and 31 foreign) were inspected during the year. Four new applications for licences were received, two of which were granted and two withheld until required changes have been effected.

Tests for identity, safety, pyrogenicity, potency and sterility are carried out routinely on all "licensed" preparations. A new program for collecting samples was initiated in which each of the drugs listed on all manufacturers' licences are sampled and tested at least three times during the year. This is in addition to those products which are on a "release" basis and each lot of which is tested by the Laboratory of Hygiene before it can be sold in Canada. A total of 3,587 specimens (exclusive of antibiotics) representing 677 lots were tested, of which 18 failed to meet the required specifications.

Antibiotics: In addition to the licensed antibiotics (i.e., those for injection) non-licensed antibiotic preparation (e.g., capsules, tablets, troches, lozenges, ointments, syrups, sprays, dental pastes) are also tested. A total of 1,021 specimens, involving 4,382 tests, were received and tested. Six hundred and forty of the specimens were antibiotic sensitivity discs, the remainder being either injectable or non-injectable preparations for human use. Thirty-seven lots, were found unsatisfactory and were refused distribution in Canada, of which 28 were sensitivity discs.

This laboratory is represented on World Health Organization expert advisory panels for biological preparations and antibiotics and collaborates with the W.H.O. and a number of national organizations in the establishment of international standards.

Collaborative assays were carried out on Spiramycin and Novobiocin on behalf of the Medical Research Council (U.K.) and the W.H.O. A study of chlortetracycline, demethylchlortetracycline, oxytetracycline and tetracycline oral suspensions was carried out at the request of the Medical Directorate of the Department, to determine the stability of these preparations under the rigorous conditions (alternate freezing and thawing) to which these drugs may be exposed in their use in the Far North. Most of the preparations were found to stand up fairly well under these conditions.

In collaboration with the Atomic Energy Board, attempts were made to sterilize vaccines with gamma radiation. To effect sterility, however, the radiation also destroyed the efficacy of the vaccine (staphylococcus) studied. Preliminary results on the development of a semi-solid culture medium for the quantitative estimation of bacteria in sterility tests are encouraging.

Research to isolate the fractions in vaccines which are responsible for bringing about immunity was continued.

The new type of vaccine, developed originally in these laboratories, was actively followed up. Staphylococcus, streptococcus, meningococcus and typhoid vaccines have so far been developed. At the request of the World Health Organization, large quantities of the meningococcus vaccine were prepared and given to them to carry out a clinical trial in Haute-Volta, Africa, where meningococcal infections are a serious cause of illness and deaths.

Clinical Laboratories

Reorganization within the Department resulted in the transfer of the Clinical Nutrition Laboratory from the Nutrition Division to the clinical chemistry section of the Laboratory of Hygiene, in February 1964. This unit will provide laboratory services for nutrition surveys and will continue to offer specialized nutritional analyses to provincial public health laboratories, hospital laboratories and physicians.

Clinical Chemistry

The study of chemical methods suitable for use in hospital laboratories has been actively pursued and several additions were made to the Laboratory's "Manual of Clinical Chemistry for Hospital Laboratories", most important of which was the Somogyi Method for the preparation of protein-free filtrates for whole blood, serum and plasma, and the Glucose Oxidase Method for the determination of glucose in whole blood, serum or plasma. To date 2,030 of these manuals in English and 289 copies in French have been distributed, on request, and are in constant use in 572 hospitals in Canada.

The evaluation of various diagnostic kits, reagents and devices produced commercially to provide simplified procedures in the clinical laboratory has been continued. Three different kits for the determination of blood urea nitrogen,

three for the determination of calcium, two for cholesterol and nine for transaminase have been examined, as well as five paper strip devices for the detection of glucose in urine. Much of the information obtained from these studies was circulated in a newsletter to the provincial public health laboratories and some of it has been prepared for publication in the scientific press. In addition, a comparative study has been started of commercial test kits for the diagnosis of pregnancy on specimens from women who can be followed clinically.

Studies to assess the accuracy of labelled values of commercial standard sera for clinical chemistry and to determine the stability of the sera on storage have been continued. Data were obtained for urea nitrogen, glucose, cholesterol, protein and chloride.

A reference cyanmethemoglobin solution for the control of haemoglobin determinations, prepared by this laboratory, was distributed to 576 hospitals and other clinical laboratories in Canada. The survey, started last year, to determine normal values of haemoglobin for all ages and both sexes across Canada has been completed, with 90 laboratories participating. The mechanical tabulation and statistical evaluation of the data are being carried out by the Department's Research and Statistics Division.

A number of investigations are in progress in the Laboratory of Hygiene's laboratories at the Ottawa Civic Hospital viz. (1) The levels of glutamine in malignant and normal human tissues, using high voltage electrophoresis and chromatographic techniques. (2) The amino acid patterns in plasma and urine of uremic patients undergoing intracorporeal dialysis or hormone therapy. (3) A method, developed by this laboratory, of detecting phenylalanine for the diagnosis of phenylketonuria. (4) A study of the levels of beta-glucuronidase in the sera of normal and of atherosclerotic individuals.

Syphilis Serology

This laboratory continued to function as a national reference centre for syphilis serology, preparing standardized reagents for distribution to all provincial public health laboratories, evaluating performance in Canadian laboratories, assessing new tests, attempting to improve methodology and providing consultant services as requested. Slightly more than 58 litres of carefully standardized reagents were distributed and the eleventh national serological evaluation study was completed, the Laboratory of Hygiene serving as a referee. The good uniformity of results among all provincial laboratories attests again the excellent quality of the serological diagnosis of syphilis performed in this country.

Studies have been continued on the efficiency of the Reiter Protein Complement Fixation (RPCF) test, particularly in comparison with the Kolmer complement fixation test. RPCF, Kolmer, VDRL and TPI tests have been compared on 995 specimens from cases which, in general, presented a diagnostic problem. The R.P.R. Card Test, a device designed for rapid serodiagnosis for syphilis, was also tested on 287 specimens of blood. This test compared favourably with the VDRL test, but like all serological tests for syphilis requires considerable experience in both performing the test and reading the results. Studies were also initiated on the Fluorescent Treponemal Antibody (FTA) test.

The Treponema Pallidum Immobilization (TPI) test, while being very specific for syphilis, is also a highly technical procedure, requiring very special technical facilities. The TPI unit at the Laboratory of Hygiene offers this special service to provincial public health laboratories and to other federal departments. Nine hundred and forty-two specimens, obtained principally from cases where there has been difficulty in determining whether the patient has syphilis, were tested. In addition, intensive studies on the *invitro* survival of pathogenic *Treponema pallidum* in laboratory media have been continued.

Virus Laboratories

One of the major functions of these laboratories over the past 10 years has been the technical control of virus vaccines and prophylactic and therapeutic specific antisera, under the Food and Drugs Act.

The control of Salk polio vaccines is continuing and a number of the trivalent vaccines submitted by the manufacturers were tested for viral sterility and potency, and were found to be satisfactory.

Safety and potency tests on about 20 lots of live oral polio vaccine (Sabin type) submitted by Canadian manufacturers were carried out during the past year. All lots were found satisfactory and were released for general use.

The control of measles virus vaccines has now been established on a routine basis and a number of batches of the inactivated vaccine have been tested for safety and potency. A licence for distribution of the vaccine in Canada has been granted to one manufacturer.

A total of 10 lots of attenuated "live measles" vaccines received from American and British manufacturers were tested in tissue cultures and laboratory animals for safety and potency. One of these manufacturers has now been licensed to sell this vaccine in Canada.

Thirteen commercially produced lots of influenza virus vaccines and several lots of mumps and smallpox vaccines were tested and found satisfactory.

Four lots of measles immune serum globulin, submitted by American and European manufacturers, were tested and found satisfactory.

In view of the developmental work on rubella virus vaccines in progress in various parts of the world, preliminary steps have been taken at the Laboratory of Hygiene to establish testing procedures for the safety and potency of such vaccines. The rubella virus strain has been obtained and is being propagated at present in various tissue cultures and cell lines.

At the request of the World Health Organization, the Virus Laboratories in co-operation with the Provincial Department of Health of Quebec is conducting a vaccination study with a number of "further attenuated" live measles virus vaccines in young children. The objective of the investigation is to observe the severity and incidence of reactions and to measure the antibody response of the children to these vaccines.

Diagnostic antigens have been supplied to the provincial departments of health and their associated clinical laboratories for the past 10 years. Whereas antigens for about 1,000 diagnostic tests were distributed in 1954, the yearly demand for these reagents had risen to 20,000 by the end of this fiscal year.

This clearly reflects the enormous increase in virus diagnostic procedures carried out in Canada during the past 10 years. During this period continuous developmental research has been conducted at the Virus Laboratories to improve the potency and specificity of these reagents and many new methods of their preparation have been introduced and published in the scientific press. One of the latest methods of antigen purification developed in this laboratory was applied to the successful preparation of a highly specific complement fixing antigen for the diagnosis of adenovirus diseases. The method is based on adsorption and precipitation of the antigen with copper hydroxide.

A number of antigens, particularly those for the laboratory diagnosis of neurotropic virus diseases are still being purchased from commercial sources. Many of these preparations are of marginal quality and stability. These reagents are standardized by the Virus Laboratories before distribution to the provincial departments of health and are periodically tested for potency.

The demand for diagnostic antisera has also increased steadily over the past years. Today antisera to about 60 different viruses are being prepared in the Virus Laboratories. They are mainly used for serum neutralization tests of viruses isolated in tissue cultures. These sera are inactivated, standardized and freeze-dried for optimal storage. Sera for over 11,000 control tests were distributed to the provincial laboratories during the past fiscal year. Since the number of viruses known to cause disease in the human population is increasing steadily it is evident that the production of specific diagnostic antisera will be increasing correspondingly.

In its capacity as a National Reference Centre, 600 specimens from human sources were received from the provincial departments of health for diagnosis. A total of 72 viruses belonging to 19 different groups were isolated and identified. In the course of this work over 2,000 tests in tissue cultures and over 1,500 serological tests were performed. As a result of these investigations the etiologic agent of an outbreak of aseptic meningitis occurring in Alberta during the fall of 1963 was identified as Coxsackie virus, type A-23.

The successful isolation of varicella virus from throatwashings of infected individuals made it possible to use this strain to prepare a standardized diagnostic antigen and antiserum for complement-fixation tests.

These laboratories participated in two projects sponsored by the World Health Organization. One involved the testing for specificity of a number of diagnostic antisera for enterovirus diseases to be used as international standards. A report of results was presented at a meeting of the Directors of the W.H.O. Reference Centres in Geneva. These W.H.O. standards were later made available to Canada. After proper stabilization the Laboratory of Hygiene started distributing these sera to all provincial public health laboratories and their affiliated clinical institutions for reference purposes. The second project, still in progress, concerned a study of the optimal stability of diluted reference sera on prolonged storage.

The tissue culture section of these laboratories has now been established with the express purpose of analysing and providing standard cell lines for vaccine control and virus diagnosis. All cell lines which had been in use have been tested for their chromosomal make-up and purity. Several new cell lines were

obtained and, after genetic analysis, were employed in control and diagnostic procedures. These cell cultures will be made available as reference material to the provincial departments of health, and other institutions, on request. The chromosomal stability of cell lines in various culture media is being investigated with the object to secure a tissue culture medium which will prevent or delay the transformation of diploid cell lines into heteroploid (malignant) cell lines.

Zoonoses Laboratories

One of the principal functions of these laboratories is to study the distribution and assess the importance to human health in Canada of a number of animal diseases transmissible to man. Tick collections were carried out on the Six Nations' Reserve, near Brantford, and on the Caradoc Reserve, near Muncy, Ontario. Of the 25 lots comprising 1,061 American dog ticks examined, five lots were found infected with *Pasteurella tularensis*, the etiologic agent of tularemia. Two lots showed inconclusive evidence of spotted fever rickettsial infection. These and the *P. tularensis*-infected ticks were obtained on the Six Nations' Reserve. So far as is known, this is the first isolation of *P. tularensis* from this tick in Canada. The establishment of this pathogen in ticks in this area is of public health significance because this tick readily feeds on man and can transmit the disease by its bite. Moreover, dogs, which constitute the principal host of the adult tick, are common on this reservation and carry ticks into the yards and homes of the residents.

More than 700 wood ticks from British Columbia were submitted by the Canada Department of Agriculture for investigation for the presence of disease agents. Two viral isolates were obtained, one of which has been identified as Colorado tick fever virus.

Earlier studies, by this laboratory, on California encephalitis in the Ottawa area demonstrated serologic evidence of infection in many snowshoe hares and groundhogs and in smaller numbers of porcupines, raccoons and skunks. In an effort to isolate the causative virus and to obtain other information of epidemiologic importance, laboratory-reared "indicator" rabbits were kept in cages in the woods where seropositive wild animals were known to be present. Ten rabbits became seropositive and from five of these, viruses were isolated, two of which have been successfully identified as members of the California encephalitis virus group, thus providing incontrovertible evidence of the existence of California encephalitis virus in the Ottawa area. This is the first time this virus has been isolated east of Montana. The virus, which is thought to be transmitted by mosquitoes, appears in nature in early June and continues to circulate throughout the summer. Through the co-operation of the Canada Department of Agriculture, sera from laboratory-reared indicator rabbits and groundhogs have been obtained from the Kamloops area of British Columbia for similar studies. The possibility of using a tissue culture neutralization technique for serologic surveys of Colorado tick fever and California encephalitis in man is being investigated.

A start was made of a study of the role of human lice in the causation of phlyctenulosis — a problem amongst the Eskimos and Indians of the Far North. Lice obtained locally from children were used to prepare an antigen for the sensitization of rabbits. Rabbits given a series of injections of this material devel-

oped cutaneous and ocular sensitivity. These encouraging results are being pursued.

Progress was made in establishing at this laboratory a complete serotyping service for *Pasteurella multocida*. This is unavailable elsewhere in Canada. As the National Zoonoses Reference Centre, this laboratory processed 43 specimens referred by the provincial public health laboratories. One specimen was strongly seropositive for *Leptospira icterohemorrhagiae* and as the symptoms were compatible with leptospirosis, it is most probable that this was the cause of the death of the patient. This would be the first death in Canada attributable to this cause since 1940.

As a further aid to diagnosis, this laboratory distributed to the provincial public health laboratories 244,085 ml. of antigens and 42 ml. of standardized diagnostic antisera.

Parasitology

The Institute of Parasitology, Macdonald College, Quebec, continued to serve as the Parasitology Section of the Laboratory of Hygiene and to provide technical and consultant services to federal departments and to provincial departments of health.

Five hundred and seventy-seven stool specimens were received for laboratory diagnosis, 469 of which were from the Medical Services Directorate of the Department. Serological tests were carried out on 22 referred specimens for hydatid disease, of which 5 (23 per cent) were positive, and on 159 specimens for trichinosis, of which 27 (17 per cent) were positive. In addition, 714 ampoules of hydatid (Casoni) antigen and 166 ampoules of trichina antigen were distributed to hospitals, public health laboratories and private physicians in Canada.

A special highly intensive four-weeks course in tropical diseases was given, at the specific request of the Surgeon General (Canada), to four service medical officers destined for service in tropical regions. This was the second year such a course was given.

Administration

The Administration Section continued to provide to the laboratories stenographic and typing services, culture media, clean and sterile glassware, and laboratory test animals, and to operate a central stores and maintenance workshop. A new animal breeding building was constructed in Tunney's Pasture and will be ready for occupancy early in 1964. The total inadequacy of the old animal breeding quarters in Hull to meet the considerably increased demand for laboratory animals for biological assays has been evident for years. This new building equipped with the most modern facilities for the raising of animals should go far in meeting this need.

Medical Rehabilitation

This division provides a national consulting and co-ordinating service in the field of medical rehabilitation, and in addition, has certain responsibilities

to the medical aspects of the Disabled Persons Allowance and Blind Persons Allowance Programs.

Consultant Services

Advice is provided regarding the development of medical rehabilitation service and training programs to rehabilitation centres, special clinics, hospitals, university teaching centres, voluntary organizations and public health and welfare departments at various levels of government — local, provincial and federal. The aim of the service is to stimulate and assist with the planning and development of balanced provincial health programs, whereby medical rehabilitation facilities and services will be available to every disabled child and adult in Canada who may benefit from treatment or retraining.

In the course of the year, the consultants took part in study and in planning activities, within and beyond the Department, in such widely ranging fields as the problems of congenital limb defects, building standards for the handicapped, chronic illness, health education, the role of medical rehabilitation in mental health, training standards in para-medical rehabilitation disciplines, and hospital standards.

Medical Rehabilitation and Crippled Children Grant

The Medical Rehabilitation and Crippled Children Grant is one of the main instruments through which the consultants are able to assist with the planning and development of rehabilitation programs in Canada. Under this Grant more than \$2,500,000 is made available annually to the provinces for their medical rehabilitation programs. An additional sum of \$200,000 was provided during 1963-64 to establish regional prosthetic research and training centres to meet the problems presented by children with congenital limb defects. Three centres were established and are now in operation in Montreal, Toronto and Winnipeg. Health Grants assistance has been provided to more than 100 medical rehabilitation facilities established in Canada since the inception of this grant in 1953. In view of the critical shortages of personnel in the rehabilitation field, emphasis has been placed on assistance to training, and this emphasis is reflected in current utilization of the grant. Consultant services and Health Grants assistance were provided to the three schools of speech pathology and audiology (including one new school), and to six of the eight schools of physiotherapy and/or occupational therapy in Canada. These include a new school of physiotherapy which opened this year. Advice was provided in the planning of proposed new schools for therapists, and it is hoped that at least two of these may start in the near future. During 1963 over 125 persons were assisted in taking professional training or short special courses under this grant, in addition to those who received bursary assistance under the Professional Training Grant.

Educational Material

In collaboration with Information Services, educational material dealing with various rehabilitation problems was prepared. The English and French

versions of a new training and recruitment pamphlet entitled "Opportunities for Speech Therapists and Audiologists in Canada" were published and distributed. This is the third of a series of four pamphlets on para-medical disciplines in the rehabilitation field.

Vocational Rehabilitation

The division continued to work with the Civilian Rehabilitation Branch of the Department of Labour and its program for the vocational rehabilitation of disabled persons. By the end of the fiscal year, nine provinces had signed agreements under the relevant Act, providing for the sharing of costs of comprehensive services including assessment and medical restoration, to disabled persons with potential to return to substantially gainful employment, or to dispense with the services of an attendant. These provisions in some respects complement those of the Medical Rehabilitation and Crippled Children Grant, which is used to assist in the establishment and development of rehabilitation facilities, and in the provision of services to those persons who are not within the terms of reference of the Vocational Rehabilitation Act.

Disabled Persons Allowances

The division continued to carry out its medical responsibilities in the operation of the Disabled Persons Allowance Program, and visits were made to most of the provinces for discussions with welfare officials and physicians engaged in the evaluation of total and permanent disability. During the fiscal year, Disability Allowances were granted to approximately 5,500 persons and there is now a total of some 51,500 recipients, representing an increase of approximately 1,000 over the previous year. Emphasis has been placed on consistent and uniform interpretation of the medical standards employed in the determination of total and permanent disability.

Blindness Control Section

Blindness Allowances

The section has continued to review eye examination reports and to determine medical eligibility of all applicants for Blind Persons Allowance throughout Canada. A total of 1,505 eye reports and 6,756 reports from provincial field workers were reviewed. Notice of medical eligibility is forwarded to the provinces in the form of a certificate completed for each applicant by the reviewing officer. The section also carries out the accounting procedure through which the fees of the examining oculists are paid.

On March 31, 1964 there were 8,581 recipients of Blindness Allowance compared to 8,634 one year earlier. The Canadian National Institute for the Blind listed 24,671 registered blind persons in March, 1963, compared to 24,385 in the preceding year.

The analysis of causes of blindness among persons granted the allowance during each fiscal year has been continued. Figures for this year are very similar to those of the preceding four years. Cataracts and congenital and developmental

Table 15

MEDICAL REHABILITATION AND CRIPPLED CHILDREN GRANT ANALYSES, 1953-1964

	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
Amount available.....	\$500,000	1,000,000	979,484	998,984	961,591	964,234	1,020,948	2,565,251	2,566,193	2,604,036	2,579,980 (200,000)*
Amount and percent approved.....	\$ 75,855 15.8%	213,374 21.3%	355,927 36.3%	547,085 54.7%	736,662 76.6%	814,215 84.4%	754,214 73.8%	1,338,469 52.2%	1,729,769 67.4%	1,704,433 65.4%	1,930,322 74.8% (145,824)
Amount and per cent spent.....	\$ 58,222 12.1%	168,679 16.8%	303,419 30.8%	487,723 48.8%	633,395 65.8%	691,613 71.7%	673,399 65.9%	1,159,204 45.2%	1,614,914 62.9%	1,580,723 60.7%	1,725,190 66.9% (128,042)

*\$200,000 allocated additionally for development of prosthetics research and training.

conditions are still the two leading categories of disease causing blindness in this group. Glaucoma is responsible for 8 per cent of blindness among new recipients, and this figure gives support to the belief that control measures are reducing the prevalence of blindness due to glaucoma, which generally has been regarded as responsible for 11 to 12 per cent of blindness occurring in the total population.

Treatment Plan

This plan has been conducted since 1948, in co-operation with nine provincial governments, and provides free treatment for the restoration of vision to recipients of Blindness Allowance. The Federal Government pays 75 per cent of the costs and the provincial governments 25 per cent. Treatment of 91 persons was completed during the year. Seventy-five (82 per cent) of these had vision restored to better than 20/200. Since the plan began, 1,025 recipients of Blindness Allowance have received treatment, which was successful in 795 (78 per cent) cases.

Health Grants Projects

The section has continued to provide consultant services to the Health Grants Program in the field of blindness control.

- (a) Glaucoma Clinics. By the end of the fiscal year, there were 16 glaucoma clinics from coast to coast receiving Health Grants assistance. These clinics are making a valuable contribution to the knowledge of glaucoma and its control and to prevention of blindness from this disease.
- (b) Health Grants support has been provided for other projects in the field of blindness control. These projects include children's eye clinics, visual screening of school children, a low vision clinic, orthoptic services, a tonometer testing station, an eye bank, and the training of technical personnel associated with some of these projects.
- (c) Eye Research. Basic and clinical research directed at some of the main causes of blindness was assisted during the year. Projects include studies of glaucoma, diabetic retinopathy, retinal detachment, problems of corneal grafting and amblyopia.

Mental Health

The Mental Health Division advises the Department on desirable policies and procedures for the treatment and prevention of mental illness in Canada, and on the appropriate use of the Mental Health Grant, under the National Health Grants program, for the improvement and extension of provincial mental health service, training, and research programs. Divisional consultants (one in each of psychiatry, psychology, social work, nursing, and public health education) maintain liaison with, and are available as planning advisors to, other federal departments, provincial health departments, professional associations, university departments, and voluntary agencies concerned with the study and management of mental, emotional, and behavioural problems.

Health Grants Services

The division advised the Department on the expenditure of close to \$9 million available to the provinces under the Mental Health Grant (of which about 80 per cent typically goes to support of services, 10 per cent to professional training, and 10 per cent to research).

Research Activities and Statistics

Special studies carried out by the division covered: a statistical review of mental illness trends during the years 1955-1960 (published as "Selected Mental Health Statistics" by the division); an analysis of graduate training facilities for clinical psychologists in Canadian universities (*vide*: "Canadian Psychologist", July 1963); a field study of emotionally disturbed children in residential centres and psychiatric hospitals (published for departmental distribution only); an analysis of research carried out under the Mental Health Grant (*vide*: "Canadian Psychologist", October 1963); a study of aspects of human behaviour in relation to accidents (*vide*: "Occupational Health Review", Vol. 15, No. 1, 1963).

The division reviewed some 90 research grant applications, in collaboration with independent scientific referees and recommended support of 61. It also reviewed, and submitted recommendations to the Department on, applications for some 150 training bursaries, 125 short courses, a score of special training courses, as well as several hundred service grants for mental hospitals, mental health clinics, and similar units.

Liaison and Advisory Work

The professional staff made liaison visits to university departments of psychology, psychiatry, and social work, provincial mental health divisions, hospitals, clinics, and other psychiatric units in several provinces during the year. They also participated in conferences and annual meetings of the Canadian Psychiatric Association, Canadian Psychological Association, Council on Social Work Education, Canadian Mental Health Association, Canadian Association for Retarded Children, and others of special interest in Canada and the United States.

The consultants were involved in an advisory capacity on departmental and inter-departmental committees concerned with such problems as tobacco smoking and health hazards, social adjustment of Eskimos, health problems of shift-workers in air-traffic control and meteorological services, national film service programming, research planning and development.

Education and Information

The division's public education program includes publication of "Canada's Mental Health", a bi-monthly magazine featuring information of interest to professional workers in the mental health field; CMH magazine supplements on special topics (recently, for example, "Promoting Mental Health in the School", "Bibliography of Mental Health Paperbacks", "Preventive Psychiatry", "Institutional Care for the Retarded in Great Britain"); preparation, for provincial distribution,

of basic mental health pamphlets of general public interest on child training, career opportunities in the mental health services, mental health problems; occasional displays at professional meetings and scientific conferences; periodic preparation of films and filmstrips (for example, a filmstrip on the training of retarded children has recently been completed); publication of special studies (for example, "Government Programs on Alcoholism").

Advisory Committee on Mental Health

In all the foregoing, the division and the Department had the assistance and advice of provincial mental health directors and senior scientists, doctors, and scholars who serve on the Advisory Committee on Mental Health and on its subcommittees concerned with research, personnel, addictions, development of services, rehabilitation, statistics, and public education

National Conference on Mental Retardation

Plans are underway for a four day federal-provincial conference on mental retardation. Representatives of health, welfare, education, and labour will participate together with representatives of this Department to clarify roles and responsibilities of various levels of government and other interested agencies.

Nutrition

The influence of dietary inadequacy is not so dramatically demonstrated in Canada as in less favoured parts of the world. However, nutritional problems do exist and nutritional deficiencies continue to be diagnosed. The program of the Nutrition Division is designed to improve the health of Canadians to the extent that this can be achieved by better nutrition. The program includes research to define nutritional status of population groups, preparation of educational materials, assistance with quantity food service problems in small hospitals and other non-profit institutions, and special technical and consultant services. There have been vast changes in the program of the Nutrition Division during the past year, with the emphasis placed on consultant and advisory services in research, education, and hospital food service.

The extension of the Hospital Insurance and Diagnostic Services Program has increased the demand for expert advice regarding standards for hospital food service. A position of dietary consultant was added to the staff to permit extension of the division's work in this field.

Research

The eighth food habits' study of senior citizens was carried out in London, Ontario, in May 1963. Individual reports were sent out to participants. A summary of the data was sent to the Ontario Department of Health for use in a follow-up program. The information from the eight studies has been assembled and checked and will be used for a nation-wide report.

Food consumption data for Canada for the year 1960-61 were calculated in terms of average nutrients available per person.

A subject index file has been developed for Canadian nutrition research in the national repository. There has been continued interest among scientific workers in nutrition during the past year shown by the numerous abstracts and scientific papers received for cataloguing. The repository provides a central reference through which nutrition scientists may review studies in progress in Canada in their particular fields of interest. An annual summary of this information is planned for use of nutrition research workers.

Laboratory

Laboratory services were provided for the food habits' survey of senior citizens in London.

The auxiliary laboratory services to provincial health departments and physicians were continued.

The operation of the Clinical Nutrition Laboratory was transferred to the Laboratory of Hygiene in February 1964. To that time a total of 497 specimens were analysed; 301 in support of diagnostic services and 196 as a part of nutritional assessment on surveys. On these, 1,212 assays were carried out (diagnostic services 695, surveys 517).

The diagnostic service of blood phenylalanine assay continued to be provided for those provinces without facilities for this procedure in support of mental retardation programs.

Information and Education

Following the nineteenth meeting of the Dominion Provincial Nutrition Committee a two-day workshop on "Communications in Nutrition Education" was held on September 12 and 13, 1963, in Ottawa. This workshop was sponsored by the Nutrition Division with the co-operation of Information Services Division. Attendance at the workshop was limited to municipal, provincial and federal nutritionists, plus participation of health educators, radio and television experts from the CBC, and Department of Agriculture extension home economists. A carefully designed evaluation indicated that all of the 36 participants found the workshop to be very useful and informative, and urged more frequent similar workshops to cover various aspects of nutrition education.

Several of our publications were revised or reprinted.

The food service manual, "Meals for Serving 20" (English) was printed and is now for sale by the Queen's Printer. The French edition is being prepared for publication within the next fiscal year.

Quantity recipes for small institutions were developed and published quarterly.

The Canadian Bulletin on Nutrition, Vol. 6, No. 1, entitled "Dietary Standard for Canada" was published and is also for sale by the Queen's Printer. The French edition should be available during the next fiscal year.

The booklet "Healthful Eating" (English) was revised; the French edition is now under revision.

The posters "A Good Breakfast" (English and French) and "Canada's Food Guide" (English) were reprinted.

A new folder "Good Eating with Canada's Food Guide" was produced in English and French.

A new poster intended for teenagers was planned and preliminary work on design commenced.

The Nutrition Division assisted the Canadian Horticultural Council in the development of a folder as a companion-piece to the fruit and vegetable poster produced by this association in 1962

The 12-page monthly bulletin "Canadian Nutrition Notes" continued to be published for professional people; the circulation is approximately 5,000 English and 2,000 French copies.

The quarterly "Reading Reference List" continued to be published; the number of copies distributed in English and French was 1,600 and 900 respectively.

Altogether approximately 800,000 English and French pieces of educational material were distributed.

Experimental Kitchen

Recipes were tested and developed in 10, 20, 50 and 100 servings for use in the quarterly recipe cards publication.

Weights and measures were made of fresh produce on the market. The number of servings to be obtained from the various available containers of fresh, canned, frozen and dehydrated fruits were determined. This information is for use in publications, for use in hospitals and other institutions, and has a function also for future revision of the Table of Food Values.

Commercial packs of various new convenience packaged products, mostly dehydrated, were kitchen tested for preparation and for acceptability for use in rations for northern areas, isolated outposts, and arctic supply vessels, at the request of the Department of Transport, and in co-operation with other interested departments.

Consultant and Advisory

Advice and assistance continued to be provided, on request, to other divisions of the Department, to other federal departments, to provincial health departments as well as to non-government and professional groups. Of interest this year were: assistance with a National Emergency Food Consumption Standard; preparation of a qualifying examination for certification of ships' cooks; consultation on the applicability of new types of food service equipment and new methods of processing for use on ships and in outposts; consultations with the Department of Agriculture on food consumption data. Officers from the Department of Northern Affairs, and Radiation Protection Division consulted with the division regarding a survey of foods eaten by the Eskimo, with particular attention to caribou consumption. Discussions were also held with Indian and Northern Health Services on further studies of the nutritional state of the Eskimo population.

The addition of a consultant dietitian to the staff will enable the division to meet the need for expert advice regarding standards for hospital food service

more adequately, and to provide consultant service on equipping and operating of hospital food services.

Advisory Committees

The Canadian Council on Nutrition held a three-day meeting in June, 1963. Topics discussed included: nutrition surveys, nutritional status of elderly citizens and of adolescents, nutrition in the curriculum of schools of medicine, the Dietary Standard for Canada, regulation of the addition of supplementary nutrients to foods, the National Emergency Food Consumption Standard, radio-nuclides in Canadian foods, obesity and weight control programs, and the Canadian food situation and outlook.

The Dominion Provincial Nutrition Committee met in Ottawa in September, 1963. This committee of the Canadian Council on Nutrition is composed of a nutritionist from each province and the staff of the Nutrition Division. Meeting annually, it provides an opportunity to review provincial programs and indicates ways in which the federal program can best assist them.

Occupational Health

The division furnishes laboratory, clinical, technical, consultant, and training services in occupational health and air pollution for the purpose of protecting the health of Canada's workers and the general public.

Special projects concerned with air pollution, industrial hygiene in shops and offices, dust control in mines, and laboratory analytical methods have been undertaken for such international organizations as the World Health Organization, the International Labour Organization, and the International Union of Pure and Applied Chemistry.

Problems in occupational health and air pollution vary, depending upon the dynamic nature of Canadian industrial development. To cope with such changes, the program must be kept flexible.

The division has continued to aid provincial and municipal governments, universities, and industry through a limited program of teaching and in-service training for industrial hygiene and air pollution surveys.

Members of the division, the Ontario Air Pollution Control Division, and the Meteorological Branch, Department of Transport, are co-operating in a study to determine the concentration of particulate pollution affecting the Windsor, Ontario, metropolitan area. Sources of pollution are the iron and steel manufacturing industries and other industries located on the Michigan side of the Detroit River. A report on the findings has now been sent to External Affairs and the Ontario Government.

The Research Institute of Industrial Hygiene and Air Pollution, University of Montreal, was assisted in planning and organizing a study to determine the effect of industrial emissions and other sources of air contamination on respiratory diseases and lung cancer in Montreal. This study was initiated under a

federal grant. To avoid undue delay in commencing air sampling work, the division lent the institute air sampling equipment. Specialized laboratory assistance was given in the analysis of samples of polycyclic hydrocarbons and other carcinogenic substances.

Environmental Assessment Unit

Laboratory Services and Research: More accurate and improved chemical laboratory techniques and rapid, sensitive, gas chromatographic methods were devised for analysing oxygen, nitrogen, carbon dioxide, and total volatile hydrocarbons in ambient and compressed air. Work continued on the perfection of a rapid, sensitive method for carbon monoxide in the range down to one part per million. A continuous, recording analyser was developed for measuring total volatile hydrocarbons for air pollution and industrial hygiene studies. A refined analytical method has been perfected for determining 3,4-benzpyrene in air, in the presence of other polycyclic hydrocarbons, by fluorescence emission spectroscopy. The division has effected an improvement in the method for determining small quantities of zinc in a lung ash, and similar work is being developed for the determination of quantities of silica, arsenic, nickel, and other heavy metals.

Service has been provided to the University of British Columbia, the Provinces of Manitoba and Alberta, and other government departments for laboratory analyses. These included mercury in vegetation, uranium in urine, arsenic in water, polycyclic hydrocarbons and lead in air. The Chemistry Section is presently collaborating in the development of a publication containing 110 analytical abstracts and 120 ultraviolet absorption diagrams for industrial hygiene use.

The Physics Section developed a rapid method for the separation of micron and submicron sized particles by liquid elutriation in a high centrifugal field. A new instrument based on this principle has been constructed, and a patent application has been made to cover this instrument and method. Improvements were made in the application of X-ray fluorescence spectroscopy to the analysis of samples for toxic metal elements.

Several hundred samples submitted by provincial and federal departments were examined by X-ray methods for the determination of free silica, mica, calcium fluoride, asbestos, and other minerals and for elements such as arsenic, lead, copper, zinc, mercury, tantalum, ytterbium. Specimens of biological materials and aerosols were examined by electron microscopy.

Air Pollution: A report is being prepared on the first stage of the co-operative study of air pollution in twenty cities in Ontario. Population, consumption of fuels, industrial activities, seasonal variations in concentration, and other factors are being considered.

A study on how the shape and size of dustfall collectors affected the efficiency of collecting particulate fallout was completed. Best results were obtained with the Nipher Gauge, an instrument designed by the Meteorological Branch to collect snowfall aerodynamically. Further work was completed during the year on the accurate measurement of atmospheric smoke and haze concentra-

tions by measuring the optical density of deposits on paper filter tape. The reliability and stability of tape methods are also being assessed.

Assistance was given to the City of Regina and the Saskatchewan Division of Occupational Health in evaluating an odour problem from oil refinery operations and pipeline distribution systems. Similar assistance was given to municipal and provincial health agencies in determining sources of urban air contaminants from major manufacturing operations associated with pulp, paper, and oil refining in New Brunswick and iron and steel manufacturing in Nova Scotia.

Industrial Hygiene: Assistance was given to the newly formed Division of Occupational Health in Alberta. Two engineers of our industrial hygiene staff conducted a preliminary survey of environmental conditions and related hazards. The results are being used to determine hazardous conditions and to organize and establish the required occupational health facilities.

Industrial noise is growing in importance both to provincial health departments and workmen's compensation boards. A survey of noise problems in foundries of the Winnipeg area was carried out for Manitoba. Findings are being correlated with audiometric tests of employees. Similar surveys were conducted for provincial and federal departments in mines, paper mills, newspaper press rooms, machine shops, and office equipment installations.

A study of noise dealing specifically with certain major Canadian industries has been initiated to assist provincial health departments in establishing noise criteria, particularly on narrow band and impact noises.

Compressed air used for diving and caisson work has been the subject of a co-operative study with the Royal Canadian Navy and the Defence Research Board. The aim of the project is to establish specifications for compressed air purity and to define permissible limits for impurities in compressed gases, such as carbon monoxide, carbon dioxide, oil vapour, hydrocarbons, and so on. Better analytical methods, particularly for low concentrations of carbon monoxide and hydrocarbon vapours, are being explored.

The division conducted surveys of the following potential health hazards: lead compounds and solvents in printing establishments and battery plants; exposure of workers to chemicals and petroleum products; contaminants in auto-body repair work; pottery, brick, and glass making; paper making; chemical fertilizer plants and a wide range of metal industries. Consultations and advisory services were provided where there were problems with welding fume hazards, fumes from flueless oil heaters, mailbag dusts, operation of firearms, hazards in fumigation, and other operations.

Occupational Safety and Health Information Centre: This division is now a National Centre for Canada of CIS (branch of the International Labour Organization), a service for abstracting the world's literature on occupational health and safety. Organization of the above centre for Canada was completed during the year. CIS is being supplied with abstracts of technical articles on occupational health published in Canadian journals, abstracts of Canadian legislation, books, filmstrips and films. About 125 Canadian publications are being abstracted regularly by divisional staff, with assistance from federal, provincial, and industrial organizations.

Biological Unit

This unit is concerned with the study of the biomedical effects of a wide and rapidly increasing range of adverse physical and toxicological environmental factors. It co-operates with the Environmental Assessment Unit to identify and control environmental hazards to health. The program of the Biological Unit encompasses both clinical and toxicological studies, the study of the mode of action of various chemicals, and the development and application of improved methods for diagnosis and medical control. Consultative services to federal and provincial government departments and other agencies are part of the program.

Clinical Consultants: The clinical consultants took part in all environmental assessment surveys, providing medical interpretation of environmental factors on the health of exposed individuals.

Problems dealt with during the year included the biomedical effects of shift work, acoustical trauma, and clinical aspects of poisoning by arsenic, benzene, xylene, carbon tetrachloride, paradichlorobenzene, naphthalene, pentachlorophenol, sodium azide, organic mercurials, beryllium, and a range of plastic substances and agricultural chemicals.

Increasing emphasis is also placed on the initiation of environmental epidemiological studies. Studies at present in progress include the investigation of the incidence of cancer of the lung among fluorspar miners of Newfoundland and the determination of the health status of a number of occupational groups, with particular emphasis on the medical effects of shift work.

Toxicology: There has been a marked increase in the manufacture and use of a wide range of toxic chemical substances, with potentially increased exposure of the general public and working population.

A new approach to assessment of biological effects of toxic chemicals is being investigated. The methods being developed are based on psychophysiological reactions of mammals undergoing exposure. These methods used in behavioural studies will help to assess the damage some toxic compounds induce in the central nervous system of mammals. An evaluation of the lesion produced can be done without sacrificing the animals, and, therefore, the recovery can be followed and sometimes predicted. Design of completely new equipment to monitor various physiological parameters of the cardiovascular and pulmonary systems of mammals is also in progress.

Studies are continuing on the biotransformation of various environmental toxicants and the mechanism of action of compounds which constitute hazards to the general population and to specific occupational groups. As a result of these studies, safe compounds have been suggested to replace toxic industrial substances used for the same purpose. Emphasis is being placed on the development of specific biochemical and toxicological methods which are necessary to evaluate the safety and the toxicity of industrial chemicals and on intensive study of methods for abbreviating carcinogenicity bioassays.

The present knowledge of the mode of action of new insecticide chemicals is inadequate. A series of projects are directed toward the examination of enzymic activity influenced or critically involved in the intoxicating action of these chemicals. Methods for determining these activities and the application of these meth-

ods in survey work are being developed. Other projects include the modification of the human cholinesterase method for use with whole blood and the development of this method for rapid field use; the development of a colorimetric procedure for erythrocyte acetylcholinesterase; and the development of a rapid procedure for rat serum A-esterase.

Lung Cancer: Asbestos dust has been suspected and reported in the literature for many years as contributing to the increased incidence of malignant tumours of the lung. Of particular importance, as a general public health or environmental health matter, has been the report in the literature of cases of cancer of the lung involving the pleura in patients in whom an occupational exposure to asbestos dust could not be elicited.

The Occupational Health Division, in collaboration with the National Cancer Institute of Canada, is currently taking steps to investigate the nature and extent of possible hazardous exposure to asbestos dust and fibres in Canada. The objective of the study will be to measure the risk of developing tumors of the lungs and of other sites following exposure to the dust and to relate it to sex, age, duration of exposure, dose of dust, type of asbestos, and occupation of the individual. The mechanism of etiology will also be studied in the laboratory.

Occupational Health Nursing Consultant: Greater emphasis is being placed on closer liaison between community health and occupational health services. Occupational health consultants and industrial nurses are tending to concentrate on adult counselling service, with particular emphasis on mental health and health teaching of employed members of the family.

As part of the program for promoting the teaching of occupational health to health personnel in universities, a course of lectures was presented at the University of Ottawa for public health nurses. Other university training schools have also been visited by the consultant.

Meetings were held with the staff of the national Victorian Order of Nurses and regional supervisors to discuss their part-time industrial nursing services. There is a growing interest on the part of industry in the employment of part-time nurses, and the V.O.N. is meeting this demand. At the same time, they are seeking assistance in preparing their nurses to provide the best service possible to industry.

Hospital employee health services, university health services for students and staff, and civic employee health services are continuing to develop and require more occupational nurse consulting service to aid them in the development of these programs.

Planning of Research and Training: As a step toward better exchange of information in Canada and aiding in the selection of more important research areas, the Senior Scientific Consultant has assisted in the organization of local sections of the American Industrial Hygiene Association. Presently such sections have been created in Montreal, Ottawa, and Toronto. The first symposium on occupational health was to be held in Ottawa in May, 1964.

The collation of compensation case data is continuing so as to maintain an up-to-date picture of trends in occupational disease and work injuries. This program has already provided valuable leads in considering provincial-federal programming.

Educational and Technical Information Services: The division continued its educational program of providing information on current developments in occupational health in Canada and other countries through its publications. The "Occupational Health Review" is designed for professionals and is published quarterly; the "Occupational Health Bulletin" is intended for laymen and is published monthly. These publications are printed in English and French and have a wide national and international distribution.

A few pamphlets were revised, and several thousand copies of the division's numerous pamphlets were distributed to the provinces and to individuals.

Scientific Publications and Committee Activities: Scientific publications of staff members of the division deal with a wide range of laboratory and occupational health subjects. A list of titles of these publications is available upon request.

Consultants and other scientific officers of the division maintained a national and international representation on special technical and scientific committees of recognized professional associations.

Public Health Engineering

During the 1963-64 fiscal year the program of this division was directed toward the attainment of the following objectives:

- (a) The administration of regulatory and continuing control functions;
- (b) the provision of advisory services and technical assistance to federal, provincial and other governmental agencies;
- (c) the promotion of research in the field of environmental sanitation through universities, research foundations and provincial public health engineering divisions under Federal Health Research Grants, and through utilization of the Division's own resources for this purpose;
- (d) the provision of laboratory services to support field investigations and to implement advisory services, through laboratory and on-site studies relating to water and waste treatment and pollution abatement programs;
- (e) assistance in training programs in co-operation with provincial, federal and other agencies, i.e., university extension programs.

Administration of Regulatory Functions

Under this program, sanitation inspection services associated with common carrier activities and the Public Works Health Act and Regulations continued to be an administrative function of the division, pending transfer of these duties to Medical Services Directorate.

During the year implementation of the transfer of inspection services was actively pursued and substantial progress has been made. This has involved extensive work by members of the division's staff in training of public health inspectors; the delineation of areas of responsibility; the detailing of duties involved; and the development of a sanitary code.

In the Province of British Columbia, agreement was reached with Medical Services, this division and the Provincial Director of Health Services for the

assignment of specific inspection duties and the role to be played by the three governmental services. The actual transfer of these duties is essentially completed.

The recruitment of adequate staff has hampered the transfer of inspection services in other regions. In the eastern region, training of public health inspectors acquired by Medical Services was provided by the Ottawa and Montreal staffs of this division. The program has included an understanding of basic health principles as set forth in the sanitary code and field exercises associated with common carrier sanitation

Administration of Continuing Control Functions

(a) Shellfish Control Program

Continued surveillance was maintained in the shellfish control program administered by the division with respect to certification of shellfish for export purposes. Eleven engineering sanitary surveys, and 13 bacteriological appraisals of shellfish areas in the Maritime Provinces were made and reports submitted for detailed review by the subcommittee of the Interdepartmental Shellfish Committee. The bacteriological studies were made through the use of the mobile laboratory facilities and staff of the Laboratory of Hygiene of this Department and the Fish Inspection Laboratory of the Department of Fisheries.

(b) Fish Processing Plants

In co-operation with the Department of Fisheries under their voluntary certification program, water quality studies for fresh fish processing plants were conducted. Once the plants are certified, only limited surveillance is required unless there is evidence of a significant change in the water quality. For this reason, there has been some reduction in the number of surveys required under this program.

(c) International Joint Commission Boundary Water Pollution Studies

Direct assistance was provided the I.J.C., in the surveillance maintained of water quality and control of pollution in the undernoted boundary waters under reference:

(i) Lake Superior-Huron-Erie-Ontario Section

The Advisory Board established for surveillance purposes under the auspices of the I.J.C., reviewed and discussed the continuing water quality programs for these areas.

A special study was conducted in the St. Marys River under the direction of the District Engineer, St. Catharines, in co-operation with the United States Public Health Service officer-in-charge of the I.J.C. Detroit field unit.

The St. Marys River study was instituted as part of a continuing program in the assessment of water quality in this area and indirectly as a result of several occurrences of oil spills which had been brought to the attention of the Advisory Board. Major improvements have since been effected by industry to prevent re-occurrence of oil spills into the river, as a direct result of this study and the industrial waste surveys conducted by officers of the Ontario Water Resources Commission

(ii) *St. Croix River Basin*

A comprehensive pollution survey of the St. Croix River and Estuary was carried out under the direction of the regional engineer for the Maritimes with supporting technical staff from the New Brunswick Department of Health, and the New Brunswick Water Authority. Assistance was again provided by the Laboratory of Hygiene of this Department in the use of its mobile laboratory and staff. The survey of the lower estuary afforded an opportunity to appraise the pollution effect of the river on the shellfish beds in the area of Oak Bay, New Brunswick, which has been a closed area to the taking of shellfish for some years.

The findings of the survey were presented to the I.J.C. in a progress report to the October meeting in Ottawa.

(iii) *Rainy River and Lake of the Woods Reference*

An Advisory Board report, covering the three year pollution investigation of this river, under reference to the I.J.C. from the Governments of the United States and Canada, was prepared, printed and distributed prior to a public hearing held by the Commission at International Falls, Minnesota on August 28, 1963.

Advisory Services to Other Federal Departments

Requests for advisory and direct assistance from other federal departments and agencies have not only continued as in past years, but the number of referrals, covering a wide range of problems, has greatly increased. All aspects of public health engineering, such as treatment and design of water supply systems and waste disposal facilities, sewage treatment evaluation projects and water pollution investigations involving federal interests were covered in the advisory services provided by the division.

Through a gradual understanding and recognition of the laboratory services available, the opportunity to render technical guidance has increased. This is reflected in a number of requests from consulting firms, doing engineering work for other federal and provincial agencies, for advice in the treatment of specific water supplies. Several laboratory and on-site studies were conducted for such purposes. The most notable of these concerned studies made, on behalf of National Defence, for Camp Gagetown in the use of activated silica for treatment of a water subject to high turbidity, color and other organic particulates.

Provincial Co-operation

Consultant services and direct assistance covering areas of mutual interest were provided on a request basis to the provinces. The principal areas covered included water and sewage treatment and industrial waste problems, some of the latter arising from the oil refinery processing and the food canning industries. Other environmental problems investigated, included the determination of detergent levels in provincial water.

Assistance was provided to the New Brunswick Water Authority in the organization and direction of an extensive water pollution survey along the Kennebecasis River, the Lower Saint John River and Saint John Harbour.

At the request of the Prince Edward Island Department of Health, engineering consultant services were provided to determine water quality assessment and the assimilating capacities of Summerside and Charlottetown Harbours. This was initiated by the municipalities concerned to establish the degree of waste treatment necessary to protect shellfish interest and to permit utilization of these waters for recreational and other purposes. Other appraisal studies were made with respect to the efficiency of existing municipal waste treatment facilities and those serving several food processing plants.

Shellfish control programs were reviewed in British Columbia and direct assistance provided the Quebec Ministry of Health in the re-examination of the shellfish producing areas in the Baie des Chaleur.

Yukon and Northwest Territories

Continued assistance and advisory services were provided the federal and territorial governments on matters of sanitation, water supply and sewage treatment in the Far North. An urgent call during the disastrous spring floods in Hay River and Fort Simpson, N.W.T., placed the western area engineers on the alert and three were despatched to the area to supervise the rehabilitation of homes and decontamination of water supplies affected. At the request of Medical Services, engineering personnel were made available for a Community Health Education Course, conducted over a five week period at Cambridge Bay, N.W.T.

Special research studies were carried out and these are mentioned elsewhere in this review. The plans for proposed water supply and sewerage systems for seven northern communities were reviewed and recommendations submitted. These community systems were developed by a firm of consulting engineers in close liaison with division engineers, whose advice was sought owing to their knowledge of the area concerned.

Research Projects and Special Studies

During the past year studies have been continued on several research projects and others have been initiated through our district office at Edmonton.

Continuing research projects cover:

- (a) Iron bacteria and its control in water supplying the Veterans Land Act settlement at Bowness, Alberta, was kept under limited surveillance.
- (b) The household type disposal system serving the nursing station at McPherson with effluent discharge through electrically heated pipeline to an oxidation pond, received further study, resulting in modifications made in the electrical control circuit in phase with pump operation.
- (c) The collection of additional data and observation on the practicability of using oxidation ponds as an economical method of sewage and treatment for communities in the Far North.

Other areas of research studies during the year have included:

- (a) Continued assistance in the planning and organizing of a public water supply system at Fort Chipewyan, Alberta, as a follow-up to a previous nitrate research study of well waters serving this area.

- (b) Research on current behaviour in Yellowknife Bay in relation to arsenic distribution from waste discharged from Giant Mining and Smelting Company.
- (c) The practical utilization by arctic communities of a low cost sewage disposal unit and a summer water supply system, having portable pumping facilities.
- (d) A number of laboratory studies made with respect to commercial coagulants and the use of activated silica in the pre-treatment of water prior to filtration. These studies were carried out at the request of National Defence to resolve problems encountered at certain Army and Airforce water treatment plants.

Special Research Projects

At the request of the Canadian Public Health Association, acting on behalf of the Government of Nova Scotia, a survey of environmental health services was conducted in the City of Halifax, the City of Dartmouth and the adjacent metropolitan area. The division actively participated in this study and this report formed one section of a comprehensive report on all health services for the area.

Following this study, the services of the division were again utilized in a similar capacity in a health unit personnel research study, requested by the Canadian Public Health Association, of the environmental health personnel in the Ontario Health Units of Halton and Metropolitan Windsor.

Public Health Research Grants Program

Under the Department's Public Health Research Grants Program, the division stimulated and promoted new research studies on:

- (a) kinetic and biological action of ozone on sewage borne organisms and micro-organisms and a comparison with chlorine;
- (b) kinetics of the biological oxidation of the soluble constituents in sewage under continuous culture conditions, which are being carried forth under the auspices of the Ontario Research Foundation.

Health Grants Services

During the fiscal year a total of \$416,489 was allotted under the National Health Program for the support of environmental sanitation services. These projects involved training, research, sanitation control programs for milk and food, and necessary assistance required for field operations in carrying out pollution surveys.

Publications and Training Programs Assistance

A number of technical papers were presented before professional organizations or prepared for journal publication. The division's professional staff also participated in a number of training programs

In addition, the division's staff prepared informational material for distribution purposes as follows: "Recommended Sanitary Code", "Construction and

Maintenance of Water Reservoirs", revised manuel on "Public Health in Schools" used for reference purposes by health educators in the Northwest Territories.

Laboratory Section

The addition of a second technician to the staff during the latter half of the fiscal year has materially broadened the scope and increased the efficiency of the laboratory operation. The chemist has been able to spend more time on special studies, both in the laboratory and the field, despite the fact that the demand for analytical services has substantially increased, compared to the situation a year ago.

Trends in Public Health Engineering Programming

During the 1963-64 fiscal year, the Technical, Engineering, Consultant and Advisory Services of this division were fully extended in meeting the growing demands for assistance from provincial governments, federal departments and agencies, municipalities, private industry and universities in problems concerned with Public Health Engineering. These request emphasize the continuing need for providing highly specialized service for the solution of problems involving water treatment, municipal and industrial waste disposal and water resource management.

Table 16

STATISTICAL SUMMARY 1963-64

	Consultant Advisory Services and Design Data	Field Survey and Examina- tions	Bact. Anal. Water	Chem. Anal. Water	Bact. Anal. Milk	Bact. Anal. Ice	Anal. of Sewage Effluent
Vessel Sanitation.....	14	355	1,040	1	83	6	4
Railway Sanitation.....	4	611	1,136	20	122	74	
Aircraft and Airport Sanitation.....		106	618	5	110	28	
Water and Ice Supply Sources for Common Carriers.....	3	117	345	7	18	40	1
Shellfish Sanitation.....		39	155	3			
Co-operation with Federal Govt. Departments.....	242	500	1,987	299	23	6	319
Co-operation with Provincial and Municipal Agencies.....	6	27	32	45			
Special Studies and Research Projects.....	2	17	739	1,864			635
Total.....	271	1,772	6,052	2,244	356	154	959

Radiation Protection

Activities of the division are directed towards protection of health of radiation workers in industrial and medical establishments and programs designed to assess exposure of the general population from all sources of ionizing radiation including fallout from nuclear tests

Accommodation

The division's new building on Brookfield Road, Confederation Heights area was completed, and staff and equipment moved from the Vimy Building, Sparks Street and the Radiochemical Laboratory, Caldwell Avenue to the new headquarters in February 1964.

Staff

Total staff establishment was increased from 65 to 75 positions. The increases in the establishment provided positions for four professionals, five technicians and one clerk.

Programs

(a) *Isotope and X-Ray Utilization and Safety*

As the principle health and safety adviser to the Atomic Energy Control Board, the division makes assessment of the potential radiation hazard of all uses of radioactive material in Canada and insures that proper precautions are taken to protect the user and members of the public. During the year a total of 1,117 applications made to the Board for licence to use radioactive material were scrutinized and requirements for safe use drawn up. Of these, 461 were for medical purposes; 232 for research; 230 for industry and 194 for miscellaneous uses. In addition, 498 amendments to existing licences were considered. For small devices where the radiation hazard is considered negligible, a new system has been introduced whereby distribution to the end user is controlled by a general licence issued to the supplier

Field inspections were carried out at 189 licensed establishments, this included investigation of 13 accidents. Five persons were suspected of having received external exposure doses in excess of the recommended maximum limit but in no case was the degree of exposure of a serious nature.

In co-operation with the Department of Transport, division staff participated in committee studies of the question of uniform regulations for the transportation of radioactive material. The committee's report contained draft regulations for all forms of transport in Canada.

An interdepartmental committee was established to study procedures for dealing with radiation emergencies. The division was designated as co-ordinator in providing federal assistance to local authorities.

In the field of X-ray, an *ad hoc* advisory committee was established for the development of X-ray safety standards for Canada. The division continued to provide consultative service to users of X-rays and to conduct radiation surveys of installations when requested. As a member of the Atomic Energy Control

Board's Accelerator Safety Advisory Committee, the division has actively participated in reviewing the health hazards which may result from the operation of charged particle accelerators.

The Film Monitoring Service has continued growing and was extended to about 16,000 persons by the end of the year. This service plays an important part in the control of radiation exposures and assessment of hazards. During the year, 172 high exposures (greater than 600 mr per 2 week period) were investigated.

To accommodate the increased number of subscribers to the service, automatic reading and evaluation of exposures and machine preparation of reports have been introduced. As a result of these changes, it has been possible to report lower exposures and provide more detailed information to the user.

The division has been increasingly called upon to participate in the training courses in radiation safety under arrangements with provincial departments and other organizations. In view of the increased awareness for the need of training by users of radioactive material, arrangements were made to conduct courses on basic radiation protection periodically in the division's new building. Further, through membership on the Canadian Government Specification Board Panel on Industrial Radiography the division has increased its participation in training and examining industrial radiographers.

(b) Radioactive Fallout

The monitoring of air, precipitation, soil, milk, wheat and bone for radioactivity was continued. Samples were collected with the help of the Meteorological Services Branch, Department of Transport, the Dairy Products Division, Department of Agriculture and pathologists in hospitals across Canada.

Monthly precipitation samples from 24 stations were analysed regularly for caesium-137, strontium-89 and strontium-90, in addition to the usual "total beta activity" measurements. Selected samples were analysed for other specific radio-nuclides such as zirconium-95 and barium-140.

As a consequence of the cessation of nuclear weapons testing, the levels of short-lived radionuclides of health interest became insignificant. The routine determination of iodine-131 in fresh whole milk was therefore discontinued in September, 1963.

Co-operative studies with other laboratories were extended both at a national and international level.

Data from the fallout programs are published regularly in monthly reports.

(c) United Nations Program

Samples of milk, pulse, wheat and soil were received from Pakistan and analysed for strontium-90 under the United Nations co-operative study of radioactive fallout. Initial soil samples from Burma have been received and are being analysed for strontium-90.

(d) Safety of Nuclear Reactors and Devices

A member of the division continued to serve as health representative on the Atomic Energy Control Board's Reactor Safety Advisory Committee.

Daily air samples were collected in the neighbourhood of the McMaster University Reactor and were analysed for total beta activity.

Through membership on the Reactor Safety Advisory Committee, the division has continued to keep a close watch on the siting, design and operations of nuclear reactors. Environmental studies were continued near the sites of the Chalk River reactors, the NPD (Des Joachims) power reactor and the Douglas Point (Candu) reactor. Monthly analyses of water samples from the Ottawa River and the shores of Lake Huron were carried out on a regular basis. Samples of biota (rabbits and fish) were also obtained from the environment of these reactors in the spring and fall and analysed for caesium-137, strontium-89 and strontium-90.

(e) Total Body Monitor

With the completion of the new building for the division the electronic equipment was moved back into the Whole Body Counting Laboratory and this laboratory is now in operation

Advisory Committee on Radiation Protection

An Advisory Committee made up of specialists in the many areas related to radiation protection was formed to advise the Department on all health matters related to radiation protection. This committee will be responsible for providing the Minister with assistance and advice as additional support for the Department's Radiation Protection program and will also be responsible for studying and recommending radiation protection standards for use within Canada.

MEDICAL SERVICES

HISTORY AND FUNCTION

The Department has responsibilities for controlling health conditions amongst categories of persons, such as the travelling public, immigrants, seamen and the indigenous races and in connection with such things as international and inter-provincial common carriers, on federal property and in national parks, which, by reason of their nature, fall outside the jurisdiction of the provincial health services. Prior to 1962, these "field services", as distinct from the consultative, research and advisory functions of the Department grouped under the Health Services, were administered through seven independent services. For reasons of administrative convenience and economy, these separate services were amalgamated on 1st January 1962 to form the Medical Services of the Department of National Health and Welfare under the direction of one Director of Medical Services.

The seven services concerned were the former Quarantine Service, organized to protect the country from invasion by dangerous infectious diseases, the Immigration Medical Service, designed to assess the physical fitness of intending immigrants, the Sick Mariners Service, serving the needs of sick seamen manning ships touching Canadian ports, Civil Aviation Medicine, mainly concerned with ensuring the physical fitness of the men operating the civilian air transport services, Civil Service Health, organized to promote the health of federal civil servants, the Indian Health Service, organizing health services for Indians otherwise unable to fend for themselves and the Northern Health Service, functioning for all practical purposes in lieu of a Health Department to the two Northern Territorial Governments. Although superficially apparently quite diverse, there was some overlapping of interests between these services. In promoting the health of civil servants, Civil Service Health became involved in hygienic conditions on federal property. The Quarantine Service and Indian and Northern Health Services employed health inspectors trained to supervise such matters. The treatment of ailing seamen called for arrangements similar to those needed by ailing Indians and Eskimos. The facilities and personnel required to assess physical fitness in flying personnel and in civil servants were of the same nature. Various services were in fact using each others facilities from time to time. Amalgamation not only co-ordinated administration but, by pooling staff and facilities, permitted considerable expansion of services without necessitating increases in either, improved efficiency and effected many economies. It has also made possible a further step whereby some regulatory functions formerly performed by the Public Health Engineering Division can be progressively taken over by the Medical Services corps of health inspectors.

ORGANIZATION

Responsibility and executive authority for directing the total program is vested in the director who promulgates the policy guiding operations. He, together with his associate directors and staff of advisory professional officers with supporting technical and clerical staff, constitute the Directorate, located in Ottawa. The advisory professional officers comprise the former chiefs of the originally autonomous services, each contributing his specialized knowledge and experience of that phase of the operations which was formerly his special responsibility, and advisers on treatment policies, hospital insurance services, public health programming, dental services, nursing problems and in-service training, staffing and personnel management.

Executive control of the total program is decentralized onto six regional superintendents, all medical officers, also assisted by a group of officers with specialized knowledge of those phases of the program of major importance in each region. Conditions vary markedly between region and region and considerable discretion has to be allowed to regional superintendents to adapt the broad general policies promulgated from the Directorate to local conditions. The regional superintendents meet in conference with the director from time to time, usually at least once a year, to discuss policy in detail and map out their respective courses.

Control of actual field operations is further decentralized onto twenty-two zone superintendents, also all medical officers, responsible to their respective regional superintendent, who co-ordinate and control the activities of the various field units and field officers through which the actual services are rendered. These zone superintendents meet in conference periodically with their regional superintendent to discuss regional problems and development of the program.

The direct line of executive control is from director through regional superintendent to zone Superintendent but informal communication of a consultative or informative nature is permitted between officers at the various levels with responsibilities in specialized phases of the program.

FACILITIES

In addition to the various directorate, regional and zone administration offices, Medical Services performs its functions through hospitals, nursing stations, health centres, health stations, a wide variety of clinics and the services of many private physicians on a part-time or fee-for-service basis. It is broadly Directorate policy to employ locally available facilities where such are willing to co-operate and are satisfactory and only to provide directly a federal facility where nothing else is available. Following on this, where local facilities of a satisfactory nature willing to co-operate are subsequently developed, an existing federal facility will be closed down or converted to some other use and the work transferred to the locally operated facility. Consequently there is a continuous change in the nature and number of federal facilities operated by Medical Services.

During 1963 Medical Services operated eighteen hospitals, forty-four nursing stations, eighty-three health centres, forty-one health stations, forty-two clinics mainly for Indians and Eskimos and twenty-five full-time and five part-time clinics mainly for civil servants. The hospitals vary in size from large general hospitals to comparatively small sanatoria and some are housed in old and inadequate buildings but all are equipped with the most efficient of modern equipment for the purposes they perform. Nursing stations are small rural hospitals with four to ten beds permanently staffed by nurses acting under the supervision of a visiting physician. Health centres are primarily public health nurses' offices but most of them, being located as a rule in the remoter areas, usually offer some minor treatment services as well. Most health centres and nursing stations are now equipped with diagnostic X-ray units. Health stations are facilities for the use of visiting public health nurses and physicians, normally without permanent staff, located in remote sparsely populated areas where it is impracticable to set up permanent clinics or health centres.

Medical Services do not operate ambulance services but they do operate mobile field X-ray units and, in one region, mobile dental units. Mobile professional specialists such as ophthalmologists, otologists and dentists elsewhere carry portable equipment.

SPECIAL DEVELOPMENTS

(a) Aerospace Medicine

The former Civil Aviation Medicine Division, organized originally in 1948 as an independent service within the Department, provided advice to the Department of Transport and other governmental departments and associated agencies on medical problems relating to the health, safety and comfort of aircrews, groundcrews and airline passengers. Much of the work consisted of assessing the medical fitness of applicants for issue of licence as pilots, aircrews or air traffic controllers. However, since research was necessary in this new field of medicine, the Chief of the Division maintained close liaison with the National Research Council, the Defence Research Board, the Royal Canadian Air Force Institute of Aviation Medicine and other interested agencies both national and international. As the work of examining civilian aviation personnel and providing advice on standards of physical fitness is closely allied to the work of the Civil Service Health Division it was decided in October 1963, to incorporate this aspect of the work of the former Civil Aviation Medicine Division as one of the duties of the Civil Service Health Division. This relieved the Chief of Civil Aviation Medicine of responsibility for the Examiner Service and he was redesignated Consultant Surgeon, Civil Aerospace Medicine, Research and Safety, charged with developing a civil aeromedical research program. In November he became medical co-ordinator for the interdepartmental Steering Committee established to study the effects of shift work on the health, morale and efficiency of certain classes of the Department of Transport Air Services personnel. During the year he has been involved in numerous studies and investigations, including the disastrous crash of the Trans-Canada Air Lines DC-8F at Ste. Therese, and has attended international aviation medical conferences in Los Angeles, Washington,

Oklahoma, Athens and Rome. Research studies currently undertaken include the effects on hearing of the noise of jet engines on a selected occupational group, an evaluation of medical statistics relating to the physical fitness of aviation personnel, accident investigation and safety. A review of physical standards, particularly relating to methodology of examination and adequacy of standards in terms of environment and task of civil aviation personnel was continued. A new first aid kit and suitable container were assembled for use on Department of Transport Aircraft. Information for a handbook on Civil Aviation Medicine was collected and prepared for publication. The consultant surgeon has also been instrumental in developing short training courses for medical examiners and conducted a Regional Conference on Civil Aviation Medicine in Edmonton for Medical Services personnel.

(b) *Ottawa Bureau*

In 1963, following a careful review of the head office organization and operational functions of the newly formed Medical Services, a decision was taken to group together certain of the operational programs and services discharged within the headquarters area. This resulted in the formation of an Ottawa Bureau, headed by a bureau chief. The bureau at present embraces the original Civil Health Division and the Civil Aviation Medical Examiner Services of the former Civil Aviation Medicine Division including responsibility for advising the Department of Transport on the clinical application of Physical Standards for Civil Aviation Personnel Licensing. The transfer of the Preliminary Screening Section of Quarantine, Immigration Medical and Sick Mariners Services, although not strictly a program confined to the Ottawa area, will be considered following the major move of the Department to its new building at Tunney's Pasture. The purpose of this reorganization is to provide more unified and efficient administration, and even more important, better co-ordination and more effective use of the clinical resources in the headquarters area.

The new bureau operates with an establishment of eighty-eight personnel, consisting of the former Civil Service Health Division establishment of eighty-two supplemented by an additional medical officer and five other positions transferred from the former Civil Aviation Medicine Division. Thus the establishment consists of seven medical officers, including a psychiatrist, a psychologist, a consultant in social services (vacant for the past five years), a supervisor and assistant supervisor of nursing counsellors, forty-eight nursing counsellors and twenty-nine auxiliary personnel.

(c) *European Region*

The amalgamation led to the establishment of a new region designated the European Region. This region was listed in the Organizational Chart published in the annual report for 1961-62, however, operations in Europe did not fit into the pattern as readily as services in Canada and it was only on January 1, 1964, that it was completely organized. The principal function of medical officers in the region is to carry out the medical examination of persons who have applied for entry to Canada as immigrants to the Department of Citizenship and Immigration.

(d) Regulatory Hygiene

Following a study of the activities of the Public Health Engineering Division of Health Services it was agreed that the regulatory inspection services formerly carried out by that division in connection with hygienic conditions on board Canadian vessels, major common carriers and federal property should be transferred to Medical Services. Medical Services was not, however, adequately staffed with trained health inspectors to permit an immediate assumption of full responsibility. Accordingly, a program was worked out between Medical and Health Services whereby Medical Services would progressively increase their staff of inspectors and take over those functions gradually as opportunity developed while Public Health Engineering would assume the role of responsible "tutor", using Medical Services personnel as agents where possible, until such time as Medical Services can assume full responsibility. Considerable progress has been made during 1963 in both the eastern region and the Pacific region where the heaviest concentration of the work lies. Progress in the central regions has not been so rapid owing to difficulties in recruitment.

CONTINUING SERVICES

(a) Civil Service Health

(i) Administration

This division continues to administer three broad classes of services to Federal Government employees. The Medical Centre located in No. 3 Temporary Building, Ottawa, provides advisory, diagnostic and emergency medical services to some 40,000 employees in the Ottawa area, administers and gives supervision to the twenty-five full-time and five part-time health units located strategically in government buildings throughout the Ottawa area affording nursing counsellor services to approximately 38,000 employees, and renders a basic advisory and consultant service to all government departments and a number of Crown Companies, Corporations and Commissions on employee health and welfare matters. Where medical examinations and consultations are required either by statute or requested by departments for employees outside Ottawa, such services are arranged utilizing, wherever possible, the resources of the zones and regions within Medical Services, the Department of Veterans Affairs or, as necessary, private physicians on a fee-for-service basis. Under "Special Activities" reference is made to the extension of nursing counsellor services by the establishment of health units in large centres outside Ottawa. The bureau chief is responsible for advising on program control, planning and development of these services.

(ii) Medical Centre Services

Referrals from health units, physical examinations and psychological assessments required by statute under the Public Service Superannuation Act, Foreign Service Regulations and Isolated Posts Regulations, and periodic voluntary examinations requested by departments for special employee groups, continue to constitute the bulk of the clinical work performed at the Medical Centre. The special employee groups, apart from those and their dependents

proceeding abroad or to isolated posts, include employees assigned to summer field work; employees engaged in hazardous occupations including employees exposed to radioactive materials; selected groups of senior administrative personnel; pre-employment examinations where an assessment of physical fitness is required; and, finally, special eye examinations of employees whose work demands a high degree of visual acuity. The policy of offering periodic executive health examinations for senior administrative personnel in an increasing number of government departments has been exceptionally well received and it is planned to extend this service further as clinical resources permit. The services of the chief, Medical Rehabilitation Division, are retained as consultant in ophthalmology and, since the formation of the bureau, his services have also been available in the Civil Aviation Medicine field.

The volume of medical work required by statute increases annually, especially that undertaken for the Departments of External Affairs and Trade and Commerce, as new missions become established overseas or existing ones increase their staff requirements. Additional responsibility has been assumed for the medical arrangements required of assignees and their dependents posted abroad under a variety of government aid programs administered by the External Aid Office. This year the bureau chief accompanied the External Affairs Liaison Team on a survey of five tropical posts in Africa, namely, Accra, Lagos, Yaounde, Leopoldville and Dar es Salaam. Comprehensive reports have been completed following inspection of the hardship conditions at each of these posts. Revised post rating forms in accord with present conditions have been prepared for Accra, Lagos and Leopoldville, which posts had previously been inspected in 1961. New post rating forms have been completed for Yaounde and Dar es Salaam—no previous inspections having been made.

The consultant services of both the psychiatrist and psychologist have been in increasing demand during the past year. The psychiatrist continues to act in a dual capacity, holding a total of 523 psychiatric consultations in his consultant role and as well has continued to discharge his responsibility for developing further the educational aspects of the Mental Health Program for Federal Government employees through lectures and group discussions with appropriate departmental authorities. He has continued to ally himself with all departmental personnel officers giving leadership and direction to the broad program, both within and outside Ottawa, for combating alcoholism in the public service. This program emphasizes early recognition, treatment and rehabilitation for the problem drinker.

The psychologist continues to work closely with the psychiatrist, medical officers and nursing counsellors in the assessment of departmental referrals. There appears to have been a steady increase in referrals from departments of employees with personality problems and likewise of employees from the technical, administrative and professional groups who seek advice for relief from situational anxieties relating to job security and promotional problems.

Some 5,938 immunizations were administered at the Medical Centre to a total of 2,171 individuals, largely foreign service personnel and dependents proceeding abroad or to isolated regions. The reduction from that in the previous year is attributed in the main to the reduction in the number of vaccinations against poliomyelitis. Apart from this the number of immunizations varies little from year to year.

The former Certificate Review Section has been expanded and re-organized to include all of the review and assessment functions common to both Civil Service Health and Civil Aviation Medicine. Accordingly, in keeping with the broader functions, it has been redesignated as the Medical Review Section. From the Civil Service Health standpoint the Medical Review Section reviewed and processed 117,117 certificates of disability for duty and 9,316 physical examination record forms. Furthermore, the section arranged for 691 medical examinations outside Ottawa utilizing the resources cited above.

(iii) *Health Unit Services*

In September, Health Unit No. 13 at Victoria Island was converted into a part-time unit with nurse attendance being restricted to afternoons. The policy with respect to return to work visits following absences due to illness was carefully reviewed, and routine visits to the health units following absences of one day or less in units serving the Department of National Defence and Dominion Bureau of Statistics were no longer made compulsory. The net effect of these measures was a substantial reduction of visits in seven of the busiest health units. A total of approximately 185,000 visits was made to the health units during the year, a reduction of more than 20,000 from that of the previous year. The measures referred to above accounted for three-fourths of this reduction. The third measure taken to cope with the staff shortage was to reduce six of the two-nurse units to one-nurse units. In spite of these measures every effort has been made to maintain the essential counselling and referral aspects of the program.

(iv) *Special Activities*

The planned extension of operations, particularly the nursing counsellor service, to large centres outside Ottawa as authorized by Cabinet in April, 1962, was hindered by the limitations imposed by austerity. Early in the year the administration of the small nursing operations at No. 7 Supply Depot, RCAF, Lancaster Park, Namao, Alberta, and No. 5 Supply Depot, RCAF, Moncton, N.B., respectively, were returned to the Department of National Defence since, in the main, the services being provided were largely for service personnel. In general, the transfer of the above nursing services to Medical Services enables the medical and nursing staff of the respective region or zone to provide more efficient direction and supervision to the nursing staff of these health units. Employee health unit records have been revised and made available for use in health units both within and outside Ottawa. Arrangements have been made for monthly health unit reports from regions to be tabulated and analysed in a manner similar to the

procedures in effect in Ottawa. The revised records were introduced in October. Statistics from regional health units are thus incomplete for this year, but arrangements are in hand for complete reports to be made available for the ensuing year.

With the publication of the 1962-63 annual statistical report "Illness in the Civil Service" the Dominion Bureau of Statistics will cease to prepare this report in its present form. Instead, the Bureau plans to prepare statistics from information provided directly by departments showing patterns of use of both casual and certified sick leave including, wherever possible, rates on sickness absenteeism, specified for age, sex, classification, length of service and other characteristics.

The facilities continue to be utilized as a means of providing field experience to post-graduate students from various university schools of nursing. In May, field experience at the Ottawa health units was provided to four university students from the University of Toronto and McGill University. Several lectures on occupational health nursing and the nursing counsellor service were given to the public health nursing students at the Ottawa University.

(b) Civil Aviation Medicine

In the field of Civil Aviation Medicine the Ottawa Bureau, through the Civil Aviation Medical Examiner Services of the former Civil Aviation Medicine Division, is charged with the responsibility for advising the D.O.T. (Department of Transport) regarding the medical fitness of applicants for initial issue or renewal of licences as pilots, aircrew or air traffic controllers. Since the D.O.T. has delegated much of its responsibility in licensing matters to its six regions across the country, it has been found expedient to delegate much of the medical review and assessment functions to a medical officer of Medical Services likewise on a regional basis. These regional medical officers review the examinations on licensed personnel performed by D.O.T. approved Civil Aviation Medical Examiners, and advise the regional licensing authorities accordingly. This system has functioned efficiently during the year. During the past year a total of 21,750 examinations were carried out by 450 approved Civil Aviation Medical Examiners across Canada. Borderline or contentious cases following review in the regions have been referred to Ottawa for further study and advice. In addition, 2,034 electrocardiograms performed on pilots in accordance with D.O.T. Physical Standards for Civil Aviation Personnel Licensing were reviewed for both clinical and research purposes.

In addition to the review and advisory services afforded aircrew and air traffic controllers the D.O.T. is advised regarding the medical qualifications and suitability of applicants for appointment as civil aviation medical examiners and has completed for publication a "Handbook for Civil Aviation Medicine" for the guidance of these physicians. This handbook contains administrative procedures for both regional medical officers and civil aviation medical examiners and in general, pertinent information relative to the conduct and assessment of medical examinations on applicants.

In October a three day conference was held for approved D.O.T. civil aviation medical examiners in the Edmonton region. Some 22 medical examiners took advantage of the opportunity to attend this conference to study and discuss recent advances and current trends relating to the application of Physical Standards for Civil Aviation Personnel Licensing.

(c) Quarantine Service

The Quarantine Service operating under authority of the Quarantine Act and Quarantine Regulations has as its primary objective prevention of importation into Canada of the major quarantinable diseases, smallpox, cholera, plague, yellow fever, and relapsing fever. In addition certain measures are, from time to time, adopted in co-operation with provincial health departments to prevent importation of other infectious diseases when major outbreaks of such diseases occur in countries from which travel to Canada is common.

Information is supplied daily to divisional headquarters by radio from the World Health Organization in Geneva as to cases of major quarantinable diseases reported throughout the world in the preceding twenty-four hours. Information is also supplied by offices of Medical Services in the United Kingdom, Europe and Hong Kong. Significant information obtained by the United States Public Health Service is also made available. On the basis of this accumulated information ports and airports are kept constantly informed to permit application of the measures appropriate to the changing pattern of disease incidence as it exists from day to day. Such measures are in accordance with the International Sanitary Regulation of W.H.O. to which Canada has subscribed without reservation since 1962.

During the fiscal year under review 6,759 ships and 9,107 aircraft underwent quarantine inspection at ports and international airports. A total of 1,116,257 arriving persons were inspected; 10,283 vaccinations against smallpox and 9 vaccinations against cholera were performed on arriving persons and 2,307 persons were placed under surveillance for smallpox and 2,898 under surveillance for cholera. The large number of the latter resulted from the continued prevalence of cholera in the Far East, particularly in Hong Kong. No case or suspected case of a major quarantinable disease entered the country during the year.

The Quarantine Service supervises the importation and administration of yellow fever vaccine in Canada. Due to the very perishable nature of the material, yellow fever vaccine may be administered only at designated centres, each of which is registered with the World Health Organization. Eighteen such centres were maintained in major cities throughout the country. A total of 8,631 yellow fever inoculations were performed in 1963-64.

(d) Immigration Medical Service

The Immigration Medical Service conducts or reviews the medical examinations of prospective immigrants to Canada, classifies under the appropriate subsection of Section 5 of the Immigration Act those in whom abnormalities are found, and advises the Department of Citizenship and Immigration of the significance of disabilities. It also provides treatment to certain classes of persons after

their arrival in Canada. These functions are performed under the authority of Section 21 of the Immigration Act and of Section 5 of the Department of National Health and Welfare Act.

Examinations in the British Isles and Western Europe are, for the most part, conducted by Medical Services personnel, their area of operations now being known as the European Region. The administrative headquarters, including the office of the Regional Superintendent, is in London, England. Examining facilities exist in most of the western European capitals and in several of the principal cities of Great Britain and Germany. X-ray units are installed in all British offices, in The Hague and in Paris.

In countries such as Norway and Sweden, where the number of examinations does not warrant the posting of a Canadian medical officer, and in areas distant from Canadian establishments in other countries, potential immigrants are examined by designated local physicians. These doctors work under the supervision of the nearest Canadian medical officer and their reports are processed through his office. In general, immigrants who have been examined by Medical Services officers or by local physicians in their areas, are not subjected to re-examination at a Canadian port of entry but are "landed" following inspection.

The Department is represented in Asia by an establishment in Hong Kong. The medical officer in charge has responsibility for the general supervision of operations in Southeast Asia.

In all other parts of the world immigrants are examined by local physicians who, with certain exceptions in India, Pakistan and Japan, are unknown to the Department. Recognizing that medical standards in some of these areas may be different from those applicable in Canada or Western Europe, the Immigration Medical Service requires the reports of these examinations to be reviewed in Ottawa before any advice is given to the Department of Citizenship and Immigration regarding the health of the immigrant concerned. The purpose of this procedure, known as the Preliminary Screening system, is to give the immigrant reasonable assurance that he will meet Canadian medical requirements on definitive examination at a port of entry.

Medical Services physicians at Canadian ports and airports and at major centres throughout the country conduct the examinations of those who arrive following preliminary screening and of those who, already in Canada, apply for permanent residence. They also supervise the treatment of certain classes of immigrants and of persons found ill on arrival.

The work of the Immigration Medical Service produces a close association with the Department of Citizenship and Immigration. It is the concern of the latter Department to obtain immigrants, and the changing pattern of its efforts is reflected in new procedures and new centres of activity. It is currently held that the Department will be assisted by decentralization—by bringing the processing office closer to the immigrant. To this end, new area offices are in the process of establishment and local medical examiners are being appointed in countries hitherto served only by Canadian staff. Medical documents from eastern Europe and the Middle East are shortly to be processed in Vienna and those from Southeast Asia in Hong Kong rather than in Ottawa. Similarly, reports from Egypt

have recently begun to be processed in Athens. It is hoped and believed that these new procedures will work out to the satisfaction of both Departments.

(e) Sick Mariners Service

The treatment of sick mariners is authorized by Part V of the Canada Shipping Act. The Act provides a compulsory levy of two cents per net register ton on all vessels arriving in Canadian provinces from foreign ports or from another province. This duty is collected not more than three times in the calendar year. The initial payment can in no case be less than \$2.00, and the total due in any calendar year is a sum calculated at six cents per net register ton, or the sum of \$2.00. Payment on behalf of fishing vessels of Canadian registry is voluntary but, if coverage is desired, the payment must be made before the first fishing voyage in the calendar year is undertaken.

The Sick Mariners Service is authorized to conduct a limited medical and surgical program and to supply a reasonable quantity of drugs on behalf of eligible sick mariners. Under agreements between the Federal and Provincial Governments sick mariners are not excluded from hospital insurance benefits and, consequently, hospital charges, other than co-insurance, are now paid only for those seamen or fishermen who are not covered by a Provincial Hospital-Insurance Plan.

Sick mariner clinics staffed by Medical Services personnel provide treatment at Halifax and Sydney, N.S., Saint John, N.B., Quebec and Montreal, P.Q., and Vancouver and Victoria, B.C. Part-time physicians are employed at St. John's, Nfld., Lunenburg, Liverpool and North Sydney, N.S., Tracadie, N.B., Port Alfred, P.Q., and Port Alberni, B.C. At most other ports treatment is provided by designated port physicians on a fee-for-service basis. Department of Veterans Affairs hospitals are designated for the hospital care of sick mariners in all areas where they exist.

A "Manual of Instructions to Port Physicians" has been prepared and is awaiting official approval of publication. It is believed that its circulation will materially assist in the administration of Part V of the Canada Shipping Act.

(f) Health Services to Indigenous Races

(i) General Policies

The departmental Medical Service arrange or provide to registered Canadian Indians resident on reserves both treatment and public health services. The Federal Government has never accepted the position that Indians are entitled to free medical services by Treaty rights. The only provision suggesting such in one Treaty merely requires superintendents of Indian Affairs to maintain a medical chest in their offices for the benefit of Indians, an emergency measure originally designed to mitigate the lack of available medical professional attention. The Government does, however, recognize a moral obligation to see to it that no Indian suffers from lack of medical attention by reason of inability to pay for it. The treatment services are therefore offered on the same basis, broadly speaking, as other forms of medical welfare relief organized by welfare agencies, i.e., only to persons unable to afford the expense of necessary treatment. Because of the low

economic status of most Indians living on reserves, this applies to the vast bulk of registered Indians and this has fostered the misconception that the Federal Government provides free medical services as a matter of Indian right. This has never been the case and, from the very earliest days of colonization, certain bands of Indians have always retained the services of a physician at their own expense. The Department of National Health and Welfare, through its Medical Services, pays for necessary medical treatment of indigents at rates which compare favourably with payments made by other welfare agencies for medical services given to non-Indian indigents. Indians are now insured persons under all provincial and territorial hospital insurance plans and receive the same benefits as all other residents but, in many cases, still cannot meet the personal co-insurance charge incorporated in some plans, in which case the charge is met through Medical Services. The basic principle is that the Federal Government will assist any Indian community unable to meet the obligations placed normally on a community, in respect of obtaining medical services, to the extent of the deficit in ability to meet the full cost from its own resources. Out-patient and office treatment is generally arranged through locally available facilities and practising physicians on a scheduled fee-for-service basis. In remote areas where local facilities do not exist or are difficult to reach, direct medical services are given by medical and nursing personnel of the Medical Services. Indians are encouraged to take out prepaid medical insurance to cover office treatment, like everyone else, and several bands of Indians have arranged this on a group basis, paying the premiums from their communal funds. Where these are not adequate to meet the full expense, Medical Services assist by making up the deficit. Medical Services personnel play an active part in promoting such enterprise and assisting in negotiating these arrangements. During 1963 high level negotiations were carried on with a view to arranging for the inclusion of Saskatchewan Indians under the Medicare Plan of that Province but so far without success.

(ii) Tuberculosis Program

Tuberculosis has always posed a particularly serious problem amongst Indians, so serious that, at one time, this one disease threatened the continued existence of the race. Consequently, the control and treatment of this disease has been a major concern to the Indian Health Service. Arrangements for its treatment vary markedly from region to region. Some provincial Tuberculosis Control Services assume full responsibility, other provinces co-operate closely and yet others still prefer to leave the entire program in the hands of Medical Services. The finding of cases and general protection of contacts is mainly left to Medical Services in most places though most provincial agencies give great help. As a result of these efforts, the mortality rate has been drastically reduced, deaths from active tuberculosis amongst the Indian population as a whole now being 17 per 100,000 of population. The majority of deaths occur amongst elderly persons with long established severe disease, males and females being almost equally affected.

The incidence of new cases has also been dramatically reduced but still persistently stands at some ten times the national rate. Whereas a few years ago in most areas, it was rare to find an Indian of school age or over who did not react positively to a tuberculin test, in 1963 a number of surveys done in one region showed that approximately half those tested now react negatively and in many of the better controlled areas the proportion of negative reactors is very much higher. There were, however, several local outbreaks of tuberculosis in some small communities of explosive and epidemic proportions which led to intensified effort. One problem that is apt to be more serious amongst Indians than in other groups is that, because of the peculiar stresses of the Indian way of life, arrested cases are more liable to reactivate. In the remoter Indian communities, this may occur and the person becomes an active source of infection for some considerable time before the fact is discovered. Each of the recent epidemic outbreaks has, in fact, been traceable to one such case in each community affected. To counter this danger, Medical Services presses an active vaccination campaign with B.C.G. The value of the tuberculin test as a rapid screening method of survey is such that there is reluctance to press mass B.C.G. vaccination as this interferes with the significance of the test but, in view of these epidemic outbreaks, it is felt necessary to use all available means to enhance resistance to infection and rely more on X-ray screening for detection of new cases. Mass radiography is done on a large scale by mobile units annually and in many places over 80 per cent of the population have been successfully screened during the year. The usual experience is that over half the registered Indian population of the country is screened each year but this still leaves too many possibilities for active cases to escape detection and continue to pose a danger to the increasingly susceptible population of negative tuberculin reactors. Unfortunately, most Indians must be regarded as possible contacts of some active case and "contact vaccination" amongst Indians can seldom be distinguished from mass vaccination of susceptibles. In a few Indian communities, however, the disease appears to have been brought under satisfactory control, no new cases having occurred for several years.

(iii) Public Health Amongst Indians

Medical Services attempt to ensure or provide a complete range of public health services to all Indian communities on reserves comparable to those provided by the Provincial Health Department to other residents and communities in the province. Where it can be arranged, the services of the Provincial Department of Health are enlisted, where this is not practicable, Medical Services personnel give direct services. In some provinces the public health services are shared between the federal and provincial services, a federal public health nurse serving the whole population in one area, Indian and non-Indian alike, while, in the adjoining area, the provincial public health nurse does likewise. This means each nurse has a more compact area geographically, the two nurses do not overlap or spend excessive time travelling to remote areas and can give more concentrated attention to their

nursing duties. This shared co-operative working arrangement is most highly developed in British Columbia where the federal nurses now work under the general supervision of the Provincial Director of Public Health Nursing Services. In this Province also, the Provincial Health Department has assumed full responsibility for providing public health services to over one-third of British Columbian Indians. Finally, during 1963, the British Columbia Department of Health placed the services of their health inspectors at the disposal of the federal service for the purposes of executing their responsibilities in regard to maintaining the sanitary standards in federal properties and such places as railway stations, bunkhouses, construction camps, etc., within the provincial boundaries. In Nova Scotia, the provincial services have long relieved the federal services from providing public health services to their Indian residents and federal-provincial co-operation is highly developed also in Manitoba. In other provinces, co-operation is not so highly integrated but there is considerable exchange of information and joint effort. In all provinces the federal public health program is aligned to the pattern of the provincial program to facilitate co-operation and exchange of information, making due allowance for the impracticality of applying all aspects of provincial health control on an unorganized reserve and the need for some special efforts in respect to Indian conditions. In some areas of Ontario the Indians themselves have negotiated with the nearby provincial health unit for public health services, and Medical Services have in some cases been able to facilitate these arrangements by giving financial assistance. Some Indian communities are grasping the idea of a "Board of Health" or "Health Committee" and passing sanitary bylaws to govern their own conditions. On the whole, however, much more educational work is still needed before the Indian population can achieve standards of hygiene comparable to their white neighbours even when money is available to them. A program of training Indian personnel as community health workers, employed by Medical Services, has been launched and is proving very popular and successful. During the year all Medical Services regional superintendents attempted to assess the degree of success of the public health programs and, though a marked degree of success can be claimed in many areas, notably in the care and health of mothers and children, the prevention of communicable diseases and greatly reduced mortality, it is still clear very much more requires to be done. The effectiveness of the federal anti-diphtheria immunization program was demonstrated in an unfortunately rather oblique way during 1963 when large numbers of Indians were found to have virulent diphtheria organisms in their throats, a veritable "epidemic" of "carriers", yet clinical cases of diphtheria developed in only seven unprotected infants while several cases, some fatal, did develop in non-immunized non-Indian groups living nearby. This did little to advance the cause of integration but it did demonstrate a very solid protection of the Indians had been achieved. Many regions were able to report immunization rates of 25 to 30 per cent of the total population achieved during the year against a number of diseases, tetanus, poliomyelitis, smallpox, diphtheria and pertussis principally. The

matters of most grave concern in 1963 were the mortality from accidents and respiratory diseases, abuse of alcohol and its results and a marked rise in the incidence of venereal disease.

Table 17

MEDICAL CENTRE STATISTICS

Ottawa Bureau Medical Services Civil Service Health Division

Calendar Year — 1963

Number of Visits		
Total		9,121
First visit	3,840	
Repeat visit	5,281	
Visits by Sex		
Total		9,121
Male	6,416	
Female	2,705	
Analysis of Visits		
Physical examinations		3,040
Pre-employment, periodic, P.S.S.A.	1,517	
Foreign service, isolated duty postings, etc.	1,061	
Referrals — voluntary, department, health unit, etc.	462	
Consultations, interviews, etc.		6,018
Psychological	909	
Psychiatric	523	
Special, eye, X-ray, immunization	4,586	
Accidents		63
Industrial	8	
Non-industrial	55	
Immunizations		
Total number of employees immunized		2,171
Total immunizations		5,938
Smallpox	1,455	
T.A.B.T.	1,660	
T.A.B.	574	
Cholera	557	
Typhus	253	
Yellow Fever	798	
Polio (Salk)	545	
Plague	21	
Other	75	
Disposal		
Total		9,121
Returned to work	9,089	
Sent home	32	
Referred to Family Physician		30
Total Laboratory Procedures		4,847
X-ray		
Total		3,670
Chest	2,357	
Chest (photoroentgen unit)	760	
Other	553	

Table 18

RETIREMENTS FROM SERVICE — ACCORDING TO DISABILITY

Ottawa Bureau Medical Service Civil Service Health Division

Calendar Year — 1963

Male 253 — Female 98 — Total 351

Cause of Disability	Age Groups					Total
	Under 40	40 to 44	45 to 49	50 to 54	55 to 59	
Infective and Parasitic.....	1	0	0	0	1	2
Neoplasms.....	3	5	5	6	24	43
Allergic, Endocrine, Metabolic, Nutritional.....	4	0	2	3	8	17
Blood and Blood Forming.....	0	0	0	0	1	1
Mental Psychoneurotic Personality.....	7	12	17	10	19	65
Nervous Systems and Sense Organs.....	7	8	9	9	22	55
Circulatory.....	1	4	9	25	49	88
Respiratory.....	0	1	1	5	8	15
Digestive.....	1	0	3	4	4	12
Genito-urinary.....	2	0	2	0	1	5
Pregnancy, Childbirth.....	0	0	0	0	0	0
Skin and Cellular.....	1	0	0	0	3	4
Bones and Organs of Movement.....	1	0	8	7	14	30
Congenital Malformation.....	0	0	0	0	0	0
Symptoms and Ill-defined.....	0	1	0	1	4	6
Accidents and Results of Old Injuries.....	2	1	3	0	2	8
Total.....	30	32	59	70	160	351

Table 19

HEALTH UNIT MONTHLY STATISTICS
Ottawa Bureau Medical Services Civil Service Health Division
Calendar Year-1963

	Total	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
Number of Personnel Under Supervision													
Number of Health Units in Operation		36,940	37,671	37,694	38,048	38,409	39,351	37,605	37,769	37,699	37,615	37,420	37,671
		27	27	27	28	28	28	28	28	28	28	28	28
Number of Visits													
Total	184,538	18,366	16,947	17,500	14,443	16,396	14,434	14,636	12,994	14,719	15,440	14,268	14,395
First Visit	134,333	13,814	12,656	13,019	10,289	11,426	10,295	10,746	9,345	10,884	10,946	10,202	10,711
Repeat Visit	50,205	4,552	4,291	4,481	4,154	4,970	4,139	3,890	3,649	3,835	4,494	4,066	3,684
Visits by Sex													
Total	184,538	18,366	16,947	17,500	14,443	16,396	14,434	14,636	12,994	14,719	15,440	14,268	14,395
Males	94,703	9,295	8,701	9,075	7,397	8,334	7,439	7,524	6,683	7,642	7,407	7,529	7,677
Females	89,835	9,071	8,246	8,425	7,046	8,062	6,995	7,112	6,311	7,077	8,033	6,739	6,718
Nature of Visits													
Total	184,538	18,366	16,947	17,500	14,443	16,396	14,434	14,636	12,994	14,719	15,440	14,268	14,395
Illness	83,272	7,464	7,074	7,623	6,978	7,774	6,904	6,997	6,265	6,572	7,097	6,363	6,191
Accident	15,664	1,306	1,170	1,101	1,162	1,649	1,500	1,497	1,147	1,259	1,414	1,205	1,253
Consultations	14,680	1,224	1,042	1,045	1,194	1,507	1,288	1,301	1,220	1,337	1,399	1,124	999
Return-to-work Visits	70,922	8,372	7,661	7,731	5,109	5,496	4,742	4,841	4,362	5,551	5,530	5,575	5,952
Classification of First Visits													
Total	134,333	13,814	12,656	13,019	10,289	11,426	10,295	10,746	9,345	10,884	10,946	10,202	10,711
Respiratory	41,923	4,815	4,758	6,034	3,220	2,832	1,944	1,846	1,929	3,656	3,256	3,339	4,294
Digestive	19,823	2,167	1,851	1,421	1,450	1,664	1,780	2,086	1,823	1,382	1,503	1,456	1,240
Skin and Cellular	9,170	741	648	665	690	871	1,123	1,118	760	640	716	598	600
Menstrual Disorders	5,197	541	446	378	400	533	491	480	395	388	465	358	322
Emotional Disorders	2,685	248	216	195	190	252	228	218	216	229	265	226	202
Contagious Diseases	139	13	16	17	15	16	11	15	6	5	8	10	7
Accidents — Non-industrial	7,127	620	552	483	540	719	728	790	538	559	595	471	532
Accidents — Industrial	5,084	477	448	401	393	505	410	394	338	418	481	406	413
Ill-defined and All Others	43,185	4,192	3,721	3,425	3,391	4,034	3,580	3,799	3,340	3,607	3,657	3,338	3,101
Disposal													
Total	184,538	18,366	16,947	17,500	14,443	16,396	14,434	14,636	12,994	14,719	15,440	14,268	14,395
Sent Home	5,466	510	540	637	443	444	352	407	400	478	425	437	393
Returned to Work	179,072	17,856	16,407	16,863	14,000	15,952	14,082	14,229	12,594	14,241	15,015	13,831	14,002
Referrals													
Total	10,352	1,091	878	798	818	996	867	927	812	753	946	750	716
Referred to Medical Centre	1,937	207	171	133	175	181	176	167	148	156	168	137	118
Referred to Family Physician	7,016	785	624	569	542	692	559	650	571	518	571	474	461
Referred to Community Agencies	1,399	99	83	96	101	123	132	110	93	79	207	139	137

Table 20

IMMIGRATION MEDICAL SERVICE

SUMMARY OF ACTIVITIES

Fiscal Year 1963-64

Canada

Immigrants medically examined and/or inspected	97,287
Non-immigrants medically examined and/or inspected	243,245
Certifications as "prohibited" under Sec. 5 (a) and (b) of the Immigration Act ..	178
Certifications as physically defective under Sec. 5 (c)	3,889

Overseas

Prospective emigrants medically examined	107,111
British Isles	40,263
Continent of Europe	61,279
Asia	5,569
Certifications as "prohibited" under Sec. 5 (a) (b) (i) (j) and (s) of the Immigration Act	2,742
Certifications as physically defective under Sec. 5 (c)	14,641

All Other Countries

Medically prescreened at Ottawa	32,538
Certifications as prohibited under Sec. 5 (a) and (b) of the Immigration Act	393
Certifications as physically defective under Sec. 5 (c)	4,577

Table 21

SICK MARINERS SERVICE

STATEMENT OF DISEASES AND INJURIES TREATED

Fiscal Year 1963-64

Tuberculosis of respiratory system	25
Tuberculosis other forms	1
Syphilis and its sequelae	83
Gonococcal infection	914
Dysentery all forms	20
Other infective diseases commonly arising in intestinal tract	5
Certain diseases common among children:	
Chicken pox	3
Mumps	7
Whooping cough	2
Malaria	5
Diseases due to helminths	61
All other diseases classified as infective and parasitic	940
Benign neoplasms	304
Malignant neoplasms and others	103
Allergic disorders	735
Thyroid gland	62
Diabetes mellitus	145
Avitaminosis	145
Anaemias	504
Psychoneuroses and psychoses	644
Vascular lesions	39
Diseases of eyes	631
Diseases of ear and mastoid process	1,899
Rheumatic fever	15
Chronic rheumatic heart disease	7
Arteriosclerotic and degenerative heart	713
Hypertensive disease	454
Diseases of veins	1,134
Acute naso-pharyngitis and hypertrophy of tonsils and adenoids	3,164
Influenza	1,362
Pneumonia	479
Bronchitis	1,629
All other respiratory diseases	1,850
Diseases of stomach and duodenum	2,145
Appendicitis	177
Hernia of abdominal cavity	307
Diarrhoea and enteritis	421
Diseases of gall bladder and bile duct	139
Other diseases of digestive system	6,908
Nephritis and nephrosis	135
Diseases of genito-urinary system	1,987
Boils, abscesses, cellulitis and other skin infections	2,683
Other diseases of the skin	1,514
Arthritis and rheumatism	1,710
Disease of bones and other organs of movement	644
Congenital malformations	24
Other specified and ill-defined diseases	2,864
Occupational accidents and occupational poisonings	571
Accidents and poisonings, not specified as occupational	4,845
Total	<u>45,158</u>

Table 22

SICK MARINERS SERVICE
Revenue, Expenditure and Deficit Classified According to Type of Vessel
Calendar Year-1963

Classification of Vessel	Revenue	Expenditure	Deficit or Surplus	Deficit or Surplus Expressed as Percentage of Revenue
Foreign-going.....	\$576,200.10	\$486,558.71	\$ 89,641.39 (S)	15% (S)
Coasting.....	9,183.41	5,824.90	3,358.51 (S)	36% (S)
Fishing.....	16,682.36	335,697.26	319,014.90 (D)	1,912% (D)
Additional Expenditure not Classified as to Type of Vessel.....		5,174.57	5,174.57	
Total.....	602,065.87	833,255.44	231,189.57 (D)	38% (D)

Table 23

SHIPS BOARDED BY QUARANTINE OFFICERS
ORGANIZED QUARANTINE STATIONS — 1963-64

Station	Vessels Inspected	Personnel Inspected				Port Totals
		Crew	Passengers	Stowaways	Others	
Halifax, N.S.....	716	49,664	43,839	5		93,508
Sydney, N.S.....	100	3,746	512			4,258
Saint John, N.B.....	379	15,285	449	16	7	15,757
St. John's, Nfld.....	355	17,761	230	1		17,992
Quebec, P.Q.....	2,789	149,806	72,588	28	45	222,467
Vancouver, B.C.....	865	12,309	13,251		2	25,562
Victoria, B.C.....	892	34,327	412	4	2	34,745
Total.....	6,096	282,898	131,281	54	56	414,289

Table 24
SHIPS INSPECTED — UNORGANIZED PORTS 1963-64

Station	Vessels Inspected	Personnel Inspected			Total Personnel Inspected
		Crew	Passengers	Stowaways	
Annapolis Royal, N.S.	1	22			22
Argentia, Nfld.	3	77			77
Baddeck, N.S.	8	270			270
Bathurst, N.B.	8	217			217
Battle Harbour, Nfld.	2	30			30
Bay Bulls, Nfld.	1	51			51
Bay Roberts, Nfld.	3	68	4		72
Bell Island, Nfld.	35	1,495	6		1,501
Botwood, Nfld.	44	1,643			1,643
Bridgewater, N.S.	11	288			288
Campbellton, N.B.	3	66			66
Caraquet, N.B.	2	33			33
Carmanville, Nfld.	4	111			111
Chandler, P.Q.	1	31			31
Charlottetown, P.E.I.	3	77			77
Chatham, N.B.	9	244	4		248
Churchill, Man.	51	1,914	7		1,921
Clareville, Nfld.	2	71			71
Coal Harbour, B.C.	1	27			27
Cornerbrook, Nfld.	18	732	14		746
County Harbour, N.S.	1	23			23
Dalhousie, N.B.	36	1,400	25		1,425
Digby, N.S.	2	55			55
Georgetown, P.E.I.	4	101			101
Hantsport, N.S.	1	22			22
Harbour Grace, Nfld.	49	897			897
Hare Bay, Nfld.	19	531	3		534
Holyrood, Nfld.	14	620			620
Indian Bay, Nfld.	17	482			482
Kitimat, B.C.	44	1,749	48		1,797
Little Narrows, N.S.	3	106			106
Liverpool, N.S.	15	518	11		529
Louisbourg, N.S.	1	24			24
Matane, P.Q.	1	22			22
Moncton, N.B.	2	62	1		63
Montague, P.E.I.	3	80			80
Newcastle, N.B.	12	346			346
Ocean Falls, B.C.	3	110	8		118
Parrsboro, N.S.	7	172			172
Pictou, N.S.	2	45			45
Port Alberni, B.C.	21	777	4		781
Port Alice, B.C.	12	480	1		481
Port Hawkesbury, N.S.	46	1,617	14	1	1,632
Port Hope Simpson, Nfld.	2	58			58
Port McNeil, B.C.	7	286			286
Port Simpson, B.C.	1	44			44
Prince Rupert, B.C.	51	1,777	125		1,902
Pugwash, N.S.	3	91			91
Quatsino, B.C.	13	546			546
Richibucto, N.B.	4	116			116
Souris, P.E.I.	1	25			25
Ste. Anne, P.Q.	1	32			32
St. John's, Nfld.	3	114			114
St. Peters, N.S.	1	26			26
St. Pierre, P.Q.	1	50			50
Summerside, P.E.I.	7	173	1		174
Tahsis, B.C.	17	590	10		600
Toquart Bay, B.C.	19	767			767
Weymouth, N.S.	3	57			57
Windsor, N.S.	1	19			19
Yarmouth, N.S.	3	54	17		71
Total	663	22,531	303	1	22,835

Table 25

INSPECTION OF AIRCRAFT SUBJECT TO QUARANTINE — 1963-64

Airport	No. of Aircraft	No. of Crew	No. of Passengers	Total Persons
Ancienne Lorette, P.Q.	1	9		9
Bagotville, P.Q.	4	39	64	103
Calgary, Alta.	69	601	4,247	4,848
Dorval, P.Q.	3,623	35,076	248,271	283,347
Edmonton, Alta. (including Industrial and Namao Airports)	209	1,909	12,737	14,646
Fredericton, N.B.	22	163	1,139	1,302
Frobisher, N.W.T.	6	33		33
Gander, Nfld.	1,732	15,215	111,571	126,786
Goose Bay, Nfld.	409	3,028	21,460	24,488
Greenwood, N.S.	97	1,865	256	2,121
Halifax, N.S.	243	2,276	21,456	23,732
Malton, Ont.	1,144	10,075	95,012	105,087
Moncton, N.B.	37	309	1,616	1,925
Ottawa, Ont.	99	1,137	2,791	3,928
Seven Islands, P.Q.	5	26	14	40
Stephenville, Nfld.	18	147	683	830
Summerside, P.E.I.	83	1,273	209	1,482
Sydney, N.S.	24	183	1,661	1,844
St. John's Nfld.	11	85	146	231
Trenton, Ont.	514	4,614	16,572	21,186
Vancouver, B.C.	547	5,008	35,921	40,929
Windsor, Ont.	52	367	2,880	3,247
Winnipeg, Man.	158	1,601	15,388	16,989
Total	9,107	85,039	594,094	679,133

Table 26

**MEDICAL SERVICES FACILITIES
(Canada)**

Region	Province	Facilities							
		Hospitals			Clinics	Nursing Stations		Health Centres	Health Stations
		No.	Rated	Capacity Bassinets		No.	Rated Bed Capacity		
Eastern	Nova Scotia.....				2			2	
	New Brunswick.....				1			3	
	Newfoundland.....				2				
	Quebec.....				4	6	24	16	9
	Ontario.....	2	180	9	7			11	
	N.W.T.....	1	19	2	2	2	8		7
	Total.....	3	199	11	18	8	32	32	16
Central	Ontario.....	1	70	5	1	5	20	5	
	Manitoba.....	4	218	14	6	11	44	6	4
	N.W.T.....					4	16		
	Total.....	5	288	19	7	20	72	11	4
Sask.	Saskatchewan.....	2	141	13	3	2	8	10	10
Foothills	Alberta.....	3	566	16	3	3	12	11	1
	Yukon.....	1	120	30	1	2	8	4	1
	N.W.T.....	1	100	12	4	9	39	3	6
	Total.....	5	786	58	8	14	55	18	8
Pacific	B.C.....	3	527	8	6			12	3
	Grand Total.....	18	1,941	109	42	44	179	83	41

Table 27
MEDICAL FACILITIES BY REGION, ZONE AND PROVINCE
Department of National Health and Welfare

ADMINISTRATION AREAS			FACILITIES				
REGION and REGIONAL OFFICE	ZONE and ZONE OFFICE	PROVINCE	HOSPITAL	CLINIC	NURSING STATION	HEALTH CENTRE	HEALTH STATION
Eastern (Ottawa)	Atlantic (Halifax)	Nova Scotia		Halifax Sydney		Eskasoni Shubenacadie	
		New Brunswick		Saint John		Big Cove Chatham Kingsclear	
		Newfoundland		Gander St. John's			
	Quebec (Montreal)	Quebec (Northeast)		Caughnawaga Dorval Montreal Quebec	Fort Chimo	Bersimis Mistassini Pointe Bleue Restigouche Romane Shefferville Seven Islands St. Regis	George River Koartak Mingan Natashquan Payne Bay Wakeham Bay
	James Bay (Moose Factory)	Quebec — Ontario (Northwest) (North)	Moose Factory	James Bay	Great Whale River Paint Hills Port Harrison Povungnituk Rupert House	Albany Fort George Sugluk	Belcher Island Eastmain Ivuvik
	Ottawa (Ottawa)	Quebec (West)				Amos Maniwaki Manowan Obedjiwan Waswanipi	Rapid Lake
	Southern Ontario (Toronto)	Ontario (South and East)	Lady Willingdon	Fort Erie Malton Muncey Ohsweken Toronto		Chippawa Hill Christian Island Deseronto Orillia Peterborough Walpole Island	

Table 27 (Cont'd)

MEDICAL FACILITIES BY REGION, ZONE AND PROVINCE
Department of National Health and Welfare

	Manitowaning											
	Northern Ontario (Ottawa)	Ontario (North)	Frobisher Bay	Frobisher Bay Pangnirtung	Cape Dorset Foxe	Chapleau Parry Sound Sault Ste. Marie Sturgeon Falls Temiskaming						
Eastern (Ottawa)	Eastern Arctic (Ottawa)	Northwest Territories (Franklin District)									Arctic Bay Clyde River Igloodik Lake Harbour Padloping Pond Inlet	
	Sioux Lookout (Sioux Lookout)	Ontario (Northwest)	Sioux Lookout Sioux Lookout	Sioux Lookout	Lac Seul Lansdowne House Pikangikum Sandy Lake Big Trout Lake	Fort Francis Kenora Nakina Pickle Lake Port Arthur						
	Southern Manitoba (Winnipeg)	Manitoba (South)	Fisher River Fort Alexander	Fisher River Pine Falls	Little Grand Rapids Little Saskatchewan	Berens River Brandon Dauphin Elphinstone Portage la Prairie Sandy Bay						
	Norway House (Norway House)	Manitoba (East)	Norway House	Norway House	Cross Lake Garden Hill God's Lake Narrows Oxford House St. Theresa Point						Poplar River	
Central (Winnipeg)	The Pas (The Pas)	Manitoba (North)	Clearwater Lake	The Pas	Lynn Lake Nelson House Pukatawagan Split Lake						Brocket Shamattawa South Indian Lake	
	Central Northern (Churchill)	Northwest Territories (Keewatin District)		Churchill	Baker Lake Coral Harbour Eskimo Point Rankin Inlet							
	(Region)	Manitoba		Central Region								

Table 27 (Cont'd)
MEDICAL FACILITIES BY REGION, ZONE AND PROVINCE
Department of National Health and Welfare

ADMINISTRATION AREAS			FACILITIES				
REGION and REGIONAL OFFICE	ZONE and ZONE OFFICE	PROVINCE	HOSPITAL	CLINIC	NURSING STATION	HEALTH CENTRE	HEALTH STATION
Saskatchewan (Regina)	Fort Qu'Appelle (Fort Qu'Appelle)	Saskatchewan (South)	Fort Qu'Appelle	Fort Qu'Appelle		Broadview Kamsack Punnichy Rose Valley White Bear	
	North Battleford (North Battleford)	Saskatchewan (West)	North Battleford	North Battleford		Meadow Lake Onion Lake	Ministikwan Mosquito Patuanak Poundmaker Waterben
	Prince Albert (Prince Albert)	Saskatchewan (East)		Prince Albert	Fort a la Corne Pelican Narrows	La Ronge Shellbrook Uranium City	Montreal Lake One Arrow Red Earth Sandy Lake Stanley Mission
Foothills (Edmonton)	Northern Alberta (Edmonton)	Alberta (North)		Hobbema	Fort Chipewyan Good Fish Lake Hay Lake	Bonnyville Driftpile Edmonton Fort Vermilion High Prairie Saddle Lake	Fox Lake
	Southern Alberta (Calgary)	Alberta (South)	Blackfoot Blood	Gleichen		Calgary Cardston Peigan Rocky Mountain House Stony	
	(Region)	Alberta	Charles Cammell	Edmonton			

Table 27 (Concl'd)

MEDICAL FACILITIES BY REGION, ZONE AND PROVINCE

Department of National Health and Welfare

			Inuvik	Fort Simpson Fort Smith Inuvik Rae	Aklavik Cambridge Bay Coppermine Fort Good Hope Fort Liard Fort McPherson Fort Norman Spence Bay Tuktoyaktuk	Fort Resolution Hay River Yellowknife	Back River Fort Franklin Gjoa Haven Lac La Martre Perry River Sachs Harbour
Foothills (Edmonton)	Mackenzie (Edmonton)	Northwest Territories (Mackenzie District)					
	Yukon (Whitehorse)	Yukon Territory	Whitehorse	Whitehorse	Old Crow (Y.T.) Watson Lake	Dawson Haines Junction Mayo Whitehorse	Ross River
	Vancouver	British Columbia (Southwest)		Vancouver Victoria			
Pacific (Vancouver)	Coqualeetza (Sardis)	British Columbia (South)	Coqualeetza	Alexis Creek Sardis Williams Lake		Kamloops Lilloett Mount Currie	Merritt
	Nanaimo (Nanaimo)	British Columbia (West)	Nanaimo			Alert Bay Bella Bella Duncan Tofino	
	Miller Bay (Prince Rupert)	British Columbia (North)	Miller Bay	Miller Bay		Aiyansh Burns Lake Hazelton Massett Port Simpson	Greenville Kincolith
UNIT TOTAL			18	42	44	83	41

DOMINION COUNCIL OF HEALTH

The Dominion Council of Health advises the Minister on matters relating to the health of the people of Canada. It also plays a co-ordinating role in respect to the health programs of the provinces and between the federal and provincial health authorities.

During the past year the Dominion Council of Health met on two occasions and considered many matters of current concern in the field of public health. In particular, a full-scale discussion took place at the spring meeting on the subject of smoking and health, which resulted in the formation of plans for a Federal-Provincial Conference on Smoking and Health. This Conference took place later in the year. At the fall meeting, the Fifth and final Report of the Advisory Committee on Live Poliovirus Vaccine was presented, and Dr. M.K. Afridi, who holds a senior position in the Pakistan Government, discussed the training of overseas health personnel in Canada.

Among other matters of interest which were discussed at both meetings were the control measure for the safe use of X-rays in medical and industrial applications; fallout levels in Canada; proposals for dealing with radiation accidents or incidents; a report on the experience of the treatment scheme for the restoration of vision to recipients of the Blindness Allowance; dangers associated with pesticides; studies on measles vaccine; deaths from smallpox vaccination; and fluoridation of communal waters as a means of preventing dental caries. In connection with the last mentioned item, Council passed a resolution endorsing statements made by the Canadian Dental Association and the Canadian Public Health Association.

Progress reports of the various Advisory Committees to the Council were presented at both the spring and fall sessions.

WELFARE BRANCH

INTRODUCTION

During the year a major emphasis in the work of the Welfare Branch was placed on the development of the Canada Pension Plan and very substantial progress was made in a number of other Departmental programs.

The Old Age Security benefit, and the maximum allowances payable under Old Age Assistance, Disabled Persons Allowances and Blind Persons Allowances were raised from \$65 to \$75 monthly from October 1st, 1963.

The Youth's Allowances Program was announced on March 16 by the Minister of Finance, in his budget speech.

Close attention was directed during the year to means of improving and co-ordinating the four federal-provincial assistance programs of Unemployment Assistance, Old Age Assistance, Blind Persons Allowances and Disabled Persons Allowances. As a result of federal-provincial conferences in September and November 1963, a federal-provincial working group was appointed to review the operation of all joint welfare programs, in preparation for further discussion by ministers. In mid-February 1964, the provincial Deputy Ministers of Welfare and other welfare officials met in Ottawa under the chairmanship of the federal Deputy Minister of Welfare. Plans for a meeting of the Ministers of Welfare, to be held later in 1964, to discuss the issues in public assistance identified by the working group had been completed before the end of the fiscal year.

Continuing the planned development which had commenced in 1963, the Welfare Grants Program offered increased assistance toward expanding and strengthening welfare services in Canada. Direct grants in the form of graduate fellowships and scholarships, payments to Canadian schools of social work, and contributions to welfare research projects accounted for 55 per cent of total program expenditures during the year. The remainder constituted the federal share of provincially administered general welfare, bursary, training grant, and staff development. A sum of \$1,000,000 has been provided in the estimates for the program in 1964-65.

The development of the five Emergency Welfare Services — Emergency Clothing, Emergency Lodging, Emergency Feeding, Registration and Inquiry, and Personal Services — throughout Canada continues to be the pivotal point of the Emergency Welfare Division's activities. During the year several natural disasters in Canada demonstrated the need for emergency welfare services and emphasized the importance of preparedness.

Members of the Department represented Canada at meetings of the Social Commission of the United Nations in New York in May and of the Executive Board of UNICEF in New York in June and Bangkok in January 1964, as well as participating in and helping to prepare for other meetings in the international

welfare field and assisting the External Aid Office through advice on, and the carrying out of projects in, the welfare field.

The annual allocation under the Fitness and Amateur Sport Act was increased from \$1,000,000 to \$2,000,000 and the program was substantially expanded through increased aid to fitness and amateur sport organizations, to provincial programs and to the development of training, research and informational programs.

THE CANADA PENSION PLAN

The Canada Pension Plan is designed to extend social insurance protection to people in retirement, to widows, orphans and the disabled. It will be a basic part of Canada's social security system.

Work on the development of the plan engaged a very considerable amount of staff time in this and other federal agencies. In April 1963, a task force was constituted of representatives from this Department and the Departments of National Revenue, Finance, Justice, Insurance, and Labour, and the Unemployment Insurance Commission with the responsibility to draft legislation for the plan. Within the Department of National Health and Welfare, significant contributions were made to the work of the task force by a variety of divisions, most notably, the Research and Statistics, Legal and the Family Allowances and Old Age Security Divisions.

In July 1963, the first resolution concerning the plan was debated by Parliament and a white paper was tabled which outlined the scope of the government's proposals. In the white paper the government pointed out that adequate levels of pensions cannot be realistically achieved in a country like Canada simply by increasing the flat-rate pension. Living costs vary greatly between town and country and between different regions of Canada. What people need, if either retirement or the death or the disablement of the head of the family removes their regular income, is related in part to the level of earnings to which they have been accustomed. It was further noted that since within the provisions of the British North America Act welfare responsibilities are divided between the federal and the provincial authorities, a full program of social insurance providing benefits for survivors and disabled persons of all ages was a matter which would require full consultation and discussion with the provinces.

During the balance of 1963-64, pensions were discussed at four federal-provincial conferences with the aim of developing a plan which would meet as fully as practicable the various viewpoints and interests of the federal and provincial governments. The Federal Government entered into this consultation prepared to make adjustments to its proposals provided that the fundamental purposes of its pension plan were achieved and a number of modifications were made accordingly.

On March 17th, the Minister of National Health and Welfare introduced in the House of Commons a resolution "to establish a comprehensive program of old age pensions in Canada payable to contributors and survivors at any age after 65". A further white paper was also presented describing the revised plan.

Subsequent to the end of fiscal year 1963-64, agreement was reached that

the programs of the federal and provincial jurisdictions would be so similar that the result would be a uniform system of old age survivors and disability insurance across the country. The overall purpose of the Canada Pension Plan will be "to make reasonable minimum levels of income available on normal retirement ages, and to people who become disabled and to dependents of people who die". It will include pensions for retired or disabled workers, widows' pensions, benefits for widowed mothers, pensions for disabled widows and widowers, orphans, benefits and death benefits. Care has been taken to provide scope for the continuation and extension of private pension plans to provide benefits over the minimum levels.

OLD AGE SECURITY

Old Age Security is a universal pension payable to all persons age 70 and over who meet residence requirements

Effective October 1, 1963, the Old Age Security pension was increased from \$65 to \$75 monthly.

The total amount paid to Old Age Security recipients during the year was \$808,391,300, an increase of approximately \$74,000,000 or 10.1 per cent from the previous year. As of March 1964, 971,801 persons were receiving Old Age Security pensions.

It was necessary in respect of 18,232 recipients to pay the pension to a trustee appointed to administer the funds of a pensioner who was incapable of looking after his own affairs.

Corresponding to the increase in Old Age Security payments, the Old Age Security tax on individual incomes was increased from 3 to 4 per cent and the maximum payable was raised from \$90 to \$120 per annum effective January 1, 1964. This tax along with a tax on corporation income and a sales tax are paid into the Old Age Security Fund against which pension disbursements are charged.

To qualify for a pension upon reaching age 70, a person must have resided in Canada for ten years immediately preceding approval of his application or, if he has not so resided, must have been actually present in Canada prior to that ten-year period for twice as long as he was absent during it and must have resided in Canada at least one year immediately preceding approval of his application.

Payment of the pension may be continued for any period of absence from Canada if the pensioner has resided in Canada for at least twenty-five years after attaining the age of twenty-one; if he has not, it may be continued for six months, exclusive of the month of departure from Canada. In March, 1964, payment was being made under these provisions to 9,335 persons outside Canada, 9,163 of whom were entitled to indefinite payment outside the country. Among the 9,335 being paid while abroad, approximately 6,000 were in the United States and 1,500 in Great Britain.

The program is administered through regional offices situated in the capital city of each province.

Table 28
STATISTICS ON OLD AGE SECURITY

Province	No. of Pensioners in Pay March, 1963	Net Payment for March, 1963 Only	No. of Pensioners in Pay March, 1964	Net Payment for March, 1964 Only	Total Net Payment for Fiscal Year Ended March 31, 1963	Total Net Payment for Fiscal Year Ended March 31, 1964
Newfoundland.....	18,184	\$ 1,187,870	18,477	\$ 1,394,786	\$ 14,013,832	\$ 15,376,636
Prince Edward Island.....	7,635	497,563	7,792	585,887	5,962,922	6,493,258
Nova Scotia.....	43,583	2,850,007	44,424	3,341,792	33,817,492	37,063,710
New Brunswick.....	31,935	2,091,826	32,592	2,454,900	24,858,331	27,247,749
Quebec.....	202,405	13,153,715	207,917	15,483,329	155,359,915	171,996,794
Ontario.....	344,002	22,353,866	352,004	26,346,542	265,742,644	292,547,198
Manitoba.....	57,692	3,764,685	58,850	4,425,712	44,617,405	48,874,928
Saskatchewan.....	59,690	3,903,322	60,587	4,567,285	46,334,646	50,751,907
Alberta.....	64,286	4,219,283	65,746	4,967,257	49,787,140	54,835,096
British Columbia.....	120,678	7,863,991	122,732	9,214,863	93,362,860	102,639,328
Yukon and N.W.T.....	676	43,655	680	50,770	524,445	564,696
NATIONAL.....	950,766	61,929,783	971,801	72,833,123	734,381,632	808,391,300

FAMILY ALLOWANCES

Effective March, 1964, 2,711,272 families were receiving Family Allowances on behalf of 6,736,157 children, i.e., approximately one-third of the total population of Canada. Net payments for the year were \$538,312,224. Overpayments outstanding at the end of the year totalled \$198,038.

Family Allowances are payable in respect of every child under the age of sixteen years who has been registered for the allowances, is resident in Canada, is maintained by a parent or other person and, if of school age, is in regular attendance at school. Payment is made by cheque each month, normally to the mother, although any person or recognized child-placing agency (not including an institution) by whom the child is maintained may be paid the allowance on his behalf. Allowances are paid at the monthly rate of six dollars for each child under ten years of age and eight dollars for each child aged ten or over but under sixteen years of age. The program is administered through regional offices situated in the capital city of each province.

Welfare personnel maintain liaison with public and private agencies and institutions in the child-care field. They also examine reports of misuse of Family Allowances to determine whether an administrator should be appointed. At the end of the year there were 361 cases where allowances were being administered by someone other than the person who would ordinarily be the recipient.

Data on the number of families according to the number of children in each being paid Family Allowances in March, 1964, are shown below.

<i>Number of Children in the Family</i>	<i>Families</i>	
	<i>Number</i>	<i>Per Cent</i>
1	867,894	32.01
2	784,424	28.93
3	502,449	18.53
4	275,845	10.17
5	137,089	5.06
6	70,017	2.58
7	36,028	1.33
8	19,529	0.72
9	9,848	0.36
10 or more	8,149	0.30

The Family Allowances Division also administers a Family Assistance program which provides assistance at the same rates as Family Allowances for children ineligible for Family Allowances during their first year in Canada. The administration of Family Assistance was formerly a function of the Department of Citizenship and Immigration, which still provides the funds for payment of these grants. There were 21,094 children for whom Family Assistance was being paid at March 31, 1964. Payments for the month of March 1964 totalled \$153,431.

Table 29

COMPARATIVE STATEMENT OF FAMILY ALLOWANCES PAYMENTS
BETWEEN MONTH OF MARCH 1963 AND MONTH OF MARCH 1964

Province	Month of March 1963				Month of March 1964			
	Families Receiving		Children Receiving	Amount Paid	Families Receiving		Children Receiving	Amount Paid
	Number	Average Allow. per Family			Number	Average Allow. per Family		
Newfoundland	66,657	\$20.80	207,120	\$ 1,386,797	67,635	\$20.75	209,180	\$ 1,403,285
Prince Edward Island	14,344	18.99	40,423	272,324	14,377	19.05	40,524	273,921
Nova Scotia	106,018	17.14	271,476	1,816,784	105,754	17.20	271,336	1,818,491
New Brunswick	83,272	19.33	239,507	1,609,944	82,711	19.29	237,093	1,595,942
Quebec	752,413	17.87	1,999,894	13,444,428	766,364	17.74	2,017,190	13,595,588
Ontario	939,314	15.44	2,172,643	14,506,311	949,955	15.56	2,209,982	14,778,201
Manitoba	132,937	16.07	319,564	2,136,842	133,105	16.17	321,413	2,151,814
Saskatchewan	131,066	16.89	331,394	2,213,364	131,240	16.97	333,051	2,226,866
Alberta	208,646	16.29	509,805	3,398,385	211,105	16.47	519,140	3,476,866
British Columbia	239,496	15.40	550,380	3,689,123	242,789	15.51	561,174	3,766,285
Yukon and N.W.T.	6,582	17.03	17,674	112,083	6,237	17.21	16,074	107,352
NATIONAL	2,680,745	16.63	6,659,880	44,586,385	2,711,272	16.67	6,736,157	45,194,611

Table 30

NET FAMILY ALLOWANCES PAYMENTS — COMPARISON BY FISCAL YEARS

Province	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
Newfoundland	\$ 11,038,875	\$ 11,497,719	\$ 11,967,775	\$ 12,414,789	\$ 12,881,415	\$ 14,131,153
Prince Edward Island	2,522,830	2,558,097	2,590,704	2,621,722	2,640,585	2,824,311
Nova Scotia	16,297,170	16,716,374	17,147,920	17,596,685	17,973,392	19,400,494
New Brunswick	14,287,535	14,700,819	15,073,324	15,451,544	15,779,360	17,074,970
Quebec	107,084,124	111,441,302	116,057,182	120,389,838	124,368,344	136,080,634
Ontario	98,303,868	104,409,819	110,492,480	116,604,314	122,539,123	136,706,313
Manitoba	17,283,660	17,979,854	18,705,349	19,418,713	19,888,717	21,520,779
Saskatchewan	19,723,352	20,244,540	20,894,790	21,401,114	21,644,971	23,241,829
Alberta	22,575,584	23,958,081	25,390,585	26,752,793	27,953,311	31,029,720
British Columbia	24,399,859	25,904,496	27,405,872	29,097,077	31,029,472	34,969,036
Yukon and N.W.T.	680,828	702,801	739,983	986,437	819,150	907,321
NATIONAL	334,197,685	350,113,902	366,465,964	382,535,026	397,517,840	437,886,560

Province	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
Newfoundland	\$ 15,162,900	\$ 15,566,372	\$ 15,960,416	\$ 16,336,849	\$ 16,562,083	\$ 16,747,021
Prince Edward Island	2,994,334	3,062,692	3,124,017	3,204,881	3,259,952	3,274,057
Nova Scotia	20,560,462	20,932,794	21,241,829	21,623,655	21,838,772	21,790,680
New Brunswick	18,201,518	18,588,795	18,877,745	19,222,615	19,340,514	19,198,184
Quebec	146,278,435	150,462,531	154,185,288	157,712,911	160,299,079	162,172,423
Ontario	150,186,253	156,681,500	162,610,724	168,442,100	172,711,354	175,544,729
Manitoba	23,091,594	23,730,765	24,384,595	25,065,334	25,523,719	25,727,440
Saskatchewan	24,789,278	25,363,936	25,848,509	26,313,109	26,539,801	26,650,259
Alberta	34,122,637	35,765,854	37,365,329	38,928,125	40,315,733	41,227,721
British Columbia	38,409,308	39,984,176	41,433,470	42,687,279	43,834,184	44,712,129
Yukon and N.W.T.	990,349	1,074,944	1,159,725	1,244,335	1,341,158	1,267,581
NATIONAL	474,787,068	491,214,359	506,191,647	520,781,193	531,566,349	538,312,224

UNEMPLOYMENT ASSISTANCE

The Unemployment Assistance Act, as passed in 1956 and amended in 1957, provides that the Federal Government may enter into an agreement with any province to contribute fifty per cent of the assistance payments made by the province and its municipalities to persons and their dependents who are unemployed and in need. All provinces and territories have signed agreements under the Act.

Total payments under the program for the year were \$106,480,176, a 10.6 per cent increase from the previous year's total of \$96,244,796. The average number of recipients per month during 1963-64 increased 5.9 per cent, from approximately 653,533 per month in 1962-63 to 692,251 per month in 1963-64.

Those covered by the federal-provincial unemployment assistance agreements are persons provided for under programs variously known in the different provinces as social assistance, social allowances, social aid or general welfare assistance. The rates of aid granted and the conditions of eligibility in these programs are set by the provinces and, to some extent, by their municipalities. Payments to both employable and unemployable persons are shareable under the agreements, as are the costs of maintaining persons in "homes of special care" such as nursing homes and homes for the aged. Travelling expenses of persons receiving assistance are also shareable when paid for purposes specified in the agreements.

The Federal Government also shares in additional assistance paid to needy persons in receipt of old age security pensions, old age assistance, blind persons allowances, disabled persons allowances and unemployment insurance benefits, where the amount of the assistance paid is determined through an assessment of the recipient's basic requirements, as well as his financial resources.

The agreements do not cover payments to recipients of mothers' allowances nor expenditures made for medical, hospital, nursing, dental and optical care, drugs and dressings, funeral expenses and costs of administration.

The growth in expenditures under the unemployment assistance program from 1956 to the end of the past fiscal year reflects important changes that have been occurring in many aspects of the general assistance programs in the provinces. These have included the extension of coverage, the modification of conditions of eligibility, the widening of provisions for the payment of supplemental assistance to recipients of other governmental benefits, the expansion of institutional care for older persons, and the improvement of the rates of aid granted to all types of recipients.

The administration of the Unemployment Assistance Act requires close consultation with provincial welfare officials. During the year, representatives of the division travelled to all provinces for discussions on the program. Plans were also developed for the appointment of divisional field representatives in the provinces to maintain close contact with the provincial administration, to be responsible for examining the documents supporting reimbursement claims, and to work with regional representatives of the Audit Services Branch of the Department of Finance. The division was strengthened through the appointment of officers to provide consultative services in the fields of family welfare, aging and community development.

Table 31

FEDERAL-PROVINCIAL UNEMPLOYMENT ASSISTANCE AGREEMENTS: FEDERAL SHARE OF ASSISTANCE *
AND NUMBER OF PERSONS ** ASSISTED, BY PROVINCE, APRIL, JULY AND OCTOBER 1963 AND JANUARY 1964

Province	April 1963		July 1963		October 1963		January 1964	
	Federal Share Of Assistance	Number Of Persons Assisted	Federal Share Of Assistance	Number Of Persons Assisted	Federal Share Of Assistance	Number Of Persons Assisted	Federal Share Of Assistance	Number Of Persons Assisted
Newfoundland	\$393,285	66,068	\$346,252	58,801	\$412,582	65,224	\$378,934.44	61,497
Prince Edward Island	23,714	3,236	20,904	2,249	25,177	2,293	27,343.71	2,874
Nova Scotia	152,280	28,146	137,019	25,894	138,091	24,935	168,003.08	29,266
New Brunswick	189,371	42,653	125,956	28,053	126,078	27,996	155,299.09	33,054
Quebec	3,423,747	266,355	3,125,295	220,358	3,134,942	213,008	3,437,455.23	245,052
Ontario	1,987,424	136,003	1,865,995	115,860	1,941,312	117,988	2,144,109.71	142,455
Manitoba	433,515	32,127	382,650	28,078	410,030	28,475	438,150.13	31,343
Saskatchewan	437,321	43,798	355,482	37,330	337,345	34,660	419,938.85	41,310
Alberta	660,269	47,494	592,401	43,191	633,786	43,267	760,649.66	53,630
British Columbia	1,410,521	93,356	1,304,550	90,001	1,260,627	88,595	1,455,709.80	94,884
Yukon Territory	5,412	294	4,589	341	6,275	243	7,373.56	355
Northwest Territories	8,440	936	4,856	401	6,327	812	7,273.07	1,028
CANADA	9,125,299	760,466	8,265,949	650,557	8,432,572	647,496	9,400,240.33	736,748

*The amounts shown are for the months in which assistance was granted to recipients rather than the months in which the federal share was paid to the provinces.

**Includes dependents.

Table 32

FEDERAL UNEMPLOYMENT ASSISTANCE PAYMENTS TO PROVINCES

<i>Province</i>	<i>Payment</i>
Newfoundland	\$ 4,512,494
Prince Edward Island	400,033
Nova Scotia	1,790,832
New Brunswick	1,925,353
Quebec	39,439,412
Ontario	24,488,546
Manitoba	5,774,194
Saskatchewan	4,641,398
Alberta	7,979,968
British Columbia	16,262,733
Yukon Territory	59,162
Northwest Territories	96,581
CANADA	107,370,707

OLD AGE ASSISTANCE

The Old Age Assistance Act provides for federal sharing, under agreements, of 50 per cent of the amounts paid by the provinces for assistance to persons 65 to 69 years of age. In the fiscal year 1963-64, federal payments amounted to \$39,208,181. The number of recipients as at March 31, 1964 was 105,241, being 21 per cent of the population 65 to 69 years of age.

Under the authority of provincial legislation, the provinces grant and pay assistance to recipients. In order to obtain the federal share, their decisions must be made in accordance with the provisions of the federal Act.

The Act specifies \$75 a month as the maximum amount in which the Government of Canada may share. The maximum amounts of income, including assistance, allowed by the Act are \$1,260 a year in the case of an unmarried person, \$2,220 a year in the case of a married person and \$2,580 a year in the case of a married person with a blind spouse. These amounts are specified in an Act passed by Parliament in 1963 to amend the Old Age Assistance Act.

Agreements between the Government of Canada and provincial governments stipulate the amounts specified in the federal Act. As at March 31, 1964, agreements with the territorial governments had not been amended to invoke the 1963 amendments to the Act.

Federal administration of the Old Age Assistance Act is a responsibility of the Old Age Assistance, Blind Persons and Disabled Persons Allowances Division, Welfare Branch, Department of National Health and Welfare.

ALLOWANCES FOR DISABLED PERSONS

The Disabled Persons Act provides for federal sharing, under agreements, of 50 per cent of the amounts paid by the provinces for allowances to disabled persons age 18 and over. In the fiscal year 1963-64, federal payments amounted to \$20,206,543. The number of recipients as at March 31, 1964, was 51,671.

Under the authority of provincial legislation, the provinces grant and pay disability allowances to recipients. In order to obtain the federal share, their decisions must be made in accordance with the provisions of the federal Act.

The Act specifies \$75 a month as the maximum amount in which the Government of Canada may share. The maximum amounts of income allowed by the Act, including any allowance payable, are \$1,260 a year in the case of an unmarried person, \$2,220 a year in the case of a married person and \$2,580 a year in the case of a married person with a blind spouse. These amounts are specified in an Act passed by Parliament in 1963 to amend the Disabled Persons Act.

Agreements between the Government of Canada and provincial governments stipulate the amounts specified in the federal Act. As at March 31, 1964, agreements with the territorial governments had not been amended to invoke the 1963 amendments to the Act.

Federal administration of the Disabled Persons Act is a responsibility of the Old Age Assistance, Blind Persons and Disabled Persons Allowances Division, Welfare Branch, Department of National Health and Welfare. The Medical Rehabilitation Division in the Health Branch provides advisory services on the medical aspects of the program.

ALLOWANCES FOR BLIND PERSONS

The Blind Persons Act provides for federal sharing, under agreements, of 75 per cent of the amounts paid by the provinces for allowances to blind persons 18 years of age and over. In the fiscal year 1963-64, federal payments amounted to \$4,987,897. The number of recipients as at March 31, 1964, was 8,581.

Under the authority of provincial legislation, the provinces grant and pay blindness allowances to recipients. In order to obtain the federal share, their decisions must be made in accordance with the provisions of the federal Act.

The Act specifies \$75 a month as the maximum amount in which the Government of Canada may share. The maximum amounts of income allowed by the Act, including any allowance payable, are \$1,500 a year in the case of an unmarried person without a dependent child or children, \$1,980 a year in the case of an unmarried person with a dependent child or children, \$2,580 a year in the case of a married person and \$2,700 a year in the case of a married person with a blind spouse. These amounts are specified in an Act passed by Parliament in 1963 to amend the Blind Persons Act.

Agreements between the Government of Canada and provincial governments stipulate the amounts specified in the federal Act. As at March 31, 1964, agreements with the territorial governments had not been amended to invoke the 1963 amendments to the Act.

Federal administration of the Blind Persons Act is a responsibility of the Old Age Assistance, Blind Persons and Disabled Persons Allowances Division, Welfare Branch, Department of National Health and Welfare. The Medical Rehabilitation Division in the Health Branch is responsible for medical decisions.

Table 33

FEDERAL PAYMENTS TOWARDS ASSISTANCE TO THE AGED, BLIND AND DISABLED

Province	Old Age Assistance		Blind Persons Allowances		Disabled Persons Allowances	
	Number of recipients March, 1964	Payments	Number of recipients March, 1964	Payments	Number of recipients March, 1964	Payments
Alberta.....	6,644	\$ 2,559,785	465	\$ 278,014	1,815	\$ 727,595
British Columbia.....	6,864	2,781,892	551	335,593	2,319	929,723
Manitoba.....	5,436	2,105,940	383	230,264	1,518	615,287
New Brunswick.....	5,447	2,121,387	679	418,037	2,141	859,995
Newfoundland.....	5,081	1,945,021	436	246,924	1,586	587,092
Nova Scotia.....	5,509	2,084,088	775	468,866	3,108	1,229,805
Ontario.....	25,197	9,134,698	1,902	1,045,329	15,938,	6,182,921
Prince Edward Island.....	1,130	394,947	79	46,778	801	310,817
Quebec.....	38,206	13,860,075	2,855	1,642,869	20,753	8,081,258
Saskatchewan.....	5,549	2,151,490	406	246,010	1,657	669,042
Northwest Territories.....	147	56,744	46	27,214	32	10,745
Yukon Territory.....	31	12,113	4	1,999	3	2,263
NATIONAL.....	105,241	39,208,181	8,581	4,987,897	51,671	20,206,543

WELFARE GRANTS

The Welfare Grants program completed its first full year of operation on March 31, 1964, having commenced late in the fiscal year 1962-63. The allocation for 1963-64 was \$500,000, as compared to \$250,000 in 1962-63, and \$1,000,000 in 1964-65.

Designed to assist in the development and strengthening of welfare services in Canada, the program has some components administered in co-operation with the provinces on a financial matching basis, while others are directly administered by the Department with no sharing required. The general welfare, bursary, training grant and staff development provisions, which require provincial participation, together accounted for federal expenditures of \$153,792. The total cost of these projects was, therefore, double this figure. Teaching and field instruction grants, fellowships and scholarship awards and research grants, which do not require matching funds, together accounted for \$188,978.

The general welfare services provision makes funds available for a broad range of demonstration and other projects designed to strengthen and extend both public and voluntary welfare services within the provinces. Assisted projects included the assessment and rehabilitation of selected groups of general welfare assistance applicants and recipients, provincial assistance to a community in identifying welfare problems, experimental group counselling for unmarried mothers, a survey of a geographical region to determine welfare staff needs, the establishment of a provincial staff development and training service, and the strengthening of the adoption program in a particular municipality.

Bursaries may be awarded by the provinces, for graduate study at Canadian schools of social work, to applicants who have completed at least their undergraduate work with satisfactory standing, require financial help, and undertake to accept employment in welfare within the province for a prescribed period following completion of their studies. The Department made matching grants to six provinces which awarded a total of 57 bursaries.

Training grants are provided to assist the provinces with the cost of awards they make to staff members of both voluntary and government agencies who have been given leave of absence to undertake full-time graduate studies at Canadian schools of social work up to the Master's degree. Eight provinces and the Yukon Territory participated in a total of 61 individual awards.

Six provinces participated in the *Staff Development grants* which are designed to assist a wide variety of training projects for welfare personnel in both private and public agencies. This provision, under which a total of 450 individuals were assisted, has no federal restriction with respect to previous education and training.

Teaching and Field Instruction grants are available on a non-matching basis to Canadian schools of social work to assist in meeting the costs of additional staff required to cope with the increased registration stimulated by the other provisions of the program. Five graduate schools in four provinces were assisted to maintain 19 staff members.

Fellowships are awarded by the Department on a national competitive basis, for advanced study at Canadian and foreign universities, to applicants who have

demonstrated ability of a high order in administration, teaching or research in welfare work. Nine fellowships were given, of which eight were for doctoral programs, for tenure in Canada, the United States and Great Britain. Five of the successful applicants were faculty members of Canadian schools of social work, while four held senior positions in large private agencies. Fellowship awards carry a commitment to subsequent welfare employment in Canada. Some fellowship recipients return to their former posts, but others accept new and more demanding responsibilities.

Table 34

EXPENDITURE UNDER THE NATIONAL WELFARE GRANTS PROGRAM
Fiscal Year 1963-64

Province	Research	Bursaries	Fellowships and Scholarships	Training Grants	Teaching and Field Instr.	Staff Develop- ment	Welfare Services	Total
Newfoundland		600		3,579		5,173		9,352
New Scotia.....	1,667			8,109	5,522	4,961		20,259
New Brunswick	560	2,474		2,087		4,798		9,919
Quebec.....			5,858					5,858
Ontario.....	32,174*	13,889	32,189	1,514	37,545	15,545	21,005	153,861
Manitoba.....		2,325	1,328	12,865	16,817			33,335
Saskatchewan..	6,876	5,389		9,622				21,887
Alberta.....			2,009	5,585		3,779	9,379	20,752
British Columbia.....	16,675*	500	15,617	1,460	13,476	3,383	14,402	65,513
Yukon.....				1,370				1,370
Total.....	57,952	25,177	57,001	46,191	73,360	37,639	44,786	342,106

*This includes payments to schools of social work and to voluntary agencies located in the province.

Scholarships are also awarded by the Department on a national competitive basis to university graduates with high academic standing for study in Canadian schools of social work. Eleven of fourteen awards went to Master's degree candidates in their second year of graduate study, the other three to first year students. Scholarships, like fellowships, carry a commitment to subsequent employment in Canada. Both kinds of awards may be renewed on the basis of satisfactory performance. Ten fellowships and twenty scholarships will be offered for tenure during the 1964-65 academic year.

Welfare Research: Priority was given to research projects which held promise of significantly assisting in the organization, co-ordination and staffing of

welfare services and of developing new services focussed on the prevention of welfare problems and dependency. Eight were assisted, involving a federal expenditure of \$57,952. These projects were sponsored by two national voluntary agencies, four provincial departments of welfare, a school of social work and a local voluntary agency. Four had been assisted in the previous year.

Of the four new projects, two were for research designs; one related to the planning and provision of direct services for problems amongst younger women, the other to the appropriateness and effectiveness of the social welfare program in a local community. Of the two other new projects, one was a study in depth of economic dependency in a specific city, the other a study of the relationship between children's health and the various structural aspects of the families in which they live.

EMERGENCY WELFARE SERVICES

Emergency Welfare Services planning is based on the premise that preparation can reduce human and material losses in the event of disaster. Although the international situation was somewhat easier during the year, several natural disasters in Canada demonstrated the need for emergency welfare services and gave emphasis to the importance of preparedness. These disasters, the Mackenzie flood, Chicoutimi hospital fire, Sans Joachim de Tourelle landslide and the Alberni-Port Alberni earthquake tidal wave, demonstrated once again that the ability of existing welfare programs to cope with human needs in civil as well as war emergencies is related to the prior planning of emergency welfare services.

The development of the five Emergency Welfare Services — Emergency Clothing, Emergency Lodging, Emergency Feeding, Registration and Inquiry, and Personal Services throughout Canada continued to be the pivotal point of the Departmental activity carried on by Emergency Welfare Services. Liaison with the provinces was maintained through regional representatives located in British Columbia, Alberta (for the prairie provinces), Quebec, Ontario and Nova Scotia (for the Atlantic provinces).

Organization

Order-in-Council P.C. 1959/656 provides that the Department of National Health and Welfare assist the provinces, municipalities and others in planning, organizing and operating emergency welfare services.

The responsibility for development of the program has been accepted by the department of welfare in every province. Each provincial welfare department, except Prince Edward Island, employs at least one full-time emergency welfare planning officer. Appropriate senior welfare officers have been delegated the responsibility to assist the provincial and zone emergency welfare services directors in planning and organizing the five services.

Development of Plans, Policies and Procedures

Joint planning with other departments of government, to define policy and co-ordinate survival operations, has continued. Liaison has been maintained with

several professional and trade associations in Canada and the U.S.A. The Joint Canada/US Emergency Planning Committee has furthered the exchange of information and mutual understanding for the provision of emergency welfare services in both countries. The director presented a paper on "Emergency Welfare Services in Canada" at the 1963 Biennial Round Table Conference of the American Public Welfare Association in Washington, D.C. He also attended the meeting of the NATO Civil Defence Committee held at Paris in May when the appointment of a working group on emergency welfare added a welfare component to NATO.

The annual Federal-Provincial Directors' Conference, as well as a special Policy Conference of provincial and federal welfare officials called in June 1963, afforded the opportunity to review and consolidate plans, policies and procedures to insure the highest degree of uniformity possible for operations across Canada. In co-operation with the Dominion Bureau of Statistics, the Department of Social Welfare of British Columbia was assisted in a pilot "used clothing" survey at Penticton. The survey was designed to determine what used clothing and blankets might be available in the event of an emergency.

At the end of 1963-64 the federal undertaking to provide each province with operational systems including forms and equipment such as mobile feeding and clothing sorting units was 85 per cent complete. The usefulness of the mobile feeding equipment was again proven during actual disasters such as the hospital fire at Chicoutimi, Quebec. Some improvements based on experience gained in training and natural disasters were made in the design and content of this year's mobile feeding units.

Training and Training Materials

A total of 206 candidates attended courses given by the division at the Canadian Civil Defence College. This year a course given in French was attended by employees of the Department of Family and Social Welfare of the Province of Quebec. An important new trend has been the introduction of more practical operations exercises in all EWS courses. Staff members have participated in annual professional conferences and have given numerous lectures as well as assisted in training in all provinces. Correspondence courses conducted for welfare employees of the Province of Newfoundland qualified their candidates for federal staff training programs.

Four manuals were prepared, "Emergency Feeding", "Personal Services", "Manuel des Services de Bien-Etre d'Urgence pour les membres de la protection civile" and "Unité Mobile D'alimentation". A film, "Aide aux Sinistrés" and several filmstrips for use in technical training were produced and made available to the provinces. New precis have been written in French and English and many old ones revised.

Public Education

The interpretation and dissemination of public information continues to be a most important task. During the year this program was greatly expanded to ensure that sufficient informational material is available in English and French

at all times all over Canada. Advantage has been taken of the very large audiences available through the mass media of radio and television. A T.V. clip "Your Emergency Pack" and four scripts for the radio series "Your Health, Your Welfare" were produced in conjunction with Information Services. Displays have been made available at various professional and public exhibitions and conventions. Articles on Emergency Lodging and Personal Services have been written for the "EMO Digest".

Continuity of Government

Considerable progress was made in this area at the federal level by the completion of the "Departmental Readiness Plan". This document details the action to be taken by key personnel who have emergency duties in the initial stages of an emergency and the organization of the Departmental Readiness and Relocation Units from which emergency functions of the Welfare and Administration Branches would be carried out. A one-day indoctrination course was held for some 1,300 members of the Department regarding the nature of the threat, the emergency measures being taken by government, and those to be taken through personal survival planning.

Although Exercise TOCSIN 1963 was not held, data about welfare resources were collected from all provinces. During the Federal-Provincial Emergency Welfare Services Conference already noted, many aspects of the continuity of government planning regarding emergency welfare services were considered.

INTERNATIONAL WELFARE

During the year the Department continued close co-operation with and assistance to the social development activities of the United Nations.

The Director of the International Welfare Division, with a member of the division as adviser, attended the fifteenth session of the United Nations Social Commission, held in New York in April-May 1963. The Commission, in which 21 countries are represented, is responsible for giving policy guidance to the United Nations on both broad and specific aspects of social welfare.

The main item for consideration by the Commission was the 1963 "Report on the World Social Situation". The report provided a general review of social problems and programs in the past decade and showed that, despite advances in such sectors as health and education, the gap between the living standards of developed and underdeveloped countries respectively is even wider now than it was ten years ago.

The Commission also considered reports on land reform, on the first session of the United Nations Committee on Housing, Building and Planning and on community development. In addition it reviewed the social welfare activities of the United Nations in 1961-1963 and the program of work for 1963-1965. Arrangements were also studied for the establishment of the new United Nations Research Institute for Social Development, which has since been opened in Geneva with the aid of a generous financial grant from The Netherlands.

The Commission adopted ten resolutions on social development questions; these resolutions gave special attention to such matters as planning for balanced

economic and social development, the social consequences of disarmament, and advisory social welfare services, in addition to the subjects covered by the reports mentioned earlier. In a resolution co-sponsored by Canada, the Commission decided to set up an *ad hoc* working group on social welfare, to meet immediately before its sixteenth session in 1965; the Deputy Minister of Welfare will serve as Canadian representative on this group. The report of the Commission was circulated by the International Welfare Division to key English and French language welfare agencies and persons throughout Canada.

In September 1963, the directors of the International Welfare, Unemployment Assistance and Welfare Grants Divisions, together with other members of the Department, and senior representatives of a number of non-government welfare agencies, participated in a special seminar conducted in Ottawa by the United Nations. The purpose of the discussion group was to obtain Canadian viewpoints on social welfare items that will be placed before the next session of the Social Commission, and it provided opportunity for a useful exchange of views.

The Deputy Minister of Welfare and the Director of International Welfare Services represented Canada at the meeting of the 30-member UNICEF Executive Board, together with its Budget and Programme Committees, held in New York in June 1963. At this meeting \$11 million in new allocations were approved for UNICEF aid to children in developing countries.

In January 1964, the Director of the Unemployment Assistance Division, with a member of the International Welfare Division as adviser, represented Canada at the meeting of the UNICEF Executive Board and Programme Committee in Bangkok, Thailand; this was the first time that a major UNICEF meeting has been held in a developing region. In addition to approving \$21 million in allocations to new program aid, the board discussed a number of important policy items including the scope of the UNICEF program as a whole, UNICEF aid for malaria eradication and for personnel training, and relationships between UNICEF and other United Nations agencies. Points of view expressed in the discussions provided useful guidance for UNICEF in its responsibility of helping children in the underdeveloped countries.

Before and after the meeting the Canadian representatives took part in observation visits to UNICEF-assisted projects in India, The Philippines, Hong Kong and Taiwan. These visits gave first-hand knowledge of the actual problems and conditions encountered in the provision of UNICEF aid.

During the year, officers of the International Welfare Division continued to take part as members of the National Committee on Canada's Participation in Social Development Abroad. The committee's work led to the holding of a Workshop in Ottawa, in June 1963. All major areas of Canadian social welfare were represented by the more than 80 participants, who included five members of the Department. In March, 1963, the Director of International Welfare Services, together with other members of the Department, also took part in the Canadian Commission for UNESCO's Third National Conference, held in Ottawa.

In 1963-64, the Department continued co-operation with the International Social Security Association, for which it provided information and replied to

questionnaires through the Research and Statistics Division; information was also supplied in response to United Nations questionnaires on other aspects of social welfare.

Co-operation in technical assistance to developing countries was also continued throughout the year in consultation with the External Aid Office. Programs of practical observation and academic study, in various fields of social welfare, were arranged for students from Pakistan, Ceylon, Thailand, Malaya, Hong Kong, Sierra Leone, Nigeria, the Ivory Coast, Syria, Haiti, Morocco, and The Netherlands. Assistance was given in the recruitment of Canadian social welfare advisers to serve in Nigeria, and in making provision for a Canadian social defence expert to be attached to the United Nations Centre for the Prevention of Crime and Treatment of Delinquency at Tokyo, Japan.

FITNESS AND AMATEUR SPORT

The Fitness and Amateur Sport Act provides for an allocation of up to \$5,000,000 annually to encourage, promote and develop fitness and amateur sport in Canada. A total of \$2,000,000 was made available under the Act for the fiscal year 1963-64; the amount was increased to \$3,000,000 for 1964-65.

The program administered under the Fitness and Amateur Sport Act is divided into three main parts. The first consists of federal grants made directly to national organizations, for purposes of national interest, or for post-graduate training and research. The second is services provided by the Department of National Health and Welfare. The third is grants-in-aid to the provinces, to assist in the development of services at the provincial and local level, under agreements signed with the Federal Government through which \$1,000,000 is at present being made available annually.

An objective of the program has been the stimulation of additional aid from the community. Grants to both national agencies and the provinces call, through matching conditions in the case of the latter, for substantial expenditures on the part of those receiving assistance. Although there has been some tendency to suggest that the Federal Government should assume a substantially larger share of cost, there is considerable evidence of a growing view amongst the organizations receiving grants that increased revenues from public funds must be balanced by amounts raised privately if a sturdy, vital and independent growth is to be achieved.

Although the program has not yet been in operation long enough to make possible any evaluation of its long term results, there is evidence that it has already been responsible for substantial progress. Aid to the training of coaches is being reflected in considerably improved coaching methods in a number of sports. Substantial contributions have been made to assist Canadian participation in international sports events and in national competitions. Considerable impetus has been given to the advanced academic training of physical education and recreation leaders and in assistance to young people entering courses in physical education or recreation, through the bursary and scholarship program. Substantial assistance has been given to organizations such as the Y.W.C.A. and Y.M.C.A.

concerned with non-competitive fitness activities, in the undertaking of projects which have considerably enlarged and improved programs. Aid given to fitness research, and the enlistment of the services of people with expert knowledge in this field in an advisory capacity, has brought a new dimension, scope and vitality to this fundamentally important aspect of the program. Technical instructional films and other informational material being produced are filling a long felt need and one film has received the recognition of an important award.

One of the important developments to emerge from the program is the increasing acceptance of the Directorate by national sports governing organizations and agencies as a co-ordinating centre and clearing house for matters related to fitness and amateur sport activities in Canada. The work of the National Advisory Council on Fitness and Amateur Sport and the expert services available through the Department have been particularly helpful in carrying out this function. Another important role the Department is being called upon to perform is the co-ordination of all federal activities related to the encouragement, promotion and development of fitness and amateur sport in co-operation with other federal government departments and agencies engaged in activities related to the program.

The program has not been utilized for the construction of local recreational and sports facilities. However, liaison is maintained with the Municipal Winter Works Program, administered by the Department of Labour, through which substantial federal aid may be given to this type of construction.

The National Advisory Council on Fitness and Amateur Sport

The Minister is advised on the administration of the Act by a thirty member National Advisory Council on Fitness and Amateur Sport. During 1963-64, the Council met twice, on November 18th and 19th, and on March 9th, 1964. The development of the program has continued to be guided by its recommendations. The high degree of co-operation and assistance which the Council has consistently provided was continued throughout the year.

An important and very helpful step in the development of the program has been the consultations between the various committees of the National Advisory Council on Fitness and Amateur Sport and the executives of the sports governing bodies concerned with baseball, basketball, hockey, volleyball, soccer football, inter-collegiate athletics and skiing. Members of the Directorate met on several occasions with members of a large number of national organizations to discuss planning and programming of their respective sports activities. These consultations have proved very beneficial to both the Department and the sports governing bodies and were particularly successful both in delineating problems and in working out long term courses of action.

The terms of fifteen members of the Council expired during the year and new appointments were made to bring it to full strength.

Grants to National Agencies

During the year, grants in excess of \$1,000,000, or over fifty per cent of the total funds available, were awarded to forty-three national sports governing bodies and to agencies and organizations operating national programs.

Of the total funds allocated for this part of the program, twenty-six per cent assisted the staging of fifty-eight competitions or trials, fifteen per cent the sending of Canadian participants to thirteen international competitions, in addition to the 1963 Pan American Games and 1964 Olympic Games, and three per cent assisted special projects related to the promotion and development of fitness and amateur sport. Fifty-six per cent of all grants made to national agencies was spent on training through forty-one central and six cross-Canada clinics and seminars on coaching and leadership, five Olympic training camps and eighteen central clinics for the training of athletes.

Larger clinics held in 1963 included national hockey leadership courses organized by the Canadian Amateur Hockey Association at five universities regionally located in Canada; the annual national track and field coaches' clinic conducted by the Royal Canadian Legion at the Ontario Agricultural College at Guelph, which was followed by a series of trans-Canada clinics in track and field; the leadership training courses for directors and administrators of recreation centres and activity leaders in community centres conducted by the Association Canadienne des Centres de Loisirs at Rivière du Loup; the Y.M.C.A. and Y.W.C.A. training camps, refresher courses and workshops for physical education leaders and athletic and sports directors and the cross-Canada clinics organized by the National Council of Y.M.C.A.'s to conduct physical fitness training and testing courses in Y's and communities where Y's are not established.

Staging of National and International Multiple Games in Canada

The Department continued to provide financial assistance on a matching basis with the Province of Alberta and the City of Calgary to the Calgary Olympic Development Association in its bid to stage the 1968 Olympic Winter Games in Banff, Alberta. Extensive planning and assistance were also provided through an interdepartmental committee chaired by the Deputy Minister of Welfare, on which the Departments of External Affairs, Finance, National Defence, Northern Affairs and National Resources and the Canadian Government Travel Bureau were represented. In January, 1964, the Games were awarded to Grenoble, France, by the International Olympic Committee on the third ballot which favoured Grenoble with twenty-seven votes against twenty-four for Calgary.

Assistance was extended by this Department and the Department of External Affairs to the City of Winnipeg in its successful bid to host the 1967 Pan American Games and the Department continued liaison with the Pan American Games 1967 Society of Winnipeg, which is the agency responsible for the organizing and staging for these games.

Another project of national importance which is under consideration concerns the proposed staging of a Canadian Winter Games Festival in Quebec City and Town of Beauport in 1967. Departmental liaison has been continued with the organizing group and representatives of the governments concerned.

The Directorate staff worked closely with the National Centennial Commission in developing plans for special fitness and amateur sport activities to be staged in 1967.

Grants to Provinces

Grants to the provinces are made under federal-provincial agreements which, for 1963-64, were for a period of one year. The agreements for this fiscal year provided for an allocation of \$1,000,000, or fifty per cent of the fitness appropriation, to be made available to the provinces on the basis of \$35,000 to each, with the balance being distributed on a per capita basis. Under the agreements the Federal Government reimburses the provinces for sixty per cent of the cost of approved projects, except in the case of undergraduate scholarships or bursaries where the province makes the selection and the Federal Government pays the full amount. All provinces except Quebec participated in the joint federal-provincial program in 1963-64.

The second complete year of operation of this portion of the program enabled the provincial authorities to assist a greater number of students enrolled in courses leading to a Bachelor's degree in Physical Education or Recreation, to encourage sports clinics, often as a follow-up to national clinics, to assist recreation commissions by paying part of the salary of qualified personnel and by extending professional services in physical education or recreation at the provincial level. In some provinces extensive training sessions have been launched to meet the need for leadership in small communities. New and well-adapted instructional material has been prepared and distributed.

The development of this program has required close liaison between sports governing bodies, provincial governments and the Federal Government. As a result, the provincial programs have become closely integrated in new nationwide efforts to raise participation and levels of performance. Local interest in improving recreational services has been stimulated, in some areas markedly, and requests to provincial authorities for assistance under the Act are greatly increasing. A high degree of federal-provincial co-operation and accord has been experienced in this program.

Post-Graduate Training in Physical Education and Recreation

The scarcity of professionally qualified personnel in the fields of physical education and recreation has necessitated special attention to the scholarship program.

Eighty post-graduate scholarship and fellowship awards were made during the year, involving an expenditure of \$136,000. All applications were reviewed by a Scholarship-Fellowship Committee consisting of two representatives from the National Advisory Council, two from English and French-speaking schools of physical education and two from the provincial fitness directorates, and awards made in accordance with its recommendations.

Since the inception of this program in 1962, two recipients of Fitness Scholarships have earned PhD. degrees in physical education. In 1963-64, forty-nine students were awarded scholarships to study for the Master's degree, an increase of twenty-six over the previous year, and eighteen men and one woman were awarded Fitness and Amateur Sport Scholarships for Doctorate studies, an increase of ten over the previous year. In addition, nine Senior Research Fellow-

ships were awarded, compared to four in the previous year. Research carried on has included such subjects as study of fitness and arterial pressure, fitness and running, metabolism during exercise and growth, and development factors in athletic performance.

Since the educational opportunities in Canada for post-graduate work in physical education and recreation are still limited, most of these students attended universities in the United States or, if French speaking, in Europe.

While the full impact of the scholarships program cannot yet be accurately determined as its results are long range and often intangible, there is no doubt that it has materially assisted in providing the senior teaching staff required to produce the increased number of persons with professional academic training who will be required as the program expands. The shortage of qualified teachers in physical education and recreation has been one of the principal limiting factors in the development of a full program in Canada.

Three additional grants in the form of Special Fellowships were awarded for special studies in Europe. As a result of these, a comparative report of physical education in several European countries is being prepared for publication. It is hoped that this information will be of assistance to universities and schools of physical education in reviewing curricula and assessing possible revisions in the light of changing conditions stimulated by the program.

Table 35

SUMMARY OF POST-GRADUATE SCHOLARSHIPS AND FELLOWSHIPS AWARDED

Type of Award	1962-63		1963-64	
	No.	Amount	No.	Amount
a) Post-Graduate Scholarships				
1) Master's Level				
Summer School.....	9	\$ 6,150	22	\$14,860
Full Year.....	14	26,000	27	54,000
2) Doctorate Level				
Summer School.....	6	4,700	12	9,800
Full Year.....	3	6,000	7	14,000
b) Senior Research Fellowships.....	4	18,605	9	37,918
c) Special Fellowships.....	3	9,993	3	5,323
Total.....	39	71,448	80	135,901

Undergraduate Scholarships and Bursaries

National Fitness and Amateur Sport Scholarships and Bursaries for undergraduate professional study in the recreation or physical education fields are made by the Federal Government on the recommendation of the provincial authorities.

During the year under review, the following undergraduate scholarships and bursaries have been awarded, by province:

Table 36
UNDERGRADUATE SCHOLARSHIPS AND BURSARIES
1963-64

Province	Awards		Amounts	Total No. Awards	Total Amounts
Newfoundland.....	11 31	— Scholarships — Bursaries	\$ 2,200 9,600	42	\$11,800
Prince Edward Island.....	2 21	— Scholarships — Bursaries	1,000 5,400	17	6,400
Nova Scotia.....	2 48	— Scholarships — Bursaries	1,000 14,650	50	15,650
New Brunswick.....	3 16	— Scholarships — Bursaries	1,500 5,100	19	6,600
Quebec.....	NIL NIL	— Scholarships — Bursaries			
Ontario.....	1 120	— Scholarship — Bursaries	100 24,900	121	25,000
Manitoba.....	NIL NIL	— Scholarships — Bursaries			
Saskatchewan.....	8 9	— Scholarships — Bursaries	3,800 3,700	17	7,500
Alberta.....	7 71	— Scholarships — Bursaries	2,750 35,500	78	38,250
British Columbia.....	1 6	— Scholarship — Bursaries	500 3,000	7	3,500
Northwest Territories.....	NIL NIL	— Scholarships — Bursaries			
Yukon.....	NIL NIL	— Scholarships — Bursaries			
Total.....	35 322	— Scholarships — Bursaries	114,700	351	114,700

National Fitness Research Grants

The Fitness Research Program consists of individual investigations by scientific workers into problems related to fitness, and of long-term, multi-disciplinary investigations of complex fitness problems and the establishment of fitness standards. The program is assisted by grants to individuals and to University Fitness Research Units.

A Research Committee of the National Advisory Council, composed of leading scientists in fitness research, is responsible for the review of applications for grants and for the formulation of recommendations concerning the development and promotion of the program.

In June, 1963, the Research Committee conducted a Fitness Research Seminar which was attended by Canada's senior research experts and by three of the leading fitness scientists in the United States.

All individual research grants are made on a reimbursement basis; a comparative statement of expenditures is as follows:

Name	1962-63		1963-64	
	Grant Awarded	Amount Expended	Grant Awarded	Amount Expended
University of Montreal.....	\$16,000	\$ 9,556	\$ 8,000	\$ 2,283
University of Ottawa.....	12,732	8,531	7,875	3,637
University of Alberta.....	17,750	15,261	13,000	10,811
University of Western Ontario.....			1,500	1,409
University of Saskatchewan.....			25,000	24,978
Total.....	46,482	33,348	55,375	43,118

In addition to the fitness research projects initiated through funds granted under the program, an important step has been taken towards the establishment of three research units at the Universities of Alberta, Montreal and Toronto. These units, financed at a cost of \$50,000 a year each for the next five years, are commencing operations in 1964. Since fitness includes the physical, physiological, psychological and sociological wellbeing of an individual, investigations on a long term basis involving many scientific disciplines are essential, if authoritative results are to be obtained.

A significant start was also made in the establishment of a National Documentation Centre on Fitness and Amateur Sport to be operated by the Department of National Health and Welfare in facilities provided at the University of Ottawa. This Centre will provide, on a bilingual basis, information pertaining

to the different aspects of the program, and will disseminate information on fitness in Canada.

Investigations of a continuing nature supported by Fitness funds, although still incomplete, have already contributed much to a greater understanding of fitness and the related problems. The knowledge to be gained through the individual investigations will supplement that obtained through a long-range, concentrated, multi-disciplined approach.

Information Services

Information materials under the Fitness and Amateur Sport program comprise visual aids such as films, filmstrips and film loops, illustrated manuals and instructional guides on sports and recreational activities and technical information on the construction and use of facilities. This service is an integral part of the overall program and it is provided through continuous co-operation and consultation amongst the Directorate staff, the Information Services Division of the Department and the sports and recreation associations.

Emphasis has been placed on the development of reliable aids on typically Canadian activities through the production of a series of "How To" kits. Each kit combines the use of film and the printed word, to interest the public in the activity and to provide expert instructional aids.

The first of the "How To" kits, dealing with figure skating, was released in November, 1963. It included an illustrated manual, a film, filmstrips and film loops designed to assist both instructors and participants. The illustrated manual giving point-by-point instruction on figure skating is now in its second printing, after an initial quantity of 6,000 copies sold out in five months. The entire kit, produced with the co-operation of the National Film Board, received the first place Blue Ribbon award in the Sports, Recreation and Physical Education Category of the 1964 American Film Festival.

By the end of the 1963-64 fiscal year, development of "How To" kits on four other subjects was well under way. Plans for the new year call for the release of kits on skiing, family camping, lacrosse and community recreation. In all cases, the Department has worked closely with the national associations most directly concerned with the activity under study, to attempt to ensure that the techniques shown will be of utmost benefit to users.

Other visual aids on sports and recreational activities consist of some 360 films which are available on a loan basis from the Department Fitness Library. Coaches and recreational groups in all parts of Canada make constant use of these films; where public demand calls for material on subjects that are not fully covered by other film producers, the Fitness and Amateur Sport Directorate has taken steps to provide proper coverage. The films now available have been the subject of over 9,000 showings to date, 550 of which were during the year under review. The productions most in demand are the series concerning track and field, hockey, swimming and football.

Fitness information in printed form is also being made available. The Directorate aims at the production of material which will be of service to all age groups within the community. A comprehensive manual on coaching track

and field at the high school level will be published in 1964. During the year, the manual "Points on Public Swimming Pools" (containing detailed instructions for the construction of regulation swimming pools) was released and has been widely used. It is the first of a series on the construction and use of recreational facilities; other manuals of this type are now being planned. A further series of pamphlets is being prepared to outline the assistance that can be provided under various headings within the program.

Radio has proved to be a useful medium of communication for the program. Three playlets on subjects related to fitness were broadcast on the series "Your Health, Your Welfare", which is given regular air time by 108 stations across Canada. Discussions were begun with the Canadian Broadcasting Corporation to determine how the Directorate could most effectively use the resources of radio and television to encourage fitness and amateur sports activities.

It is not believed that adequate information and promotional materials have yet been produced for the aims of the program. However, Departmental efforts on this part of the work are being strengthened to meet increasing demands for a more complete service.

For the fiscal year that ended on March 31st, 1964, a budget of \$100,000 was established for informational services within the Fitness and Amateur Sport Program. The amount actually spent was \$98,788.

Table 37

FITNESS GRANTS TO NATIONAL ORGANIZATIONS AND ASSOCIATIONS

1961-62, 1962-63, 1963-64

Organization	Amounts Received			
	1961-62	1962-63	1963-64	Total
SPORTS GOVERNING BODIES — CO-ORDINATING MULTIPLE SPORTS				
Amateur Athletic Union of Canada				
Boxing Committee	\$ 1,000	\$ 3,377		\$ 4,377
Fencing Committee	500		\$ 1,500	2,000
Gymnastics Committee	15,000	2,762		17,762
Hand Ball Committee			1,000	1,000
Track and Field Committee		2,000	7,700	9,700
Weightlifting Committee	1,500	1,817	4,590	7,907
Wrestling Committee	1,500	2,088	11,020	14,608
National Championships		21,677	70,938	92,615
British Empire and Commonwealth Games Association	30,000			30,000
Canadian Olympic Association		30,000	76,000	186,000
		50,000	30,000	
Sub-total	49,500	113,721	202,748	365,969
SPORTS GOVERNING BODIES — SINGLE SPORTS				
Canadian Amateur Basketball Association		5,000	7,500	12,500
Canadian Amateur Bobsleigh Association		4,800		4,800
Canadian Amateur Hockey Association		50,000	25,000	125,000
			50,000	
Canadian Amateur Ski Association	14,785	16,310	20,215	51,310
			10,000	80,040
			18,730	
Canadian Amateur Speedskating Association	500	8,000	5,175	18,175
			4,500	
Canadian Amateur Swimming Association		4,000	11,738	58,449
		4,450	38,261	
Canadian Archery Association			2,000	2,000
Canadian Association of Amateur Oarsmen		10,000	10,884	26,939
			6,055	
Canadian Badminton Association	1,500	1,200	4,900	14,200
		2,000	1,300	
			3,300	
Canadian Canoe Association	3,800	400	8,078	14,388
			2,110	
Canadian Civilian Association of Marksmen	15,000			15,000
Canadian Cricket Association		1,633	5,822	7,455
Canadian Field Hockey Association		1,000	3,000	10,330
		1,900	4,430	
Canadian Figure Skating Association		10,000	4,300	19,300
			5,000	
Canadian Intercollegiate Athletic Union		18,000	22,000	67,000
			27,000	
Canadian Lacrosse Association		3,000	2,000	5,000
Canadian Ladies Golf Union	10,000		3,842	17,692
			3,850	
Canadian Lawn Bowling Council			2,800	6,610
			3,810	
Canadian Lawn Tennis Association	18,000		20,000	64,718
			26,718	
Canadian Roller Skating Association		500		500
Canadian Ski Patrol		9,000	5,950	14,950
Canadian Snowshoers' Union		2,000	1,328	5,218
			1,890	
Canadian Table Tennis Association		750	4,770	6,790
			1,270	

Table 37 (Concl'd)

FITNESS GRANTS TO NATIONAL ORGANIZATIONS AND ASSOCIATIONS

1961-62, 1962-63, 1963-64

Organization	Amounts Received			
	1961-62	1962-63	1963-64	Total
Canadian Volleyball Association.....		\$ 1,500	\$ 7,568 8,640	\$17,708
Canadian Wheelmen's Association.....	\$ 5,000	350	2,052	7,402
Canadian Women's Field Hockey Association.....			2,500 6,040	8,540
Canadian Yachting Association.....		750	11,000 14,000	25,750
Canadian Soccer Football Association.....			3,140	3,140
National Federation of Amateur Jr. Baseball Inc.....			4,450	4,450
Royal Canadian Golf Association.....	5,000		5,767 3,500	14,267
Rugby Tours Committee of Canada.....	10,000			10,000
Sub-total.....	83,585	156,543	448,183	688,311
NON-COMPETITIVE SPORTS				
Canadian Wildlife Federation.....		20,000		20,000
Canadian Youth Hostels Association.....		4,750 10,000	15,000	29,750
Canadian Association for Health, Physical Education and Recreation.....		6,000 4,000	20,000 12,400	42,400
Sub-total.....		44,750	47,400	92,150
AGENCIES OPERATING PROGRAMS FOR OWN MEMBERS				
Association Canadienne Des Centres De Loisirs.....			20,000 42,000	62,000
Boys' Clubs of Canada.....		6,000	8,000	14,000
Boy Scouts Association of Canada.....			5,465 6,650	12,115
Canadian Catholic Girl Guides Association.....			11,661	11,661
Girl Guides Association of Canada.....			10,525	10,525
National Council of YMCA's of Canada.....		6,428	6,428 29,900	42,756
Young Women's Christian Association.....		21,810	23,676	45,486
Sub-total.....		34,238	164,305	198,543
SPECIAL PROJECTS				
Calgary Olympic Development Association.....	35,000	30,000 30,000	15,000	110,000
Canadian Amateur Sports Federation.....		10,000	10,000	20,000
Canadian National Exhibition (Fitness Festival).....		50,000		50,000
Royal Canadian Legion.....	50,000		49,400 51,133	150,533
Royal Lifesaving Society of Canada.....			10,000 10,000	20,000
University of Ottawa.....	5,000		7,831	12,831
Sub-total.....	90,000	120,000	153,364	363,364
Sub-total Grants Made.....	223,085	469,252	1,016,000	1,708,337
Less Refunds.....		13,441	12,804	26,245
Total.....	223,085	455,811	1,003,196	1,682,092

Table 38

FITNESS AND AMATEUR SPORT FEDERAL-PROVINCIAL PROGRAM
SUMMARY OF TYPES OF PROJECTS FINANCED IN 1963-64 BY PROVINCE

	Nfld.	P.E.I.	N.S.	N.B.	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.	N.W.T.	Yukon	Total	%
Scholarships & Bursaries.....	11,800	6,400	15,650	6,600		25,000		7,500	38,250	3,500			114,700	28.41
Books, Films, etc.....	4,200	964	1,632	215			3,958	6,360	1,091	2,040	117		20,577	5.10
Provincial Staff Salaries — Professional & Field.....		5,936	4,902	14,619			14,293				7,020	12,904	59,674	14.78
Recreation Leadership Courses.....		3,019	4,800	4,643		14,043	3,926	4,920	1,312	3,889	120		40,672	10.07
Grants to Communities.....		5,940		10,157		1,800	35,445	6,000					59,342	14.70
Competitions.....		2,227	159								852	3,517	6,755	1.67
Sports Clinics.....	1,230	3,391	7,203	4,033		6,128		1,200	2,425	5,238	590		31,438	7.79
Total.....	17,230	27,877	34,346	40,267		46,971	57,622	25,980	43,078	14,667	8,699	16,421	333,158	82.52
Miscellaneous*.....	7,515	6,149	4,330			39,633	6,581	2,760	739	1,499	1,329		70,535	17.48
Total Projects Approved.....	24,745	34,026	38,676	40,267		86,604	64,203	28,740	43,817	16,166	10,028	16,421	403,692	100.00

*Such as attendance at conferences, surveys, purchase of equipment and assistance to camp developments.

ADMINISTRATION BRANCH

DEPARTMENTAL SECRETARY

The activities of the Departmental Secretary's Division continued to fall into two broad classes—those which the Departmental Secretary carried out personally and those which were undertaken largely by the staff of the division.

Included among the first group were: (a) assisting the Minister and the Deputy Ministers in the preparation and approval of the departmental estimates; (b) acting as financial adviser to the Department; (c) acting as the Deputy Ministers' substitute with respect to approval of accounts payable, travel claims, requests for encumbrances, requests for transfer between allotments, submissions to Council and to Treasury Board, and other financial documents; (d) preparing material for tabling in Parliament; (e) acting as departmental security officer; (f) organizing all financial campaigns within the Department; (g) carrying out special projects assigned from time to time.

The second group of responsibilities are outlined in the following paragraphs.

The Registry Services continued to be responsible for the records management program within the Department in Ottawa and for providing advice and assistance in respect of records in many departmental establishments across Canada. Records retirement work was actively pursued resulting in substantial savings in space, equipment and staff time. The chief records officer was a member of a small committee which drew up general records disposal schedules for all departments and government agencies. Mail, messenger and truck services at head office continued to be provided by this section.

The Financial Services Section continued to perform a centralized accounting advisory service designed to assist the directorates and divisions (other than those of the Medical Services Directorate) in the development and budgeting of funds. This section also carried out much of the detail involved in the preparation of departmental estimates and continued to act as liaison between the Department and the Treasury Office serving it.

Because of unusual problems arising from restricted programs it was necessary this fiscal year to review divisional budgets regularly and to conduct frequent program reassessment within each vote to ensure the most efficient use of available funds.

The work of this section included the preparation of replies to many thousands of letters from the general public covering a wide range of health and welfare subjects.

This section was also responsible for the daily reading of all parliamentary papers and the excerpting, distribution and indexing of items of interest to the

Department. It also continued to be responsible for the certification of institutions for sales tax refunds under the terms of the Excise Tax Act.

The Addressograph Services Section which serves all branches of the Department addressed a heavy volume of material from its extensive list of addressograph plates. The installation of new rapid photocopying equipment provided a service to the Department for short run duplication of urgently needed material.

All typing and matrix work required in the preparation of material for reproduction by the Department of Public Printing and Stationery was done by the Secretarial Services Section. A central source of typing assistance was again provided to the entire Department in Ottawa by this section.

In addition the Departmental Secretary's Office acted as an information centre for the entire Department.

INFORMATION SERVICES

The responsibility for disseminating health and welfare information to Canadians rests with Information Services. In this work printed matter, including posters and publications, plays a prominent part. Other media include films, filmstrips, radio and television.

The Printed Word

A number of new items were produced during the year, perhaps the most significant in terms of health education being the widely distributed "Smoking and Health" reference book, opening gun in a departmental program to bring to the attention of Canadians the relationship between smoking and certain diseases.

A new version of the Child and Maternal Health booklet "Posture and Rest Positions for Expectant Mothers" was produced.

The French adaptation of an Emergency Health book "Casualty Simulation" was completed.

A manual on construction, maintenance and administration of public swimming pools was printed for the Fitness and Amateur Sport Directorate. An illustrated manual on figure skating, produced as part of a "How To" kit on the sport, was so well received that a second printing was required a few months after issue. Work has been launched on similar manuals on skiing, family camping, lacrosse, and community recreation. A "How To" kit on each of these four activities will include training films and other visuals aids.

"Brush Your Teeth The Way They Grow", a folder-poster kit for distribution to primary school children, was completed for the Dental Health Division.

The folder "Immunization Requirements and Recommendations for International Travellers" was revised and reprinted for the Medical Services Directorate.

As in previous years, much of the division's work involved reprinting programs for the Food and Drug and Medical Services Directorates, Mental Health and Child and Maternal Health Divisions and others.

A revised "Dietary Standard for Canada", issued in 1958, and "Meals for Serving Twenty", a guide for small institutions, were produced for the Nutrition Division.

Individual requests for material totalled 18,200. There were 4,900,800 pieces of material distributed, including 3,666,530 English and 1,234,270 French items.

The following distribution was reported: 10 issues of "Canada's Health and Welfare", totalling 550,000 copies; 12 issues of "National Health Radio Notes", 3,660 copies; 12 issues of "Press Fillers", 5,100 copies; 12 issues of "Health Column", 5,880 copies; 11 issues of "Medical Services Journal", 2,530 copies and one issue of "Dental Health Newsletter", 550 copies.

At the request of a number of divisions, artwork and designs were supplied for various printing projects

Displays were completed for the Emergency Health, Emergency Welfare, and Radiation Protection Divisions as well as a display on welfare grants and a display on the subject of smoking and health.

Mass Media Projects

The departmental radio program, "Your Health, Your Welfare" continued into its 14th consecutive year of production and was heard in English or French on approximately 120 radio stations across Canada.

Senior departmental officials were guests on television and radio shows, assisted, in some cases, by division officers acting as liaison personnel.

Three filmstrips were completed, "Emergency Clothing (Operations and Supply)" and "Emergency Clothing (Organization)" for the Emergency Welfare Services Division and "Training the Mentally Retarded Child at Home" for the Mental Health Division. In addition work on a filmstrip titled "Emergency Lodging" was begun for the Emergency Welfare Services Division.

The division maintained its program of procuring, screening and evaluating health and welfare films. The following table provides current statistics in this area:

NATIONAL FILM LIBRAIRIES

	Total No. Films, Mar. 31/63	Total No. Films, Mar. 31/64	Withdrawals 1963-64	Additions 1963-64	Circulation* (1962-63) (1963-64)	
Health	488	508	2	22	2,605	2,716
Medical, Biological	328	321	13	6	1,230	1,399
Welfare	37	37	—	—	90	91

*Indicates the number of bookings only.

Public Relations

Division officers represented the Department at Canadian and International conferences in a number of localities and, in some cases, manned displays sent to these conferences. There was a large number of visitors, mostly professional

persons, to the division during the year. They represented many countries, including the new republics of Africa and the Far East.

The Camera at Work

Photography of various biological specimens, in both black and white and colour, such as tumors and transplants, was done for the Occupational Health Division, Laboratory of Hygiene and Food and Drug Directorate. This work involves the development of highly specialized microphotographic techniques and the adaptation of older methods to suit specific needs.

A large quantity of tissue culture infected with polio and measles causing plagues to form in the tissue culture was photographed both in colour and black and white.

Charts and graphs for the Epidemiology Division were copied for reproduction in the new book on smoking.

The Dental Health Division was supplied with a full colour photograph for a poster illustration.

A complete photographic coverage of the Chemistry Section of the Occupational Health Division was undertaken.

A filmstrip covering Emergency Welfare Services at the Civil Defence College showing emergency accommodation, was produced.

In addition to the above, a large number of informational photographs were produced including the photographing in colour of all displays built for the Department.

Photographs were made of Virus Laboratory cytological work on tissue culture and on tumors consisting of microphotographs with straight and phase contrast.

LEGAL DIVISION

During the year under review the services of the Legal Division continued to be available to all three branches of the Department.

In addition to advising and assisting the Minister and the deputy heads, from a legal standpoint, the division was available to advise the numerous divisions and sections of the Department from day to day in relation to administrative problems entailing legal questions or to which could be brought the benefit of legal training and experience.

These services were sought with special frequency in connection with the administration and/or enforcement of the Food and Drug Act, the Narcotic Control Act, the Family Allowances Act, the Old Age Security Act and other Acts with which the Department is concerned. In this connection, the Legal Division undertook the instruction of agents of the Minister of Justice in Summary Convictions prosecutions and it assisted the Department of Justice on appeals and where prosecution proceedings were by way of indictment.

The services of the division were also required in the preparation of contracts with provinces, universities or other agencies, entered into in the implementation of the General Health Grants Program, the Welfare Grants Program, the Emergency Health and Emergency Welfare responsibilities of the Depart-

ment, research and other sharing arrangements pursuant to the Fitness and Amateur Sport legislation and in relation to other departmental commitments which required definitive recording. Other documents of a legal nature were prepared in the division including submissions to Privy Council and to the Treasury Board, Memoranda to Cabinet, letters and documents for execution at ministerial level where legal aspects were involved and numerous other routine papers arising out of the nature of the operation of the Department and its contacts with the general public. The services of the division were extended also to the settlement of claims by and against the Department pursuant to the Claims Regulations, arising chiefly out of the operation of the departmental motor vehicle fleet.

During the year amendments to certain Regulations, made under Acts administered by the Department, were developed by the division for review by the Department of Justice. These included revisions of the Food and Drug Regulations and the Narcotic Control Regulations. Officers of the division participated also in a series of discussions relating to prospective legislation including the Canada Pension Plan and related social legislation.

The division provided consultative legal services to a number of voluntary health agencies and organizations and officers of the division represented the Department on various boards concerned with policy and administrative matters in which the Department has some interest or responsibility. The division continued to act as adviser to the deputy heads in relation to references to them, by the Department of the Secretary of State, of applications for incorporation of non-profit organizations under Part II of the Companies Act touching on matters of health or welfare.

The legal adviser, at the request of the World Health Organization, again this year provided legal assistance to the Government of Jamaica in connection with the revision of its health laws. The legal adviser was designated the Canadian representative to the United Nations Commission on Narcotic Drugs and represented Canada at the 18th Meeting of that Commission held in Geneva, Switzerland.

DEPARTMENTAL LIBRARY

The Departmental Library continued with the selection, acquisition and organization of reference and technical books, serials, pamphlets, and government documents on all subjects related to the Department's work. The usual services of identification, ordering and cataloguing, answering inquiries and advising about authorities and sources of information were carried on. In Ottawa reference and circulation work was directed from libraries in the Jackson Building, the Food and Drug Building, the Laboratory of Hygiene and the Environmental Health Building.

Considerable time was given to plans for the equipment, furnishings and reorganization of the library collection that will be moved into the new Administration Building. A questionnaire was devised for a survey of information practices in the Health Services Directorate. The meetings of the Second International Congress of Medical Libraries and the Canadian Library Association were attended.

Continuing study is being given to the evaluation of the contribution that may be expected from the use of electronic methods in library practice, one of the staff attended a short course on the subject in March 1964.

The National Library of Medicine, U.S. Public Health Service, has successfully developed methods for the composition and printing of *Index Medicus* by digital computers from tapes on which additional information, such as analyses of case reports, has been recorded. In time, this taped form of bibliography will be available by subscription for use with suitable equipment. A special visit was made to the National Library of Medicine to discuss with their bibliographers the rational place of these advances in providing information for research. It is clear that established methods of finding information will continue for many types of searches.

The effect of increased programs of research in the health sciences on the resources and services of Canadian libraries was the subject of a number of discussions, and assistance has been given with the preparation of papers on medical communications and on the recruitment and development of expert staff. Assistance was given to the designing of a library for a national association, and other inquiries related to medical literature resources and organization were answered, some referred by the National Library.

PERSONNEL ADMINISTRATION AND ORGANIZATION

Organization Changes

Welfare Branch

Owing to developments in welfare programs, particularly in the areas of social insurance and public assistance, organization studies were undertaken to establish the most satisfactory arrangements for administration of the Department's welfare programs. These studies have led to a rearrangement of the welfare divisions into three branches—the Special Programs Branch, the Public Assistance and Welfare Grants Branch, and the Family Allowances and Old Age Security Branch. The divisions in each branch are shown in the organization chart which is appended to this report. It is planned that the last named branch will expand to accommodate Youth Allowances and eventually the Canada Pension Plan.

Health Branch

Organization and methods studies were also carried out within the three established health branches in the following areas: functions and organization of the Nutrition Division, procedures related to the processing of applications for Public Health Research Grants, Child and Maternal Health Division, organization and expansion of the Food and Drug Branch, amalgamation and organization of certain medical service functions into the Ottawa Bureau.

Administration Branch

Organization and methods studies were conducted in the Research and Statistics Division, Information Services, and the Minister's Office.

Personnel Services continued to provide departmental co-ordination with the Bureau of Government Organization in matters related to the Glassco Commission Report.

Establishment and Recruiting

Recruitment activity was necessarily curtailed during the first three-quarters of the fiscal year because of economy measures. While several areas had been relieved of these restrictions, the overall result of the economy measures was, in most instances, a consolidation of restrictions in the form of binding 1964-65 establishments to the dollar amount expended during the fiscal year 1963-64. This led to a new orientation in personnel estimates. The special establishment review conducted early in 1964, was based on a reduced number of votes, with appropriations by vote rather than by position. While more extensive alterations in budgeting methods are anticipated, it is noteworthy that an initial step toward departmental managerial authority in the handling of its own establishments has been taken.

A significant establishment change occurred in July, 1963, when the Civil Defence College at Arnprior was transferred from the Department of National Health and Welfare to the Department of Defence Production.

Appointments

New appointments (including transfers from other departments) totalled 1,126 as compared with 1,025 terminations during the fiscal year.

In total 573 promotions (including reclassifications) were approved during the fiscal year.

Classification and Salary Studies

Thirty-three class series used in the Department were created or amended. Salary adjustments approved during the fiscal year affected sixty-one other classes for an average percentage increase of 4.9.

Staff Training

Interest in language training showed a considerable increase during the past year although only two candidates completed the French course and two completed the English course offered by the Civil Service Commission.

A total of 43 employees followed courses in administrative practices offered by the Civil Service Commission.

There were 69 staff enrolled in regular university courses during the year and 74 others followed short special courses sponsored by universities and other non-governmental institutions.

The Staff Training Division developed several programs aimed at administrative improvement, including case study programs for the regional offices of the Family Allowances and Old Age Security Division, a letter writing course for Ottawa and field staff, supervision and office management seminars for Emergency Health Services and a series of seminars for personnel adminis-

trators. In addition, the Food and Drug Branch has been assisted in the editing, collating, and distribution of course material used in the training of newly appointed Food and Drug officers.

A survey has been conducted of the training needs of laboratory technicians and specialized training will be arranged for these employees.

In addition, continued emphasis has been given to the responsibility of supervisory staff to conduct on-the-job-training programs throughout the Department.

Staff Evaluation

New techniques of performance review and staff evaluation have been tested in several parts of the Department and will be extended to all classes. Special staff evaluation and placement programs were conducted in: Food and Drug (Food and Drug officers), Research and Statistics (statistical clerks) and Public Assistance (field representatives).

Now established as regular evaluation and placement programs are those for medical officers (Medical Services), scientific classes (Health Services and Food and Drug) and secretarial classes (Ottawa).

Manpower Planning

Initial steps have been taken to establish systems for forecasting manpower needs and establishing manpower inventories with a view to determining training needs and recruitment requirements.

Regulations and Procedures

Various amendments to the Civil Service, Prevailing Rate Employees and other regulations necessitated the reviewing of several departmental policies which resulted in rewriting or implementing numerous procedures, particularly the procedures pertaining to the employment of casual employees, the payment of compensation for overtime worked and the payment of shift differential allowances.

New procedures were introduced in connection with the documentation of new appointees to the Department at Ottawa. Documentation procedures are carried out in both the English and French languages.

Greater emphasis was placed on conducting interviews with employees planning retirement to ensure that they fully understand their entitlement to pension under the provisions of the Public Service Superannuation Act and terminal leave benefits as well as procedures to be followed with respect to obtaining continued coverage after retirement for hospital and medical insurance.

A survey of sick leave granted to departmental employees for the Dominion Bureau of Statistics, was co-ordinated by the Clerical Units Section. This section also developed and co-ordinated the procedures in connection with the registration of departmental staff for Social Insurance numbers.

Table 39

GEOGRAPHICAL DISTRIBUTION OF POSITIONS FOR FISCAL YEAR 1963-64

Division	Ottawa	Nfld.	P.E.I.	N.S.	N.B.	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.	Yukon	N.W.T.	Overseas	Total
Child and Maternal Health.....	7														7
Dental Health.....	7														7
Departmental Secretary.....	141														141
Deputy Minister (Health).....	3														3
Deputy Minister (Welfare) and International Welfare.....	7														7
Directorate Health Services.....	19														19
Emergency Health Services.....	67							1							68
Emergency Welfare Services.....	19			1		1	1			1	1				24
Epidemiology.....	15														15
Family Allowances and Old Age Security.....	13	23	10	36	31	180	246	42	42	50	63				736
Fitness and Amateur Sport.....	11														11
Food and Drugs.....	236	3	1	21	4	61	78	23	2	6	30				465
Health Grants.....	12														12
Health Insurance.....	15														15
Hospital Design.....	7														7
Information Services.....	35														35
International Health.....	4														4
Laboratory of Hygiene.....	161														161
Legal.....	7														7
Library.....	17														17
Medical Rehabilitation.....	9														9
Medical Services — Headquarters-Ottawa.....	109														109
Ottawa Bureau.....	87														87
Regions — Canada.....	32	10		51	10	131	459	245	257	675	602	127	210		2,809
— Overseas.....														119	119
Mental Health.....	10														10
Minister's Office.....	18														18
Narcotic Control.....	42			2		4	5	2			2				57
Nursing Consultant.....	3														3
Nutrition.....	19														19
Occupational Health.....	55														55
Old Age Assistance.....	3			1	1	2	1	1	1	1	1				12
Personnel.....	51														51
Public Health Engineering.....	11			5	3	7	4	5	3	5	6				49
Purchasing and Supply.....	34														34
Radiation Protection.....	75														75
Research and Statistics.....	67														67
Research Development.....	4														4
Special Projects.....	1														1
Unemployment Assistance.....	10	1		1	1	1	2	1	1	1	1				20
Welfare Grants.....	7														7
Total.....	1,450	37	11	118	50	387	796	320	306	739	706	127	210	119	5,376

Table 40

ESTABLISHED FULL-TIME POSITIONS MARCH 31, 1963, AND MARCH 31, 1964
INDICATES PROGRAM CHANGES AND EFFECT OF ECONOMY MEASURES.

	Welfare Branches		Health Branches			Adminis- tration	Total
	Family Allowances and Old Age Security	Others	Medical Services	Health Services	Food and Drug		
March 31, 1963.....	835	171	3,109	518	444	365	5,442
March 31, 1964.....	736	78*	3,124	540	522	376	5,376
	-99	-93	+15	+22	+78	+11	-66
Percentage.....	-11.9	-54.4	+0.5	+4.2	+17.6	+3.0	-1.0

*Decrease in establishment due in part to transfer of Civil Defence College to Department of Defence Production.

PURCHASING AND SUPPLY

The division continued to carry out its responsibility for procuring materials and equipment, entering into contracts, and arranging services of all types for the various directorates, divisions, laboratories, hospitals, far-flung Arctic posts of Indian and Northern Health Services and the overseas offices of the Immigration Medical Services.

Laboratories and hospitals continued to require special electrical, electronic and nuclear radiation instrumentation.

The increasing cost of food and food products and some types of janitorial and cleaning supplies, together with higher transportation costs, resulted in a further delegation of purchasing authority to field offices. During the year field hospitals, health units, etc., processed orders valued at more than \$1,700,000.

Approximately 13,800 requisitions were received and processed by the division comprising almost all known commodities and involving orders placed in Canada, the United States, the United Kingdom and Continental Europe. This required issuance of 11,700 tenders and inquiries to the trade concerning prices, delivery, etc., and the processing for payment of nearly 21,000 invoices. Included in this work and in the expediting of deliveries was the processing of approximately 11,400 pieces of correspondence. There were nearly 1,600 entries cleared through Customs.

The Departmental Stores handled 1,815 incoming shipments comprising nearly 21,000 pieces of freight. Approximately 16,000 pieces were shipped out involving the preparation of more than 6,300 issue vouchers. At year's end the total inventory value of stock in stores was \$150,854.

Forty replacement vehicles were purchased and 23 new vehicles were added to the motor vehicle fleet. At the end of the year the Department had 310 motor vehicles in operation.

The division processed 552 requisitions to the Department of Public Works for alterations, repairs, painting, etc., for offices and laboratories in Ottawa and 452 requisitions for the supply of office furniture and office furnishings. In addition 300 emergency calls were handled by telephone.

The Inventory Section continued to receive inventory cards from field locations. There were 184 disposals reported to Crown Assets Disposal Corporation and 56 to the Department of Public Works. Further changes in procedure were introduced, designed to secure accurate records of office machines and equipment on charge in the Department.

The Forms Control Program continued to function in close co-operation with the various services within the Department.

The overall expansion of the Department both in Ottawa and outside Ottawa put a serious strain on accommodation facilities and several divisions were required to move to other quarters during the year.

RESEARCH AND STATISTICS DIVISION

The Research and Statistics Division is responsible for the collection, interpretation and analysis of basic information on the socio-economic aspects of health and welfare, including studies of principles, costs, methods of financing,

social effectiveness, and administrative methods. It initiates or participates in surveys conducted by this Department and other government agencies and acts in an advisory capacity to senior officers of the Department in drawing up departmental policies and programs. Reports and monographs, prepared on request or arising from the work of the division, are published from time to time, and reports are supplied to government and other organizations in Canada and abroad. The division works in close co-operation with other divisions, and maintains liaison with agencies in Canada and abroad engaged in work of social or economic interest to the Department.

During the year the positions of Principal Research Officer (Health) and Principal Research Officer (Welfare) were filled. The director of the division and the supervisor of the Income Security Section, and section staff, were deeply involved in the development of the Canada Pension Plan. The newly introduced data-processing equipment proved highly useful in meeting the division's needs for statistical tabulations.

During the year a number of bulletins were published. These included: "Voluntary Medical Insurance in Canada, 1955-1961"; the French edition of "Expenditures on Personal Health Care in Canada, 1953-1961"; "Average Earnings of Physicians and Surgeons in Canada, 1957-1960"; and "Hospital Morbidity Statistics 1961". In addition, the following reports were prepared: 1961 hospitalization experience for incorporation into the Annual Report of the Minister of Health and Welfare under the Hospital Insurance and Diagnostic Services Act for the fiscal year ended March 31, 1963; preliminary hospital statistics for 1962; provision, distribution and cost of drugs in Canada; psychiatric units in general hospitals; development of mental health services; provincial grants in support of local facilities for the mentally retarded; evaluation of statements on the dimensions of the problem of mental retardation in Canada and describing federal programs relating to mental retardation; selected mental health statistics in Canada, 1955-1960; smoking and health among DVA pensioners; a Canadian study on smoking and health prepared jointly with the Epidemiology Division. Assistance was given to the Dental Health Division in the preparation of a report titled "Dental Effects of Water fluoridation in Ingersoll". Assistance was given to the Occupational Health Division in the preparation of a study of lung cancer in a fluorspar community. Material was prepared within the division for inclusion in the "Canada Year Book 1964", the "Canada 1964 Handbook", the "Encyclopaedia of Social Work", the "Canadian Annual Review", "Working and Living Conditions in Canada", and the "ILO Year Book of Labour Statistics". Articles were written for publication in such periodicals as "Canada's Health and Welfare", the "Labour Gazette", the "Canadian Journal of Public Health", the "Human Rights Year Book", and material was supplied to the Department of Northern Affairs and National Resources for a departmental publication.

In the international field, division staff continued to assist the Director of International Welfare Services in planning and arranging training and observation programs related to welfare services and rehabilitation services for several foreign students brought to Canada under the various technical assistance training schemes administered by the External Aid Office.

Royal Commission on Health Services

Assistance was given in reviewing, preparing and supplying material on hospital costs, hospital utilization, hospital facilities and services, rehabilitation services, nursing education, voluntary health agencies, paramedical health personnel, health economics, the nature and extent of prepaid health insurance, and morbidity statistics. Liaison was maintained with the Commission regarding a special Survey of Physicians. Data were supplied concerning the services provided by optometrists and ophthalmologists. A member of the economic research staff was loaned to the Commission to assist with the preparation of background material.

Hospital and Medical Care Insurance

The division continued to provide research services to the Health Services Directorate on various aspects of the hospital insurance program in Canada, and medical care programs in Canada and other countries. Estimated per capita costs of in-patient services in Canada were prepared as the basis for determining federal advances to the provinces under the hospital insurance program during 1964. Several research memoranda were prepared to assist the special departmental committee on health insurance, and senior divisional personnel served as members of this committee.

During the year a special hospital cost analysis unit was set up to make an intensive study of cost factors in hospital insurance.

Members of the division's staff provided consultative services to provincial hospital authorities, participated in provincial hospital institutes, and served on the federal-provincial subcommittees on quality of care, research and statistics, and finance and accounting. The Director presented a paper on hospital utilization in Canada to the Medical Care Section of the American Public Health Association in Kansas City. Additional data on hospital utilization, beds, and costs were prepared for the use of an officer of the United States Public Health Service in speeches and a book on the Canadian Hospital Insurance Program, parts of which were reviewed by the division.

Studies continued on different aspects of public and voluntary medical care insurance in Canada, on expenditures incurred by those receiving medical care services, and on the incomes of those providing the service. Projects under way include analyses of the experience of the medical care insurance programs and of the health care programs for public assistance recipients. Developments in foreign medical care programs were kept under review. A staff member served on the Interdepartmental Committee dealing with the Group Surgical-Medical Insurance Plan for employees of the federal public service and with pension plans for hospital employees. Special tabulations were prepared for the Northern Health Services on morbidity and cost aspects of the Northern Health Medical Care Program.

Hospital Statistics

A report on 1961 hospitalization experience covering utilization and bed accommodation, selected data on patient characteristics, hospital personnel, and

hospital expenditures was prepared as part of the Annual Report of the Minister of National Health and Welfare under the Hospital Insurance and Diagnostic Services Act for the fiscal year ended March 31, 1963. For the Advisory Committee on Hospital Insurance, a study of hospital morbidity by type of services and facilities, and a document on preliminary hospital insurance statistics for 1962 were made available. A special analytical study of hospital indices was initiated during the year.

The annual statistical report on hospital morbidity for 1962 was completed for the Territorial Hospital Insurance Services. Assistance was given to several government consultants in the hospital field, and special studies were conducted of hospital morbidity and of nursing functions in hospital.

Health Economics

Major projects were in preparation and others were completed in the health economics field during the year. The study on the provision, distribution and cost of drugs in Canada was submitted in final form for publication to the Royal Commission on Health Services. The analysis of expenditures on hospital, medical, dental, drug, and related personal health care services was brought up to date. The study of the average earnings and expenses of practice of physicians during the 1957-1960 period was completed and published during the year. The bulletin "Voluntary Medical Insurance in Canada, 1955-1961" was also published during the year. A chapter on personal health care expenditures in several countries was prepared for inclusion in a book by the Director of Health Services on "Health Services, Health Insurance, and Their Inter-relationship".

Mental Health

Work in the field of mental health covered: a report on psychiatric units in general hospitals presented to the Advisory Committee on Mental Health; a report titled "Development of Mental Health Services" based on questionnaire returns from the provinces; a report titled "Provincial Grants in Support of Local Facilities for the Mentally Retarded"; and a report titled "Statements on the Dimensions of the Problem of Mental Retardation and Federal Programs Relating to Mental Retardation".

The report "Selected Mental Health Statistics, Canada, 1955-1960" was published and a final statistical report for the study of psychopathic personality was prepared for an outside agency.

Rehabilitation and Chronic Diseases

The division undertook to determine the various methods used in other countries to evaluate disability for disability insurance purposes, and to provide pensions and assistance to disabled persons. Review of criteria was made for staff establishments for physiotherapy, occupational therapy, and speech therapy at the request of a Canadian province. Bibliographies were prepared on research in rehabilitation and disability, and on social work research in the health field and home care programs.

Assistance was given to the Victorian Order of Nurses in developing a statistical program for their home nursing care service within the Ottawa area and consideration was given to overall statistical needs for such a program.

The study of smoking and health among DVA pensioners was brought to its completion during the year. Data based on the final study were reported in a paper prepared jointly with the Epidemiology Division and presented at the Annual Meeting of the Canadian Public Health Association in June 1963. A special study was also carried out on lung cancer morbidity and mortality for preparation in a joint paper prepared with the Epidemiology Division for the Canadian Cancer Society.

A study of special interest was the joint participation with the United States Public Health Service in the submission of data from the Canadian Study of Smoking and Health to the U.S. Advisory Committee on Smoking and Health to the Surgeon General. Use was made of the Canadian Study on Smoking and Health for a special conference convened by the Minister of Health and Welfare in November 1963.

Child and Maternal Health

Assistance was given to the Chief of Child and Maternal Health Division in the preparation of a report on the effects of thalidomide in Canada for presentation to the Canadian Medical Association in November 1963. The survey on scurvy was tabulated in final form for the Chief of Child and Maternal Health for presentation of a report to the Advisory Committee on Child and Maternal Health Services. Further tabulations and analyses for the survey of maternal and newborn care in Canadian hospitals were completed during the year.

Radiation Protection

The three-year report on the "Film Monitoring Service 1958-1960" was published in July 1963. Analyses of variance of the film standards for this program were carried forward during the year. A study of thyroid mass values for the Canadian population was further extended and a special hospital study planned. A statistical study of euthyroid values from uptake of radioactive iodine 131 was carried out. Statistical evaluation was carried out of the results of the milk consumption of the Canadian population and of the strontium-90 values in milk. An analysis of variance of creatinine values in urine was also carried out in connection with a study of the levels of strontium-90 in northern diets. A review of radio-isotope installations across Canada was undertaken from data derived from the annual returns of hospitals and from the licensing of institutions by the Radiation Protection Division. Assistance was also given in developing autopsy data for use in a selection of hospitals for participation in the bone-sampling program of the Radiation Protection Division.

Other Health Research

Progress was made on a survey of haemoglobin values in Canada. Records of approximately 20,000 haemoglobin determinations were coded and put on

punch cards, and plans were developed for statistical analysis of the data from the study. Extended analysis of the data for the fluorspar mining study was undertaken at the request of the Occupational Health Division. Assistance was provided in planning and evaluating data from a study of a gastroenteritis epidemic. Arrangements were also made to handle the virus isolation reports received by the Department Virus Laboratory covering all isolations of viruses in Canadian laboratories.

Assistance was given in the design of a study of atypical mycobacterial infections, a study of infectious hepatitis, and other field studies. Members of the division participated in medical research seminars provided for the students in their final year of the medical course at the University of Ottawa.

Work progressed on the bulletin, "The Administration of Public Health in Canada", describing federal, provincial, local, and voluntary health services. Statistical data on health personnel, health services and morbidity, mortality and vital statistics were prepared for the World Health Situation Report covering the period 1961-62.

Canada Pension Plan

The division was extensively involved in the planning of the Canada Pension Plan and actively participated in committees dealing with coverage, benefits, statistics, retirement tests, and economic effects of the pension plan. The director and the supervisor of the Income Security Section served as members of the interdepartmental Task Force that developed Bill C-75, which was given first reading on March 17, 1964, and the government's white papers describing the Canada Pension Plan.

Assistance was given in the preparation of memoranda, papers, and letters on a variety of topics related to the Canada Pension Plan including, for example, the contribution rate for the self-employed, authority to make reciprocal agreements, survivors and disability benefits, funding, death benefits, patterns of average earnings, provincial distribution of persons covered by the plan, the applications of an earnings index, and private pension plans. The director went to Bonn in February to study the West German pension plan, particularly its use of an earnings index.

Social Security

Records of the disabilities of persons granted disability allowances under the Disabled Persons Act continued to be maintained and statistics were supplied to the director of the Disability Allowances Program.

A bulletin, to be published on a quarterly basis, concerned with the programs of the Welfare Branch of the Department, was in preparation.

Analyses pertinent to health and welfare outlays at all levels of government in Canada and in selected foreign countries were supplied to departmental officials, persons and agencies interested in the field of social security, and the World Health Organization.

A study on the development of the right of appeal under the International Labour Organization's convention on minimum standards of social security was

prepared. Questionnaires dealing with various aspects of social security were completed as requested by international organizations.

Welfare

Increased demands were made on the division for technical and consultative services as a result of the establishment of the welfare grants program and by other significant developments, notably in the field of aging. The division did special work for the Welfare Grants Division, reviewed and assessed all applications for welfare research grants, and supplied advisory and technical services, on request, to specialists working on projects for which a welfare research grant has been made.

The director of the division served on the Canadian Welfare Council's Advisory Committee on the Study of Housing for the Aged and the division contributed analytical comment and consultative services. Staff of the division participated in the preliminary planning for the proposed National Conference on Aging to take place in 1966. Consultative services, including memoranda and other data on aging, were supplied to the Special Committee of the Senate on Aging.

The director represented the Department at a Conference on Poverty and Socially-handicapped Families in Paris in February, sponsored by the French commission for UNESCO. The principal research officer (Welfare) served as co-ordinator of the contributors to the Report of the Canadian National Committee for the Twelfth International Conference of Social Work to be held in Athens in September 1964.

The Department, at the request of the Commission on Education and Personnel of the Canadian Welfare Council, agreed to undertake a nation-wide survey of welfare positions, and the division will begin preliminary planning within the next fiscal year.

The division continued to provide consultative services to other divisions and agencies, and to supply information in the form of memoranda and publications on a wide variety of welfare subjects to agencies, organizations, other departments, and individuals in Canada and abroad. Special memoranda for departmental use were prepared on various aspects of family and child welfare, general assistance, services for the aged, and community development. The heavy demands for advisory services and for data on services for the aged, including requests for material on accommodation, statistics, income maintenance measures, community services and social and recreational facilities, reflect the wide interest and activity in this important area. A revised method of collecting statistics on student enrolment at the schools of social work was developed.

Committee work, much of which involved detailed planning and analyses, was a major responsibility of the division during the year. In addition to service given those committees mentioned above, staff members served on a number of other committees, including the Interdepartmental Committee on the Older Worker, the International Committee on Public Assistance, the Canadian Welfare Council's Committee on Aging and the Committee on Homemaker Services, the Editorial Board of *Bien-être social canadien*, a departmental committee on welfare statistics and a departmental welfare film committee.

DIRECTORY OF DEPARTMENTAL OFFICERS

MINISTER

Honourable Judy V. LaMarsh, B.A., P.C., M.P., Q.C.

Parliamentary Secretary, John C. Munro, B.A., M.P.

Executive Assistant, J. K. Macbeth

Executive Secretary, Gwendolyn J. Blair

Deputy Minister of National Health and Welfare (Health)

G. D. W. Cameron, M.D., C.M., D.P.H., L.L.D., F.R.C.P.

Deputy Minister of National Health and Welfare (Welfare)

J. W. Willard, M.A., M.P.A., A.M., PH.D.

HEALTH BRANCH

Food and Drug Directorate:

Director, C. A. Morrell, M.A., PH.D., F.R.S.C.

Associate Director, L. I. Pugsley, B.A., M.Sc. PH.D

Assistant Director, (Foods) R. A. Chapman, B.S.A., M.Sc., PH.D

Assistant Director, (Drugs) M. G. Allmark, B.A., M.A.

Assistant Director, (Scientific Services) J. A. Campbell, B.S.A., B.Sc., PH.D.

Assistant Director, (Inspection & Enforcement Services) A. Hollett, B.Sc., M.Sc.

Chief, Narcotic Control Division, R. C. Hammond, PHM.B

Chief, Consumer Division, Miss E. M. Ordway

Chief, Administration Services, A.B. Tennenhouse, B.S.A., M.Sc.

Chief, Medical Division, J. B. Murphy, M.D.

Regional Directors:

Eastern Region (Halifax), L. B. MacIsaac, B.Sc

East Central Region (Montreal), P. E. Jean, M.Sc.

Central Region (Toronto), J. B. Jones, B.Sc.

West Central Region (Winnipeg), D. A. Gray, B.S.A.

Western Region (Vancouver), E. L. Devlin, B.S.A. (Honors)

Medical Services Directorate:

Director, P. E. Moore, M.D., D.P.H.

Associate Director (Medical), H. A. Procter, D.S.O., PH.D., M.D

Associate Director (Administration), W. B. Brittain, D.F.C., B.Sc.

Consultant, Aerospace Medical, Research and Safety, W. A. Prowse, C.D., M.D., C.M.,
D.P.H., D.I.H.

Chief, Civil Service Health Division, E. L. Davey, M.D., D.P.H.

Chief, Northern Health Services, G. C. Butler, M.B., B.Ch., D.P.H.

Chief, Quarantine, Immigration Medical & Sick Mariners Services, W. H. Frost, M.D.,
C.M., D.P.H.

Regional Superintendents:

Eastern Region (Ottawa), J. H. Wiebe, B.A., M.D., D.P.H.

Central Region (Winnipeg), O. J. Rath, M.D.

Saskatchewan Region (Regina), T. J. Orford, M.D., C.M.

Foothills Region (Edmonton), M. Matas, M.D.

Pacific Region (Vancouver), W. S. Barclay, M.D.

European Region (London, Eng.), J. E. Grant, M.D., C.M.

Health Services Directorate:

Director, K. C. Charron, M.D.

Assistant Director, E. A. Watkinson, M.D., C.M., D.P.H.

Principal Executive Officer, J. H. Horowicz, L.L.D.

Principal Medical Officers:

Health Insurance, *E. H. Lossing, M.D., C.M., M.P.H.*

National Health Grants, *G. E. Wride, M.D., D.P.H.*

Research Development, *L. B. Pett, B.S.A., M.A., PH.D., M.D., D.P.H.*

International Health, *B. D. B. Layton, M.D., M.P.H.*

Special Projects, *J. B. Bundock, M.D.*

Special Health Services:

Child and Maternal Health Division, *Chief, Jean F. Webb, B.Sc., M.D., D.P.H.*

Dental Health Division, *Chief, R. A. Connor, D.D.S., D.D.P.H., F.I.C.D.*

Emergency Health Services Division, *Chief, A. C. Hardman, M.D.*

Epidemiology Division, *Chief, E. W. R. Best, M.D., D.P.H.*

Hospital Design Division, *Chief, H. G. Hughes, B.Arch., A.R.I.B.A., F.R.A.I.C.*

Laboratory of Hygiene, *Chief, E. T. Bynoe, M.Sc., PH.D.*

Medical Rehabilitation, *Chief, O. Hoffman, M.D.*

Mental Health Division, *Chief, Morgan Martin, M.D., C.M., M.Sc.*

Chief Nursing Consultant, Dorothy M. Percy, R.R.C., R.N.

Nutrition Division, *Chief, J. E. Monagle, B.Sc., M.D.*

Occupational Health Division, *Chief, T. H. Patterson, M.D., D.P.H., M.P.H.*

Public Health Engineering Division, *Chief, W. R. Edmonds, M.A.Sc., B.P.Eng.*

Radiation Protection Division, *Chief, P. M. Bird, M.Sc., PH.D.*

WELFARE BRANCH

Family Allowances and Old Age Security:

Director, J. Albert Blais

Assistant Director, R. H. Parkinson, B.A., M.S.W.

Regional Directors:

Newfoundland, St. John's, *L. C. Abbott*

Prince Edward Island, Charlottetown, *J. E. Green, B.Sc., M.S.W.*

Nova Scotia, Halifax, *M. T. Blue*

New Brunswick, Fredericton, *A. Nicholson*

Quebec, Quebec, *J. A. M. Caron*

Ontario, Toronto, *W. F. Hendershot, B.A.*

Manitoba, Winnipeg, *W. H. Davis, D.P.A.*

Saskatchewan, Regina, *R. J. G. Mitchell, B.A., B.S.W., M.S.W.*

Alberta, Edmonton, *W. W. Dahl*

British Columbia, Victoria, *W. R. Bone*

Old Age Assistance:

Director, J. W. MacFarlane

Unemployment Assistance:

Director, R. B. Splane, M.A., D.S.W.

Assistant Director, R. Rouleau, DIP. S.W.

Welfare Grants:

Director, W. W. Struthers, B.A., B.S.W.

International Welfare:

Director, J. A. Macdonald, B.A.

Emergency Welfare:

Director, P. H. Stehelin, L.L.B.

Fitness and Amateur Sport Directorate:

Director, R. Dion, B.A., M.A.

Assistant Director, Jean Carmichael, B.A., D.P.L.E., M.A.

ADMINISTRATION BRANCH

Departmental Librarian:

Mary D. Morton, B.H.SC., B.L.S.

Departmental Secretary:

Olive J. Waters

Information Services:

Director, Harvey W. Adams

Legal Services:

Legal Advisor, R. E. Curran, Q.C., B.A., L.L.B.

Personnel Services:

Director, E. J. Preston, M.A.

Purchasing and Supply:

Director, J. K. Wilson

Research and Statistics

Director, J. E. E. Osborne, M.A., D.H.A.

Translation:

Chief, G. A. Sauve

Treasury Office:

Chief, H. L. Rock

DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS

ADMINISTRATIVE OFFICE

OTTAWA

Brooke Claxton Building, Tunney's Pasture

Family Allowances and Old Age Security

ST. JOHN'S, NFLD.	Building 102, Fort Pepperell
CHARLOTTETOWN, P.E.I.	Dominion Building
HALIFAX, N.S.	Ralston Building, Hollis Street
FREDERICTON, N.B.	Federal Building, 633 Queen Street
QUEBEC, P.Q.	15 Henderson Street
TORONTO, ONT.	25 St. Clair Ave., East, Toronto 7
WINNIPEG, MAN.	MacDonald Building, 344 Edmonton St.
REGINA, SASK.	Dominion Government Building, Corner Scarth St. & Victoria Avenue
EDMONTON, ALTA.	Federal Building, 107th Street
VICTORIA, B.C.	Federal Building, 1230 Government St.
MONTREAL, P.Q.	Room 310, Postal Station H, 1254 Bishop Street

Food and Drug Laboratories

OTTAWA, ONT.	Tunney's Pasture
HALIFAX, N.S.	P.O. Box 605, Ralston Building, 105 Hollis St.
MONTREAL, P.Q.	Room 800, 400 Youville Square
TORONTO, ONT.	55 St. Clair Ave. East
WINNIPEG, MAN.	Room 310, Federal Bldg., Main and Water Streets
VANCOUVER, B.C.	Room 504, 325 Granville Street

Food and Drug Offices

OTTAWA, ONT.	Tunney's Pasture
HALIFAX, N.S.	P.O. Box 605, Ralston Bldg., 105 Hollis Street
CHARLOTTETOWN, P.E.I.	P.O. Box 1311, Confederation Bldg.
SAINT JOHN, N.B.	P.O. Box 396, Room 517, New Customs Bldg.
SYDNEY, N.S.	P.O. Box 324, Federal Bldg.
ST. JOHN'S, NFLD.	P.O. Box 596, Sir Humphrey Gilbert Bldg.

QUEBEC, P.Q.	Gare Maritime Champlain, Room 398, Anse au Foulon
THREE RIVERS, P.Q.	P.O. Box 1146, Post Office Bldg.
HULL, P.Q.	Room 206, Federal Bldg., Rue Principale
SHERBROOKE, P.Q.	P.O. Box 1120, 315 King St. W.
MONTREAL, P.Q.	Room 800, 400 Youville Square
TORONTO, ONT.	55 St. Clair Ave. East
BELLEVILLE, ONT.	P.O. Box 93, New Federal Bldg., Pinnacle St.
HAMILTON, ONT.	National Revenue Bldg., 150 Main St. West at Caroline
KITCHENER, ONT.	P.O. Box 33, Dominion Public Building
LONDON, ONT.	P.O. Box 504, Dominion Public Building, 457 Richmond Street
WINDSOR, ONT.	Dominion Public Building
SUDBURY, ONT.	3rd Floor, New Federal Building
PORT ARTHUR, ONT.	Room 313, Public Building, 33 Court Street South
WINNIPEG, MAN.	Federal Building
BRANDON, MAN.	Federal Building
SASKATOON, SASK.	307 London Building, 20th St. East & 3rd Avenue
REGINA, SASK.	Room 312, Motherwell Building
CALGARY, ALTA.	Customs Building
EDMONTON, ALTA.	Room 541, Federal Building
KAMLOOPS, B.C.	Room 235, 317 Seymour Street
VANCOUVER, B.C.	Federal Bldg., 325 Granville St.
VICTORIA, B.C.	Room 408, Belmont Building, 805 Government Street

Immigration Medical Services Offices

CANADA

ST. JOHN'S, NFLD.	Federal Building
GANDER, NFLD.	Gander Airport
STEPHENVILLE, NFLD.	Harmon Field Airport
SYDNEY, N.S.	Marine Hospital and Reserve Airport
HALIFAX, N.S.	(1) Pier 21, P.O. Box 129 (2) 619 Ralston Building
LANCASTER, N.B.	P.O. Box 140
MONCTON, N.B.	Moncton Airport
SAINT JOHN, N.B.	P.O. Box 626
QUEBEC, P.Q.	Champlain Harbour Station, Wolfe's Cove
MONTREAL, P.Q.	(1) 150 St. Paul Street, W. (2) 320 Baldwin Street
DORVAL, P.Q.	Montreal International Airport
OTTAWA, ONT.	Ottawa International Airport

TORONTO, ONT.	175 Bedford Road
MALTON, ONT.	Toronto International Airport
WINDSOR, ONT.	Windsor Airport
LONDON, ONT.	London Airport
FORT ERIE and NIAGARA FALLS, ONT.	P.O. Box 1001, Fort Erie
WINNIPEG, MAN.	Immigration Hall, 83 Maple St., and Winnipeg International Airport
EDMONTON, ALTA.	Edmonton Airport
VANCOUVER, B.C.	Immigration Building, foot of Burrard St. and Vancouver International Airport
VICTORIA, B.C.	816 Government Street

OVERSEAS

LONDON, England	38 Grosvenor St., London W.1
BELFAST, Northern Ireland	22 North Street
BRISTOL, England	5-18 Wine Street
GLASGOW, Scotland	18 Woodlands Terrace, C.3
LEEDS, England	5-7 New York Road
LIVERPOOL, England	17 Harrington St., Liverpool 2
BRUSSELS, Belgium	230 rue Royale
PARIS, France	38 Avenue de l'Opera
ROME, Italy	Via Acherusio Sud 9
THE HAGUE, Holland	12 Carel Van Bylandtlaan
COPENHAGEN, Denmark	Canadian Embassy, Vestagervej 5
BERLIN, Germany	Berlin-Charlottenburg, 2, Uhlandstr. 20-25 Aufgang II
COLOGNE, Germany	Canadian Embassy, Visa Section, Buchheimerstrasse 64-66, Weiner Platz, Cologne-Meulheim
LISBON, Portugal	Canadian Embassy, Avenida da Republica 44-20
MUNICH, Germany	Josefshospitalstrasse 7/4, Muenchen 2
STUTTGART, Germany	Marquardt Gebaeude, Koenigstrasse 20
HAMBURG, Germany	Canadian Consulate, General Visa Office, Schillerstr. 47/49, Hamburg-Altona
BERNE, Switzerland	Canadian Embassy, Medical Section, 43 Neuengasse, Interhaus, 2nd Floor
VIENNA, Austria	Canadian Embassy, Medical Section, Tuchlauben 8, Vienna 1
ATHENS, Greece	Canadian Embassy, Visa Office, 54A Queen Sofia Street
HELSINKI, Finland	Canadian Embassy, Visa Office, Bulevardi 10A
HONG KONG	3rd Floor, United Chinese Bank Bldg., 31-37 Des Voeux Road, Central, Box 183

Sick Mariners Clinics and Hospitals

HALIFAX, N.S.	Immigration Building, Pier 21
SYDNEY, N.S.	63 Charlotte Street
SAINT JOHN, N.B.	P.O. Box 626
QUEBEC, P.Q.	Champlain Harbour Station, Wolfe's Cove
MONTREAL, P.Q.	150 St. Paul Street West
VANCOUVER, B.C.	Immigration Building, foot of Burrard Street
VICTORIA, B.C.	816 Government Street

Quarantine Stations and Sub-Stations

GANDER, NFLD.	Gander Airport
ST. JOHN'S, NFLD.	Federal Building
SYDNEY, N.S.	63 Charlotte St. and Airport
HALIFAX, N.S.	Pier 21 & International Airport
SAINT JOHN, N.B.	Pier 9
QUEBEC, P.Q.	Champlain Harbour Station, Wolfe's Cove
MONTREAL, P.Q.	150 St. Paul Street West and 320 Baldwin Street
BAIE COMEAU, P.Q.	Sub-Station
SEVEN ISLANDS, P.Q.	Sub-Station
RIMOUSKI, P.Q.	Sub-Station
PORT ALFRED, P.Q.	Sub-Station
THREE RIVERS, P.Q.	Sub-Station
SOREL, P.Q.	Sub-Station
PORT CARTIER, P.Q.	Sub-Station
DORVAL, P.Q.	Montreal International Airport
VICTORIA, B.C.	816 Government Street
VANCOUVER, B.C.	Immigration Building and Vancouver International Airport

Regional Offices — Medical Services

Responsible for Indian Health Services; Northern Health Service; Quarantine, Immigration, Sick Mariners; Civil Service Health and Civil Aviation Medicine

EASTERN	Kenson Bldg., 233 Metcalfe St., Ottawa
CENTRAL	705 Commercial Building, 169 Pioneer Ave., Winnipeg
SASKATCHEWAN	735 Motherwell Building, Regina
FOOTHILLS	11344, 128th St., Edmonton
PACIFIC	1110 West Georgia, Vancouver

Laboratory of Hygiene

OTTAWA, ONT.	Tunney's Pasture
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Occupational Health Laboratories

OTTAWA, ONT. 45 Spencer Street

Public Health Engineering District Offices

TRURO, N.S. P.O. Box 608, Federal Building
MONCTON, N.B. P.O. Box 86, Post Office Building
MONTREAL, P.Q. 150 St. Paul Street, West
ST. CATHARINES, ONT. Dominion Building
WINNIPEG, MAN. 2nd Floor, Postal Station B,
Magnus Ave. at Main St.
EDMONTON, ALTA. Room 541, Federal Public Bldg.
VANCOUVER, B.C. Room 605, 1110 West Georgia Street

Emergency Welfare District Offices

VICTORIA, B.C. Room 241, 816 Government Street
EDMONTON, ALTA. Room 372, Federal Building
QUEBEC, P.Q. Room 10, 3 Buade St., P.O. Box 940
HALIFAX, N.S. Room 618, Ralston Bldg., 105 Hollis St.

Radiation Protection

OTTAWA, ONT. Brookfield Rd., Confederation Heights

Civil Service Health Centre

OTTAWA, ONT. No. 3 Temporary Building

DEPARTMENT OF NATIONAL HEALTH AND WELFARE

