

the past twenty years. For whites it will be considerably less.

With respect to the future growth of our population, it may be noted that existing mortality rates for the whites are already so low that a further decline would affect population growth only slightly. Yet, if the birth rate were to drop to its 1940 level, the trend in mortality rates would be the main factor influencing the future size of the total population.

According to Dr. Dorn, the most important demographic effect of the declining mortality rates perhaps will be its influence on age distribution. If gains from immigration remain insignificant and if fertility rates are approximately at replacement level, the projected trends of mortality rates for white females to 1970 would yield a virtually rectangular age distribution until the age of 80. Under these assumptions the stationary population resulting from mortality rates of 1970 would be about 7.6 per cent greater than that resulting from 1948 mortality rates. "For nonwhite males the corresponding increase would be 15.3 per cent, showing that the trend in mortality is still an important factor in the growth of nonwhite population."

LILA M. FISCH

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THE CANADIAN SICKNESS SURVEY 1950-51¹

THE Canadian Sickness Survey is unique in that it was the first morbidity survey made by monthly visits over a period of a year on a national level. The survey was begun in the fall of 1950 "to obtain estimates of the incidence and prevalence of illness and accidents of all kinds, the amount of medical, nursing, and other health care received, and the volume of family expenditures for the various types of health services." The

¹ Peart, A. F. W.: Canada's Sickness Survey. Review of Methods. *Canadian Journal of Public Health*, October, 1952, pp. 401-414.

The Dominion Bureau of Statistics and The Department of National Health and Welfare. Canadian Sickness Survey 1950-1951, Special Compilation: No. 1. Family Expenditures for Health Services. Ottawa, Canada, May, 1953, 13 pp.

The Dominion Bureau of Statistics and The Department of National Health and Welfare. Canadian Sickness Survey 1950-1951, Special Compilation: No. 2. Family Expenditures for Health Services by Income Groups. Ottawa, Canada, July, 1953, 13 pp.

The Dominion Bureau of Statistics and The Department of National Health and Welfare. Canadian Sickness Survey 1950-1951, Special Compilation: No. 3. Family Expenditures for Health Services by Expenditure Group. Ottawa, Canada, September, 1953, 56 pp.

survey was planned and organized by the Department of National Health and Welfare in conjunction with the Dominion Bureau of Statistics and carried out by the ten provincial health departments with federal funds made available to the provinces through the National Health Program.

The morbidity data were collected from a probability sample of approximately ten thousand private households (forty thousand persons) which represented the population throughout the ten provinces of Canada. The sample was designed "to obtain estimates within a sampling error of twenty per cent for events occurring at least once among every fifty persons in the population during the year." Reports were issued monthly by the provincial survey directors to show any changes in the sample composition. The over-all refusal rate was approximately five per cent and of the remaining households over eighty per cent of the individuals involved remained in the sample throughout the entire survey period.

Uniformity in practice was maintained by the use of three standard record forms: a household record card which contained basic household and environmental data; an individual sickness record which contained all sickness data for an individual for the study year; and an expenditure form which contained all health expenditures for the family unit. In addition two standardized supplementary forms were included: a record of permanent physical disabilities and a record of health services which were desired but not obtained.

Uniform instructions to enumerators were issued although the hiring and training of enumerators was carried out at the provincial level. A total of fourteen visits were made to each household by the enumerators: one to introduce the survey; twelve at monthly intervals to record the sickness experienced in the household; and a final visit to check the information collected on the preceding twelve visits.

The figures presented in the reports are estimates, for the whole of Canada, of family expenditures for various items of health care and service during the twelve month survey period. The estimates have been calculated from tabulations of the data obtained from families who remained in the sample throughout the survey year.

Three preliminary reports on family expenditures for health services have been published which were prepared jointly by the Dominion Bureau of Statistics and the Department of National Health and Welfare. The first report contains general information on estimated family expenditures for various items of health care and service as well as estimated expenditures by size of family unit; the second report contains expenditures by the various income groups; and the third report gives the distribution of family units by expenditure groups for various items.

A family unit was defined as a husband, wife, and their children. All other persons were classified as separate family units. The figures given in all three reports are provisional in that they are subject to minor adjustments due to changes in estimating procedures for the provinces. The expenditures recorded in the survey were actual payments made during the twelve-month period by persons in the sample for health care and services regardless of bills received, charges made, or when the purchased service was actually received.²

The first report on the results of the Canadian Sickness Survey entitled "Family Expenditures for Health Services" gives the total estimated expenditures for health services throughout Canada as \$373,800,000. Of this amount 24 per cent was spent on prepayment plans and 76 per cent in direct payments. Of the total expenditures 19 per cent was for medicine; 24 per cent for hospital care; 27 per cent for physicians' services; 12 per cent for combined services (hospital and physician); and 18 per cent for "all other services" which included dental, eye, and nursing care, appliances and equipment. Of the total 4,555,000 family units, 86 per cent had some expenditures by at least one member of the family. The estimated average annual expenditure per family unit for all items of health service was \$82.10 and per family unit with expenditures, \$95. The average annual expenditures increased as the size of family increased up to the five to six person family and then decreased in families of seven or more persons.

² All of the estimated expenditures shown are based on actual expenditures by families or individuals and should not be confused with the total costs of the various health services.

The second report is entitled "Family Expenditures for Health Services by Income Groups." Family income was defined as the "total income for all members of the family unit taken together." Families were asked to state into which of five income groups they fell: under \$1,500, \$1,500-\$2,999, \$3,000-\$4,999, \$5,000 and over, and no income. Estimates of health expenditures are presented for the first four of these income groups separately, and, under "all incomes," for all five income groups together including those whose income was not stated. In each income group the largest proportion of the total expenditures for health services was in direct payment for services, 53 to 54 per cent in the lower three income groups and 60 per cent in the income group "\$5,000 and over." Prepayment plans accounted for only 15 per cent of the total expenditure in the income group "less than \$1,500," 23 per cent in the income group "\$5,000 and over," and 25 and 28 per cent respectively in the income groups "\$1,500-\$2,999" and "\$3,000-\$4,999." The lowest income group spent proportionately more for drugs and appliances than did any of the other three income groups, 28 per cent compared to 15 to 20 per cent in the other groups. For "all incomes" approximately one fourth of the total expenditures were for prepayment plans, one half in direct payment for services, one fifth for drugs and appliances, and the remainder for "other services."

The proportion of the total family units which reported expenditures for any item of health service increased as income increased: from 80 per cent of the family units in the lowest income group reporting expenditures to 97 per cent in the highest income group. The estimated average annual expenditure per family unit with expenditures also increased as income increased, from \$58 in families with incomes "under \$1,500" to \$164 in families in the "\$5,000 and over" group.

The third report entitled "Family Expenditures for Health Services by Expenditure Group" gives the distribution of family units by expenditure group for the various items of health service. The material is presented in three main sections: (1) the distribution of family units by expenditure group, (2) the distribution of family units by expenditure group and size of family unit, and (3) the distribution of family units by expen-

diture group and income group. Of the estimated total family units 14 per cent had no expenditure; 59 per cent expenditures from \$1 to \$99; 18 per cent, from \$100–\$199; and 9 per cent, \$200 and over.

The second section shows that as family size increased, expenditures for health services increased. For example, only 4 per cent of one person families had expenditures of \$200–\$499, whereas 29 per cent of the families with five or more persons fell into that expenditure group. Thirty-seven per cent of the one person families had no health expenditures and only 2 per cent of the families with five or more persons had none.

The third section of the report shows that as income increased the proportion of families with high expenditures increased. For example, in families with incomes "under \$1,500" only 4 per cent had health expenditures of from \$200–\$499 whereas 17 per cent of the families with incomes of "\$5,000 and over" were in that expenditure group. Twenty per cent of the families with incomes "under \$1,500" had no expenditure whereas only 3 per cent of the families with incomes of "\$5,000 and over" had no expenditure. Each section of this third report gives data on expenditures by family units in a detailed breakdown by expenditure item.

These three preliminary reports are part of a series intended to provide interim information on the more important results of the Canadian Sickness Survey. They precede the publication of a final report which is to contain more detailed information together with a fuller description of the methods used. The Canadian Sickness Survey was a comprehensive morbidity survey on a national level which provided information "essential for the effective planning of both medical care and public health programs."

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EVALUATION OF THE PHYSICAL FITNESS OF PRESENT-DAY INDUCTEES¹

THE inadequacies of the method of distributing manpower among the various branches of the Armed Forces led the

¹ Karpinos, Bernard D.: Evaluation of the Physical Fitness of Present-Day Inductees. *U. S. Armed Forces Medical Journal*, March, 1953, IV, No. 3, pp. 415–430.