pregnancy and deaths of live-born infants who fail to survive the first week of life.

Table 5.46 shows that in 1971 there were 7,352 such "deaths", of which 3,396 were stillborn and 3,956 live-born but failed to survive one week. The national rate of such deaths was 20.1 for every 1,000 total deliveries, a drop from 35.8 in 1951. This perinatal rate has declined slowly but steadily from 65.2 in 1921.

5.7.3 Life expectancy

Life tables are measures of life expectancy compiled from the death rates prevailing over a period. They assume that a given cohort of people (usually 100,000) are born simultaneously in a particular year and continue to be subject all their lives to the death rates prevailing in that year, or perhaps to the average death rates for, say, a three-year period centred around that year. The "expected" deaths in the cohort are calculated (in the case of a "complete" life table) for the first year of life, second year of life, etc., and the diminishing cohort is "followed" for 100 or more years until it has been virtually eliminated. Life expectancy at birth is calculated for the entire cohort and, subsequently, remaining life expectancy is calculated for the survivors at one year, two years, etc. It should be realized that the assumptions of such a life table are never fulfilled in practice and that the hypothetical cohorts in life tables do not represent any actual population. Usually, the persons in an actual cohort born in the life-table year will have a higher life expectancy than those in the life-table cohort because, during their lifetimes, public health conditions will presumably constantly improve and standards of medical care will also presumably advance.

Six official series of life tables for Canada and the provinces and regions have been published to date, based on deaths in the three-year period around each of the Censuses of 1931, 1941, 1951, 1956, 1961 and 1966. The life-table values for 1966 are given for selected years of age in Table 5.49. This Table shows that, at 1965-67 mortality rates, 2,525 of 100,000 males born would have died in their first year with 97,475 surviving to one year of age, that 156 more would have died in their second year with 97,319 reaching their second birthday, and so on. There would be 252 survivors at 100 years of age. The "Probability of dying" column shows the ratio between the population at each age and the number of "expected" deaths in the coming year. Finally, as already stated, the "Expectation of life" column shows the number of remaining years of life that can be expected at each age, given the 1965-67 mortality rates.

Table 5.49 also shows that the male probabilities of dying were higher than the corresponding female probabilities over the entire period from birth to 90 years. Mortality rates, and consequently the probabilities of dying, were lowest at about age ten for both sexes. Above this age the male probability rose quite rapidly, reflecting male accident mortality, and the female probability rose more gradually. Mortality for men between ages 20 and 35 was fairly constant but the male probability began to rise steeply at age 40, due mainly to cardiovascular mortality. Female probabilities after this age rose steadily but less rapidly. It may be observed that about 11,700 males would have died by age 50 as compared with 7,100 females, and that about 57,500 males would have survived to age 70 as compared with 74,400 females.

Table 5.50 shows life expectancy values over the 1951-66 period. By 1966, Canadian life expectancy at birth had reached a new high point of almost 68.8 years for males and 75.2 years for females — comparable to the expectancies for other countries with highly developed programs of medical and public health care. Because of the still substantial level of infant mortality, the expectations for male and female children one year old were somewhat higher than the corresponding expectancies at birth. Expectation at age 20 was 51.5 years for men and 57.4 years for women and, at age 40, 33.0 years for men and 38.2 for women. By age 65, the remaining expectancies were 13.6 years for men and 16.7 years for women.

Table 5.51 shows the life expectancies for five Canadian regions for selected years over the period 1951-61, and the corresponding expectancies for all ten provinces for 1966. The steady widening of the gap between male and female expectancies, so evident at the national level, was common to the expectancies for all five regions. Throughout the 1951-61 period, the Prairie Provinces showed the highest male expectancies and, in the later years, the highest female expectancies as well. The Quebec expectancies were consistently the lowest but they showed the largest gains over the period. Between 1931 and 1961, Quebec life expectancies at birth rose by 11.1 years for males and 15.0 years for females, as compared with the national advances of 8.4 years for males and 12.1 years for females.