

*Urban or Rural Residence.* Compared with urban residents "the chronic illness rates were found to be higher for rural-farm and rural-nonfarm groups, particularly among people over 65 years of age."

*Income.* The prevalence of chronic illness increased as income decreased. "Families with incomes of \$1,500 per year or less averaged 191 chronic illnesses per 1,000 population. Those with incomes of \$4,000 or more averaged 126 per 1,000."

The cost of caring for the chronically-ill person presents a serious problem to low-income families. It was found that 7.7 per cent of those with chronic illness were hospitalized at some time during the six-month period prior to the study. The average amount paid for medical care for the chronically-ill patient during the same period was \$45.18.

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## TRENDS IN ILLNESS AND MORTALITY<sup>1</sup>

"THE longest series of data available on trends of both illness and death is for soldiers in the United States Army for the 130 years since 1820." These data have been presented in a paper entitled: "Trends in Illness and Mortality," by Selwyn D. Collins. The paper also gives data on illness trends among industrial employees for the period 1915 to 1950; tuberculosis mortality in 27 countries for the period 1910 to 1950; and infant mortality in 28 countries for the same period.

*U. S. Army Data.* The data for the U. S. Army were shown by ten-year periods and by single years. When shown by ten-year periods the data reveal that rates for both illness and death declined greatly over the 130 year period under study. A comparison of the two shows that death rates declined even more rapidly than illness rates. When the data were shown for single years it was evident that although illness decreased with the years, there were periods when there was a sudden rise in rates. These outstanding peaks coincided with three wars: the Civil

<sup>1</sup> Collins, Selwyn D.: Trends in Illness and Mortality. *Public Health Reports*, May, 1952, 67: No. 5, pp. 497-503.

War, the Spanish-American War, and World War I. Mortality rates declined from the Civil War to 1925 with the exception of two wartime peaks. From 1925–1936 the rates were fairly level. After 1936 mortality again showed a decrease. “The predominant diseases causing the high case and death rates during the Civil War and also the high 1898 peak of the Spanish-American War were typhoid fever and diarrheal diseases. The 1918 peak was almost entirely due to the great pandemic of influenza and pneumonia.” The data excluded battle casualties and non-battle accidents.

It was possible to compare the mortality rates for the armed forces with those for civilian males of comparable ages. The curves describing the mortality rates for the two groups were fairly similar, but there was a tendency for the civilians to have higher mortality rates than the armed forces personnel.

*Industrial Employees.* Data on illness were shown for approximately 3,000 employees of a public utility firm for the period 1917–1950, and for approximately 200,000 industrial workers for the period 1921–1950. Data were records of absences from work of one day or longer for the first group and eight days or longer for the second group. Both groups showed data for males and females separately. Males in both groups showed a decline in morbidity until World War II, when the illness rates rose to a peak in 1945 or 1946 and then dropped. Female rates were similar to those for males in the group for which data included illnesses which caused disability of one day or longer. Females in the group which included illnesses which caused disability of eight days or longer did not show a drop in rates after the peak of 1946, but remained consistently high.

*Tuberculosis Mortality.* Mortality rates from tuberculosis were shown for approximately twenty-seven countries which were classified according to the degree of civilian participation in war. Countries in which civilian participation was the greatest, namely, those which were overrun or heavily bombed, showed periods of high mortality from tuberculosis occurring in about 1918 and again in about 1945. In the periods following these peaks, mortality “declined to a level that represents an approximate extension of the trend before the war.” Countries which were overrun, but not bombed, showed “evidences of

retardation in the downward trends of tuberculosis mortality during the war years, but practically no peaks that could be attributed to war conditions." Countries which were at war, but remote from the actual fighting, showed no wartime peaks in mortality.

*Infant Mortality.* The rate of infant mortality is considered indicative of the economic and sanitary conditions of a country. The infant mortality figures presented in this article corroborate this opinion in so far as war affects the conditions in the country. In the countries in which the war had the greatest intensity, namely, those which were overrun or bombed, there was a rise in infant mortality during the war years. There were no wartime rises in countries removed from the war.

The data in this paper are valuable because they show long-time experience in mortality and morbidity for a considerable population. They also show the trend in mortality in two fields, tuberculosis and infant births, which are affected by the general conditions for health in a country. It was possible, because of the length of the period under observation, to show the deleterious effects that two wars have had upon civilian populations.

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