THE DECLINE IN MORTALITY IN BRITISH GUIANA, 1911–1960

Jay R. Mandle
Department of Economics, School of Business Administration, Temple University, Philadelphia, Pennsylvania 19122

Abstract—In this paper an attempt is made to describe the pattern of declining mortality in British Guiana between 1911 and 1960. Specifically we identify the disease-specific mortality rates whose declines contributed most to the overall improvement, we consider the possibility that changing economic circumstances may have contributed to the decline in mortality, and we survey the improvements in public health facilities which occurred during the period. Broadly our conclusion is that improvements in public health facilities and not economic advances were responsible for the dramatic decline in mortality which was experienced. Before 1940 these advances took the form of improvements in the quality of the country’s water supplies, in methods of disposing of waste, and in medical facilities especially on the colony’s sugar estates. In addition, there was an advance in the dissemination of information with respect to pre- and post-natal care. In the postwar period British Guiana’s famous D.D.T. experiment was the most important reason death rates continued to fall. It is widely accepted that the decrease in death rates which has characterized the recent demographic experience of poor nations is the result of improved public health and preventative medical practices. With a handful of notable exceptions, however, few studies have appeared which have attempted to account for the pattern of decreasing mortality in individual countries. In this paper we attempt to describe the pattern of declining mortality as it was experienced in British Guiana between 1911 and 1960. (British Guiana became the independent nation of Guyana, May 26, 1966. To avoid confusion we will use the name British Guiana throughout the study, the country’s name during the period examined.)

(For a review of declining mortality rates in general, see Stolnitz, 1955 and 1956. Latin American mortality rate declines are discussed in Arriaga and Davis, 1969. Roberts, 1950, briefly reviews Jamaica’s mortality experience. For efforts to explain why death rates fell in Ceylon and British Guiana, see Newman, 1965; see also Meegame, 1969. The most ambitious effort to account for a downward trend in mortality has been performed for Great Britain in McKeown and Record, 1962.)

In dealing with the downward course of mortality in British Guiana, we address three issues. We identify the disease-specific mortality rates whose declines contributed most to the overall improvement in British Guiana. We consider the possibility that changing economic circumstances may have contributed to the decline in mortality, and we survey the improvements in public health facilities which occurred during the period. With respect to the latter we are interested in identifying, albeit qualitatively, whether there is evidence of a causal relationship between the pattern of public health improvements, and
the observed fall in the importance of specific diseases as causes of death.

The principal sources available for a study of the decline in mortality rates in British Guiana are the Annual Reports of the Registrar General, hereafter ARRG. The ARRG lists deaths registered in the Colony by age and also provides a listing of the "Principal Causes of Death." These compilations date from the late nineteenth century, so that coverage is available for all of the years included in the present study.

However, the accuracy of the data available is subject to serious reservation. The Colony's Registrar General in 1938 in assembling historical data for a visiting Royal Commission conceded that "... the nomenclature now in use differed materially from that used earlier in this century." Since causes of death were assigned by practicing physicians in only about 70 percent of the cases, inaccuracy was introduced from this source. Yet when the Registrar General rearranged data in order to gain "... greater accuracy than would otherwise obtain from uncontrolled acceptance of the earlier classification," very little substantive change in the original pattern actually was made (ARRG, 1938, Appendix, p. XXXI). Consistently throughout the period the same diseases reappear on the list of principal causes of death—malaria and undefined fever, pneumonia and bronchitis, diarrhea and enteritis, tuberculosis, and kidney disease (nephritis). This consistency in identifying the principal causes of death suggests that even though the accuracy of the data over time may have improved, the earliest information more or less accurately identifies the major sources of mortality. Thus, it seems that the recorded deaths by cause over time may be helpful in interpreting changing patterns of death over time.

The paper is divided into three parts. In the first, we broadly describe British Guiana's mortality experience between 1911 and 1960, and identify the diseases which were the most important causes of death. In the second we take the period from 1911 to World War II, and attempt to analyze the reasons for the Colony's initially high mortality position. We then attempt to account for the fall in mortality observed during these years, by first examining whether economic improvements could have been responsible for this trend, and then by investigating which, if any, public health improvements might have accounted for the declining mortality rates. In the third section we continue the same analysis for the postwar period, again by first testing the hypothesis that improvements in economic welfare might have accounted for the continued fall in death rates, and then by dealing with the public health improvements hypothesis.

Table 1 indicates that before the late 1920's British Guiana's crude death rate was high and fluctuating. Between 1911 and 1928 the Colony's crude death rate varied from over 4,000 per 100,000 of the population, recorded in 1918 and 1919, to between 2,350 and 2,400 registered in 1913 and 1925. Overall the mean crude death rate for the years 1911 to 1928 was 2,842 per 100,000 of the Guianese population.

For the first time the Colony's crude death rate in 1929 and 1930 fell below 2,400 for two consecutive years, and in eight of the eleven years between 1929 and 1940 it was below 2,200. Only in 1933, 1934, and 1938 did mortality return to levels in excess of 2,400, but even for these years the peak rate of mortality was 2,522 experienced in 1938, substantially lower than the mean for the 1911/28 period. Overall the crude death rate for British Guiana from 1929 to 1940 was 2,174, about one-fourth (23.5 percent) lower than the mean for 1911/28.

The crude death rate fell below 2,000