

**One hundred years of mortality in Latin America and the Caribbean:
the fragile path from hunger to longevity**

**Alberto Palloni
and
Guido Pinto-Aguirre**

**Center for Demography and Ecology
University of Wisconsin-Madison**

This paper is a summary from an as yet unfinished book on mortality in the XXth century in about 23 countries in Latin America and the Caribbean. The paper focuses only on adult mortality patterns during the period 1900-2000 and has four main goals. The first goal is to explicate and illustrate the application of a multi-pronged methodology to obtain consistent estimates of mortality levels and age patterns during the one hundred year period. The materials to accomplish this task are the series of vital statistics and decennial censuses in the 1950-2000 period. The methodology we use combines well-known techniques based on generalized stable populations, simulation of stable and non stable populations, and procedures inspired in Bayesian statistics to help us select from alternative estimates. The mortality patterns estimated for the period 1950-2000 form the foundation of specialized mortality models on which estimation for the period 1900-1950 is based.

Using quasi-stable populations and mortality models derived from the country-specific experience in the 1950-2000 period we then estimate life tables for the 1950-2000 period. This completes the measurement of adult mortality during the XXth century. The second goal of the paper is to explore patterns of mortality of old-age mortality (above age 65). We do this at two different levels. First we estimate patterns of old age mortality and compare them to those obtained in Western Europe. The patterns we examine have been purged of errors of coverage and adjusted for age misstatement among deaths and enumerated populations. For each country we examine the progression of mortality rates and extract measures regarding the rectangularization of the survival curve. Second, we analyze the cases of three countries (Chile, Costa Rica and Cuba and Chile) that have achieved very high life expectancies (higher than the US) and that have cause of death data readily available. Our analyses are designed to shed light on the factors that explain the march toward longevity in these countries.

The third goal of the paper is to explore in detail the relation between early childhood mortality and adult and old-age mortality. For each country we have available circa eleven life tables characterizing the mortality experience of each decade between 1900 and 2000. While pure cohort analysis is out of the question, we are able to relate the experience of early (0 to 5) and adult (over 50) mortality for at least six cohorts (those aged 0-5 in the 1900 to 1950 period).

The fourth goal of the project is to join our estimates of mortality with alternative projections into 2050 to estimate the overall contribution of the mortality decline experienced during the period 1930-1970 to the increase of the elderly (60+) population during the period 1990-2030. We show that more than two-thirds of the growth of the population 60+ after 1990 will be due to the sharp mortality decline experienced during the middle of the XXth century. We use this fact to derive conjectures about future mortality and health status among the elderly populations.