**Session 5: Impact of Aging Populations, Part 2**

# Prospects of Longevity in Mexico and Its Implications for Social Security and Health

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Demographic aging in Mexico reveals an increasing importance of the oldest-old. In 1980, published demographic statistics used 65 + as the higher open age group, but figures in 2000 go to 100 +. Changes have been fast, and aging at the top of the pyramid is not yet completely identified and evaluated. New concepts, definitions, methodologies and data are required. It is now essential to assess the amount and characteristics of the oldest elderly and to foresee the consequences for social security, health services and long-term care. Issues are emerging about maximum life span, the pace of longevity increases, behavior and levels of mortality at extreme ages, changes in life expectancies, and the impacts of morbidity, disabilities and causes of death. Questions and answers should take into account that rapid aging is occurring within an underdeveloped context characterized by social and economic heterogeneity and unfairness.

The lack of reliable statistics is a critical problem. However, indicators and prospects about longevity are necessary, even using approximations from indirect estimates. Advances can be drawn from life tables and demographic structures elaborated by the National Population Council. It is the only available set of statistics providing a consistent sequence from 1930 to 2000 that grounds trends and hypotheses for population and mortality projections. Demographic projections are a permanent assignment that produces periodic updates. The 2000 revision includes the 100 + age group along a whole range of dates from 1930 to 2000, with projections up to 2050. The 100 + end group seems sufficient for population structures and life tables up to 1980. But by 1990, a slight bulge appears in the 100 + population, which keeps increasing in projected estimates. Thus, omega must be moved up.

One proposition is to assume a Gompertz behavior of $q_x$ function after the mode of $d_x$ at oldest ages, considering theoretical reasoning and research findings that suggest that this procedure yields upper estimates of mortality for the oldest-old. Hence, there is likelihood that actual survival and longevity will be higher than estimated. The resulting distribution of $d_x$ adjusts to a normal distribution on the right side of the mode. This mode and mean moves in time to higher values at the same time that standard deviation lessens in an expected pattern according to other experiences and theoretical statements. The normal shape of $d_x$ for higher ages allows conjectures over the maximum life span, suggesting 109 years in 2000 and 114 in 2050. Potential improvements in health prevention, new medical interventions and genetic therapy reinforce the assumption that such calculations are a lower boundary. When combined with demographic, economic, social security and health data, this base provides scenarios for the short and medium range about life expectancies in relation to activity, health, disabilities, pension costs, demand of medical services and long-term care. Results will lead to further research on the actual size of the oldest-old population, better estimates of levels of mortality, the impact of socioeconomic variables on life and health expectancies, prospects about active life and disabilities, and morbidity and causes of death. Actuarial applications will exist for financial security, health care improvements and socioeconomic policies.