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Más, Pedro

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# Addressing Cuba's Aging Population: Why Epimapping Needs to Go Local

By Pedro Más MD PhD DrSc

The rapid aging of Cuba's population is garnering greater attention due to its foreseeable and profound economic and social repercussions. This is no wonder: by the end of 2009, 17.4% of Cuba's 11.2 million people were 60 years or older, and this trend is accelerating. By 2030, some 31% of Cubans are expected to reach this age group, making the country the "oldest" in the Americas.[1]

Among the complex implications of this process for Cuba's future are dilemmas arising from the health transition that accompanies the demographic one. In particular, with life expectancy nearing 80, people are living longer, meaning more people in the age groups most prone to disease and disability, with resulting consequences for the economy, labor force productivity, pension schemes, and design and costs of health care delivery.

To respond to these new circumstances—especially in Cuba's resource-constrained environment—the health system urgently needs a greater pool of relevant evidence on morbidity, comorbidity and mortality. This is the challenge we face as epidemiologists.

Cuba has escaped the tragedy of the "double burden" of disease that threatens many developing-country health systems, consisting of high prevalence and mortality from both infectious and non-communicable chronic conditions. In Cuba, the lion's share of morbidity and mortality, especially among older Cubans, is due to heart disease, cancer and stroke—the top three causes of death. The top 35 causes of death are well-documented for the nation and for each province, just as we know life expectancy, birth rates, and percentages of older adults nationally and for each province.

But does this tell us enough? I would argue it does not: such broad strokes and sweeping indicators don't provide the robust, detailed evidence needed to elaborate effective prevention programs; assign or move financial, material and human resources; or plan and develop health services.

The demographics themselves provide a good example: although we see relative similarity among provinces when it comes to population growth, especially birth rates and mortality, there are startling differences at the local level that have important implications. Analyzing aging by municipality offers a completely new perspective with a much greater range, from Moa municipality in Holguín province where just 10.0% of the population is older adults, to Plaza municipality in Havana City province with 25.9% in that age group.[2]


This is also true within provinces, where macro indicators tend to mask local differences. While the highest percentages of older Cubans in the country are registered in the provinces of Villa Clara (20.8), Havana City (19.5) and Sancti Spiritus (18.9), we find municipalities within these territories that have even higher rates that should trigger greater attention.[2]

Factoring in disease burden and mortality for these older adults, it becomes clear that we lack sufficiently detailed and precise epidemiological evidence at the local level to identify the specific chronic conditions that merit targeting in each municipality, so that local decision-makers can determine appropriate priorities for prevention, treatment and rehabilitation.

The micro-location studies I suggest must also consider specific populations of older adults: what differences do we find when taking into account sex as a variable for a specific condition in a specific municipality? What differences when we look at much older adults, those 80 and over?

### **we lack...precise epidemiological evidence at the local level**

The experience in Plaza municipality in Havana City province provides useful lessons from several years of research using validated methods to pinpoint differences in mortality between the municipality and the province, and among the municipality's seven health areas served by the same number of community polyclinics. Using data extracted exclusively from municipal health records, with no need to request further information, investigators found differences in degree of risk for selected causes according to sex, age group and polyclinic. [3] Interestingly, aging was sometimes associated with mortality from specific chronic causes, and sometimes not. Results of such epidemiological research, necessarily descriptive in a first phase, will undoubtedly generate other questions and hypotheses, motivating further investigation. And this is precisely what is needed.

As the current health system transformation proceeds, including reorganization, condensing and regionalization of services,[4] epidemiology as a specialty must supply the tools necessary to identify the health needs of older adults, and help tailor responses to them at the local level—the key place for truly effective action to improve quality of life for Cuba's older generations. 

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