

# Cuban infant mortality and longevity: health care or repression?

Gilbert Berdine<sup>3</sup>, Vincent Geloso<sup>1,\*</sup> and Benjamin Powell<sup>2</sup>

<sup>1</sup>FMI at Texas Tech University, Box 45059, Lubbock, TX 79409-5059, USA, <sup>2</sup>Texas Tech University's Rawls School of Business, FMI at Texas Tech University, Box 45059, Lubbock, TX 79409-5059, USA and <sup>3</sup>Texas Tech University Health Sciences Center, 3601 4th St Stop 9410, Lubbock, TX 79430-9410, USA

\*Corresponding author. FMI at Texas Tech University, Box 45059, Lubbock, TX 79409-5059, USA. E-mail: vincentgeloso@hotmail.com

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Ongoing political changes in Cuba following Fidel Castro's death offer an opportunity to evaluate his regime's legacy with regards to health outcomes. The common assessment is that Cuba's achievements in lowering infant mortality and increasing longevity are among the praiseworthy outcomes of the regime—a viewpoint reinforced by studies published in US medical journals (Campion and Morrissey 1993; Cooper and Kennelly, 2006)<sup>1</sup> We argue that some of the praise is unjustified. Although Cuban health statistics appear strong, they overstate the achievements because of data manipulation. Moreover, their strength is not derived from the successful delivery of health care but rather from the particular repressive nature of the regime which comes at the expense of other populations.

Cuban health statistics appear to be a paradox. Wealth and health are correlated because greater wealth can buy better health care. Yet, Cuba remains desperately poor and appears to be healthy. Cuban life expectancies of 79.5 years and infant mortality rates of 4.3 per 1000 live births (2015) compare well with rich nations like the USA (78.7 years and 5.7 per 1,000 live births) yet its per capita income of 7602.3\$ make it one of the poorest economies in the hemisphere (*World Development Indicators DataBank*, 2017).

How is Cuba healthy while poor? Most attribute the fact to Cuba's zero monetary cost health care system. There is some truth to that attribution. With 11.1% of GDP dedicated to health care and 0.8% of the population working as physicians, a substantial amount of resources is directed towards reducing infant mortality and increasing longevity. An economy with centralized economic planning by government like that of Cuba can force more resources into an industry than its population might desire in order to achieve improved outcomes in that industry at the expense of other goods and services the population might more highly desire.

Centralized planning has disadvantages. Physicians are given health outcome targets to meet or face penalties. This provides incentives to manipulate data. Take Cuba's much praised infant mortality rate for example. In most countries, the ratio of the numbers of neonatal deaths and late fetal deaths stay within a certain range of each other as they have many common causes and determinants.

One study found that that while the ratio of late fetal deaths to early neonatal deaths in countries with available data stood between 1.04 and 3.03 (Gonzalez, 2015)—a ratio which is representative of Latin American countries as well (Gonzalez and Gilleskie, 2017).<sup>2</sup> Cuba, with a ratio of 6, was a clear outlier. This skewed ratio is evidence that physicians likely reclassified early neonatal deaths as late fetal deaths, thus deflating the infant mortality statistics and propping up life expectancy.<sup>3</sup> Cuban doctors were re-categorizing neonatal deaths as late fetal deaths in order for doctors to meet government targets for infant mortality.

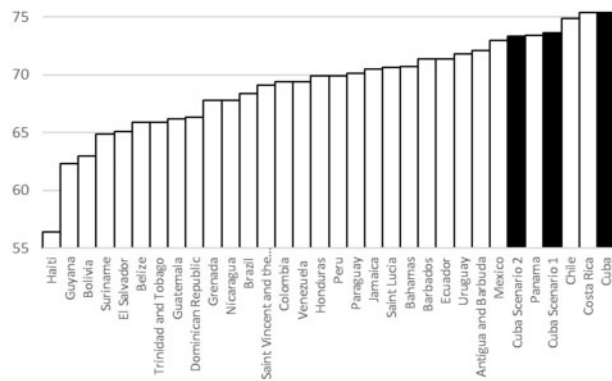
Using the ratios found for other countries, corrections were proposed to the statistics published by the Cuban government: instead of 5.79 per 1000 births, the rate stands between 7.45 and 11.16 per 1000 births. Recalculating life expectancy at birth to account for these corrections (using WHO life tables and assuming that they are accurate depictions of reality), the life expectancy at birth of men by between 0.22 and 0.55 years (Gonzalez, 2015).

Misreporting to meet fixed targets is not the only reason for the low infant mortality rate. An ethnographic study of the Cuban health system showed that physicians who worried that a mother's behavior might lead to missing the centrally established targets will prescribe the forceful internment in a state clinic (*casa de maternidad*) so that they may regulate her behavior.<sup>4</sup> Physicians often perform abortions without clear consent of the mother, raising serious issues of medical ethics, when ultrasound reveals fetal abnormalities because 'otherwise it might raise the infant mortality rate' (Hirschfeld 2007b:12).<sup>5</sup>

Coercing or pressuring patients into having abortions artificially improve infant mortality by preventing marginally riskier births from occurring help doctors meet their centrally fixed targets. At 72.8 abortions per 100 births, Cuba has one of the highest abortion rates in the world.<sup>6</sup> If only 5% of the abortions are actually pressured abortions meant to keep health statistics up, life expectancy at birth must be lowered by a sizeable amount. If we combine the misreporting of late fetal deaths and pressured abortions, life expectancy would drop by between 1.46 and 1.79 years for men. In Figure 1 below, we show that that with this adjustment alone,

### Highlights

- Cuban healthcare statistics are flawed.
- The health achievements are in part the result of repressive methods.
- The health achievements are in part the result of policies that are unrelated to health care provision.



**Figure 1.** Male life expectancy at birth at Latin America and Caribbean, 2004 with corrections to life tables. *Source:* see text, footnotes 6 and 7 (more exhaustive).

instead of being first in the ranking of life expectancy at birth for men in Latin America and the Caribbean, Cuba falls either to the third or fourth place depending on the range.<sup>7</sup>

Other repressive policies, unrelated to health care, contribute to Cuba's health outcomes. For example, car ownership is heavily restricted in Cuba and as a result the country's car ownership rate is far below the Latin American average (55.8 per 1000 persons as opposed to 267 per 1000) (*Road Safety*, 2016). A low rate of automobile ownership results in little traffic congestion and few auto fatalities. In Brazil, where the car ownership rate is 7.3 times above that of Cuba, road fatalities reduce male and female life expectancy at birth by 0.8 and 0.2 years (*Chandran et al.* 2013). All else being equal, government restrictions of automobile ownership improves Cuban life expectancy by reducing accidents but also by forcing the population to increase their reliance on more physically demanding forms of transportation (e.g. cycling and walking) (*Borowy*, 2013). In fact, local physicians attribute a strong role to the massive introduction of bicycles in order to explain the decrease in traffic accidents mortality (*Garcell and Quesada*, 2011). Another example is the rationing books entitling Cubans to limited quantities of goods priced well-below market-clearing levels. This implies that there is a need to ration quantities consumed. One good illustration is that during the 'Special Period' (the prolonged economic crisis caused by the collapse of the Soviet Union), there were 'sustained shortages in the food-rationing system' that led to reductions in per capita daily energy intake (*Franco et al.* 2007). Combined with the increase in the levels of energy expenditures due to the reliance on physically demanding forms of transportation, this led to a reduction in net nutrition. Accidentally, this crisis led to the halving of obesity rates and, although one has to be careful in causal terms, this likely contributed to important reductions of deaths attributed to diabetes, coronary heart diseases and strokes (there were also increases in the number of cases of neuropathy).<sup>8</sup>

Finally, these outcomes come at cost to other population segments. The maternal mortality ratio of Cuba in 2015 was higher

than in Latin American countries like Barbados, Belize, Chile, Costa Rica, Mexico and Uruguay (*Trends in Maternal Mortality 1990 to 2015*, 2015). In terms of healthy life expectancy, Cuba ranked behind Costa Rica, Chile, Peru and Bermuda and marginally surpassed Uruguay, Puerto Rico, Panama, Nicaragua and Colombia (*Global Burden of Disease*, 2017). This is despite the aforementioned data manipulation on top of having a greater physician density and share of national resources allocated to health than these countries.

Cuban mortality and longevity statistics appear impressive. They are a result of some combination of the government's choice to allocate more resources into the health care industry (at the expense of other industries that could produce needed goods) and from coercive measures through both health delivery and economic planning that improve health statistics at the expense of other spheres of life.

Although the USA and other countries re-examine how to design health care delivery they should not uncritically accept the myth that the Cuban health care system has been the sole, or even the most important, cause of Cuba's abnormally high longevity statistics. The role of Cuban economic and political oppression in coercing 'good' health outcomes merits further study.

### Notes

1. Cooper *et al.* (2013, p. 819) point out that vital registration rates are very high in Cuba (well above other Latin American countries) which suggests that problems of data reliability do not emanate from this issue. However, we contend that this is not sufficient evidence to rule out problems of data reliability.
2. Gonzalez and Gilleskie (p. 706) point to a World Health Organization study that show close similarities between early neonatal mortality and late fetal mortality for most regions. For 'Latin America and the Caribbean' in 2004, the rates (per 1000 live births) these rates were respectively at 8 and 10 while Cuba's rates were wider apart at 2 and 13.
3. There are other cases where discrepancies between early neonatal and late fetal mortalities were used by demographers as a sign of data manipulation—see notably *Velkoff and Miller* (1995).
4. Patients have no right to privacy in Cuba nor do they have the right to refuse treatment—see *Hirschfeld*, (2007a,b, 2009).
5. There is also substantial evidence of women being pressured by physicians on top of instances of the lack of informed consent (*Hirschfeld* 2007b).
6. All statistics regarding Cuban health care and abortions are derived from Anuario Estadístico de Salud 2015. Havana: Ministerio de Salud Pública, 2016. We use these figures not because we believe them to be perfectly accurate, but because there are no alternatives. This plays to our advantage as we can state that we are using numbers that tend to downplay our arguments. The figure of 72.8 abortions per 100 live births means that 41.9% of pregnancies are terminated.
7. The 2004 data were used because the corrections to infant mortality related to that year (*Mortality and Global Health Estimates*, 2016).

8. A later study expanded on this point and confirmed these findings—see Franco *et al.* (2007, 2013).

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