DEMYSTIFYING THE CUBAN HEALTH SYSTEM: AN INSIDER'S VIEW

Rodolfo J. Stusser[1]

The World Health Organization (WHO) in 1948 defined health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity."[2] Henry Sigerist, in his monumental work on the history of medicine, could never grasp the obscure ideological goal of Soviet totalitarian universal primary health care, with indigent physicians and "feldshers," besides the main humanitarian goal. Highly indoctrinated physicians (with low quality training and resources, miserable nutrition, housing, and income), because of their strong psychological influence on people in an environment of censorship and intimidation, were used as community "shamans" and "attorneys" to advocate for submission to oppressive and impoverishing Soviet-style egalitarian socialism with the promise of a paradise of riches in the future.

Unfortunately, some foreign public health scholars who have contributed to the development of the concepts of health care and social medicine over the last half century, have confused the progressive and balanced British and Scandinavian universal health care with the Soviet, Chinese and Cuban ones. They have mostly interacted with medical officials and leaders of the repressive community organizations of the communist party in those countries. Much has been published with the best intentions about supposed health wonders of Cuba's revolution, looking for models for a new system of universal primary care for the United States or for a way to solve serious health problems in the Third World. From the first outsiders' reports on Cuban health care by the Pan American Health Organization (PAHO) in 1962 to the more recent book by Whiteford and Branch,[3] these reports and books have been carefully dictated by biased Cuban officials without input from Cuban physicians and citizens due to the lack of free expression, travel and other liberties. There are few exceptions, among them anonymous letters published by this author in medical journals while he was in the island

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2. World Health Organization. *Research and the World Health Organization. A History of the Advisory Committee on Health Research 1959–1999*. Geneva: WHO, 2010.

3. Whiteford L., Branch L. *Primary Health Care in Cuba: The Other Revolution*. Lanham, Maryland: Rowman and Littlefield, 2008. See Hirschfeld K. "Review of Linda Whiteford and Laurence Branch, Primary Health Care in Cuba: The Other Revolution." *Society* 2009; 46:293–296.

impartially assessing Cuba's health realities during the colony, republic and revolution.[4]

Cuban health officials have traveled to U.S. and to other developed countries conveying the governmental view that there was a of lack of public health services, health care, pharmaceutical labs and medical research in pre-revolutionary Cuba, and of the miracles in universal primary care, reproductive health, and biotechnology in socialist Cuba. These officials, working and living close to the top levels of the power elite, have not conveyed Cuba's health care realities.

The purpose of this paper is to contribute to a more objective understanding of Cuban health care realities. More specifically, the objectives are to: give a balanced overview of socioeconomic and health care evolution in Cuba over the last 200 years; discuss the deflated infant mortality and inflated life span hypothesis in Cuba over the last fifty years, challenging it with evidence regarding infant and maternal health care indices; discuss the relationship between human development, liberties, and other living standards and Cuba's health care policies and results; and finally discuss the Soviet-style revolution mythology transferred to Cuba, and its distorting impact on Cuba's long-term tradition of scientific public health and health care.

MATERIALS AND METHODS

This paper is based on firsthand knowledge of the realities of the Cuban public health system experienced by the author during 64 years living in Cuba as patient and physician, combined with social anthropological observational methods in a retrospective and prospective personal 42–year research on Cuban health policies, system, information and statistics. During 2000–2010, the author had limited (and censored) access to Cuban libraries and archival sources regarding Cuba's health statistics for the colonial (1700s-1898) and republican (1899–1958) periods, as well as to some international data. During 2005–2007, despite huge obstacles and using pirated internet access, the author was able to make a comparison of Cuban and foreign health statistics for case self-control and cases-controls research with clinical and social epidemiological observational methods, in collaboration with experts at Wake Forest University and the University of Washington. Since 2010, the author has been able to revise and verify the comparisons in the U.S. through uncensored access to the internet and the extensive data bases at the University of Miami Otto G. Richter Library and the Cuban Heritage Collection.[5]

International WHO data on stillbirth and neonatal rates were analyzed and a maternal/infant mortality ratio devised by the author was calculated from United Nations Children's Fund (UNICEF) 2009 data on infant and maternal mortality indices for a wide range of countries. Estimates for standard and new human and health indexes for Cuba in 1800, 1900, 1957 and 2007, were calculated with data from Cuba and other countries; these estimates will be adjusted as additional data becomes available. The estimates of the human development index for Cuba and Korea in 1900 and 1957 were made with the online United Nations Development Program (UNDP) calculator.

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4. See, e.g., Anonymous Correspondence. "Cuba's delayed transition needs." *Lancet* 2006 368(9544):1323. (Oct 14) http://www.thelancet.com/journals/lancet/article/PIIS0140673606695445/fulltext; Anonymous Cuban professional. e-Response. "Achieving health equity with more liberty, wealth, and ethics." *British Medical Journal* 2007 (Oct 5). http://www.bmj.com/cgi/eletters/335/7621/628–b#177601; Anonymous Cuban professional. E-Response. "Poverty, emigration, government, development, and equity." *Annals of Family Medicine* 2007 (Dec 3). http://www.annfammed.org/cgi/eletters/5/6/486#7388; Author's name withheld. Letter. "Health consequences of Cuba's Special Period." *Canadian Medical Association Journal* 2008;179(3):257. (July 29) http://www.cmaj.ca/cgi/content/full/179/3/257

5. This paper is part of an 11–year personal research effort which is expected to result in Stusser RJ. *Cuba's health duration and quality standards and levels: Advances, stagnation and setbacks, 1900–1958; 1959–2010*. Book manuscript in preparation, 2011.

INTRODUCTION TO CUBAN HEALTH REALITIES

Colonial, Republican and Totalitarian Cuba's Human and Health Development

Socialist Cuba's authorities have suppressed health statistics for the colonial and republican periods as if they did not exist or were unreliable, or have altered them or taken them out of context when they do present them. In the raw data and world rankings in Table 1 and Figure 1 it can be observed that during these periods, Cuba advanced in wellbeing and health, and was among countries at the head of the developing world. Infant mortality rate, life expectancy at birth, and gross birth rate improved from 1800–1958, in contrast with the performance in the socialist period.

Republican Cuba's population had a high density of physicians, nurses, midwives and pharmacists; moreover, this cohort of health care providers worked within Cuba, providing services for the Cuban population and earned decent incomes. Under socialism, densities of physicians and of soldiers reached all time highs, but many worked abroad. With respect to the density of soldiers, Cuba held 1st place in the world in 1962 and through 1992 was very close to North Korea in this indicator.

Cuba's maternal mortality ratio declined steadily through about 1980. Rather than converging in absolute value with the declining infant mortality rate, the maternal mortality ratio has actually stagnated and even risen since the 1990s. According to UNICEF and WHO statistics, Cuba's 2009 infant mortality rate of 5.3 (x 1000 live births), 34th lowest in the world, is in contrast with the relatively much higher maternal mortality ratio of 45–53 (x 100000 live births), 68th in the world. Within the 40th percentile of countries with lowest infant mortality, Cuba is the only country that shows two other anomalies: highest rate of induced abortions (over 59 x 100 pregnancies), 1st in the Americas and 4th place worldwide, and the highest distance (about 9 to 10, measured by this author through a dimensionless ratio) between the absolute values of infant and maternal mortality indices, compared with distances (ratios) for other 39 countries in the range of 1.5 to 3. During the socialist period, while infant and child mortality decreased, elder mortality stagnated and even increased.

But there are other paradoxical facts not reflected in the tables. According to data in a 2006 WHO report,[6] Cuba's rate of early (first week) neonatal mortality of 3 (x 1000 live births), 45th lowest in the world, contrasts with the relatively much higher rates of fetal mortality—or stillbirths—of 11 (x 1000 total births—live and dead) and of perinatal mortality of 14 (x 1000 total births). Cuba is the only country within the 45th percentile of countries with lowest neonatal mortality showing two anomalies: highest stillbirth rate in the Americas (27th place) and the world (64th place) and high perinatal rate within the Americas (12th place) and the world (99th place), while in the other 44 countries the range of stillbirths rates is 2 to 5 and the range of perinatal mortality rates from 4 to 7.

In 1972–74, the author practiced general medicine in Jobabo, Bartle, Omaha and Hermanos Mayo in Oriente province, where he delivered babies; he knows firsthand about the practice of reporting as intra-partum fetal deaths the cases of newborns that were born alive and died in the first minutes after the delivery, as a means to lower artificially the early neonatal mortality and thus the infant mortality, due to the enormous political pressure to bring them down.[7] In 1979, the author published a multi-factorial analysis of mortality in the rural and urban areas of the Tunas region, where he worked.[8] In that paper he showed statistically the extreme prioritization of infant mortality and its components in contrast to other health problems of the population, and very subtly the relative lack of attention to elder and even adult

6. WHO. Neonatal and Perinatal Mortality. Country, Regional and Global Estimates. Geneva: WHO, 2006.

7. This practice was stopped temporarily during a week in 1973 when a Perinatal International Survey was being conducted.

8. The later article is: Stusser Beltranena RJ. The structure of mortality indicators in a sanitary area. *Rev Cubana Adm Salud*. 1979; 5(1):61–75. http://www.ncbi.nlm.nih.gov/pubmed?term=stusser%20beltranena.

Table 1. Cuba: Selected Socio-Health Indices and World Rankings

System	Market Economy		Democracy	Socialism
Index / Year	**1800**	**1900**	**1957**	**2007**
% Population > 64 years	—	—	5.5	11.2
Life expectancy at birth (years)	**~26**	32	64	78
(World highest rank)	**50th**	35th	31st	32nd
Infant <1yr mortality rate (x10³ live-births)	**~300**	195	32	5.3
(World lowest rank)	**30th**	20th	14th	34th
Abortion ratio (% of pregnancies)	—	**10**	25	>59
(World highest rank)	—	—	—	4th
Birth rate (x10³ of inhabitants)	**~47**	**~43**	26	11
(World lowest rank)	—	—	32nd	36th
Maternal mortality ratio (x10⁵ live births)	—	**600**	125	53
(World lowest rank)	—	—	—	>68th
Maternal/infant mortal. ratio(dimensionless)	—	**3.1**	3.5	10
(World lowest rank)	—	—	—	170th
Physician density (1xinh.) half work abroad	**2000**	1286	999	160
(World lowest rank)	—	—	(26th)	(1st)
Nurse density (1xinh.) third work abroad	—	—	1250	150
Midwife density (1x inhabitants)	—	—	3500	0
(World lowest rank)	—	—	(14th)	—
Pharmacist density (1x inhabitants)	—	—	1000	**600**
(World lowest rank)	—	—	(26th)	—
Militia-police-intel.-soldier density (1x inh.)	**?**	**?**	100	**25 50**
(World lowest rank)	—	—	—	**(1st) (5th)**
Housing available (per-head)	—	—	**0.2**	**0.02**
(% deteriorated & overcrowded)	—	—	—	**80**
Well Chlorinated Water availab. (per-head)	—	—	**0.50**	**0.33**
% Conscious Sanitation	**5**	**50**	**80**	**67**
% Population Access:				
-to medium-quality maternal & infant care	**10**	**20**	**50**	**80**
-to high-quality life-health elder&adult care	**1**	**20**	**40**	**2**
-to at least low-quality emergency care	**80**	**90**	**95**	**100**
-to at least low-quality hospital intern. care	**40**	**67**	**85**	**95**
-to at least low-quality comm. ambul. care	**20**	**50**	**75**	**100**
Pre-Modern to Modern Transitions:				
Industrial (1–100 scores)	**5**	**33**	**70**	**50**
Libertarian (1–100 scores)	**5**	**50**	**75**	**20**
Nutritional (1–100 scores)	**5**	**60**	**80**	**70**
Demographic (1–100 scores)	**5**	**15**	**70**	**90**
Epidemiologic (1–100 scores)	**5**	**20**	**70**	**90**
Exercise-Sport (1–100 scores)	**5**	**33**	**67**	**40**
Human Life Properties:				
Length (years life expectancy at birth:LEB)	**26**	**32**	**64**	**78**
Quality (1–100 scores of the years)	**12**	**33**	**67**	**40**
Human Physical Health Properties:				
Length (years physical healthy LEB)	**21**	**27**	**50**	**50**
Quality (1–100 scores of the years)	**10**	**30**	**60**	**35**
Human Mental-Social Health Properties:				
Length (years mental & social healthy LEB)	**5**	**27**	**59**	**5**
Quality (1–100 scores of the years)	**10**	**30**	**60**	**25**

Note: Figures in bold are author's preliminary estimates; other figures are official estimates.

Source: Sources: MINSAP. [Ten Years of Revolution in Public Health.] Habana: Ed. Ciencias Sociales, 1969; Cuba's Health Statistics Bureau. [Annual Health Statistics Reports 1973–2010]. Habana: MINSAP, 1974–2011; Díaz-Briquets S, Pérez L. ?Fertility Decline in Cuba: A Socioeconomic Interpretation.? Population and Development Review 1982; 8(3):513–537. http://www.jstor.org/stable/1972378; UNICEF. Annual Reports' Statistical Tables, 1990–2010. http://www.unicef.org/; U.N. Demographic Yearbook(s) 1948–2005. 1st-57th Issue(s). NY: U.N. Publ; 1948–2008; U.N. Statistical Yearbook(s) 1948–2008. 1st-53rd Issue(s). NY: U.N. Publ; 1948–2009.

Figure 1. Some Main Health Indexes. Cuba 1800–2007 (*non-linear X scale)*

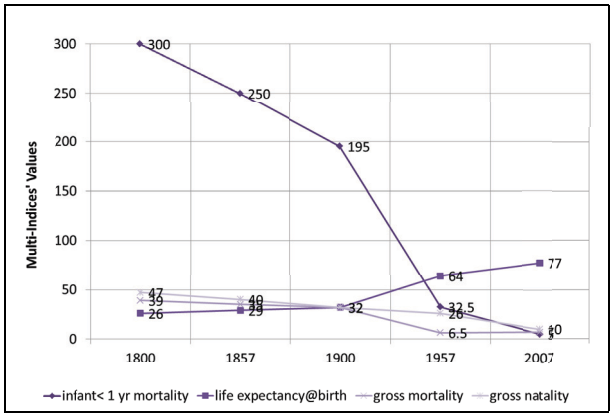


Figure 2. Maternal / Infant Mortalities Distance. Cuba 1953–2009

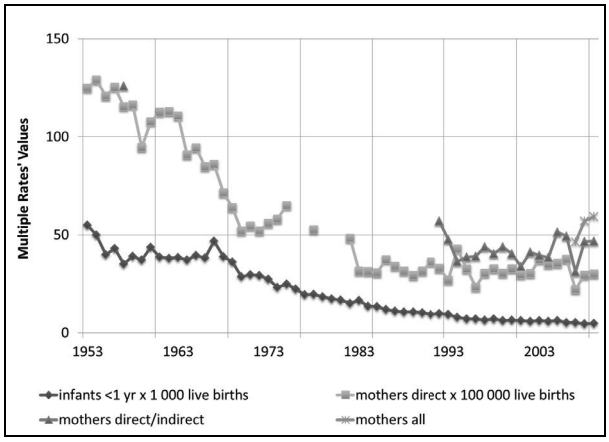
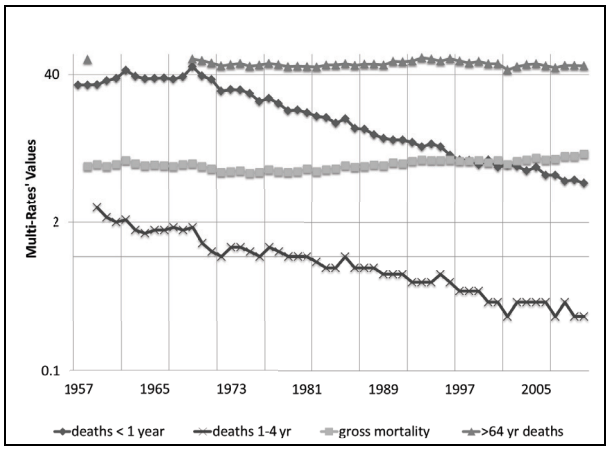


Figure 3. Infant, Child, Elder & Gross Mortality. Cuba 1957–2009 *(logarithmic Y scale)*



care of both genders (except women when pregnant), a pattern he had already experienced while practicing internal medicine at the Havana 26 & Boyeros Hospital in 1971–72 and polyclinics in 1963–67.

Moreover, he knew in 1988 that often living fetuses from induced abortions were thrown alive in the ward bathroom waste basket and omitted from reports of live births and deaths in the Havana Maternity Hospital (Linea & G). If these vital events—of at least over 21 weeks of gestational age or 499 g of weight, if not of all ages and weights—would have been reported, Cuba's infant mortality rates would be have been at least 50% higher. In 2006, he knew that many mothers with fragile health facing septic and hemorrhagic complications of abortions and deliveries were filling critical care units of general hospitals to reduce the high mortality.

The physical infrastructure of the health care system grew during the socialist period but not as much as it has been reported. Many public hospitals, infantile dispensaries, and private clinics of the republican period together with buildings and housing were nationalized, and became part of a consolidated public health system. The same happened with respect to more than a thousand drug stores and 500 pharmaceutical labs. There have been significant improvements, however, with respect to care for infants through a 21–month program that combines 9 months of maternal and 12 months of infantile intensive health care and welfare. This includes the application of vaccines developed in the West donated by UNICEF/PAHO, in addition to the vaccines made in Cuba for meningitis B, hepatitis B, and haemophilus influenza B, as well as genetics screening with ultrasound and other means, and some other biotechnology and neurotechnology advances. Nevertheless, this has been at the expense of modern health care and welfare abandonment for children older than four years, adults, including women while not pregnant, and the elder population. An overall decline in hygiene of facilities and healthcare quality of physicians and other personnel, has contributed to higher prevalence of abortion and puerperal complications, as well as the women with hunger and misery before pregnant, elevate susceptibility to other debilitating illnesses, leading to the stagnation or

even rise in the maternal mortality ratios (Figures 2 and 3).

In the area of mental and social health, socialist Cuba has suppressed from 99% of its citizens the rights embodied in 29 of 30 articles of the U.N. Universal Declaration of Human Rights.[9] Similarly, this author has estimated that the Cuban government's repressive apparatus violates at least 138 out of 171 (or 80%) civil, political social, cultural and economic rights generally recognized in international human rights instruments.[10] An analogous situation happens with the violation of the special declaration and convention of the rights of the child.

Building on the physical infrastructure, institutions, human capital and know-how accumulated prior to 1958, socialist Cuba has improved in some physical health indices. The showcasing of infant mortality and life expectancy at birth has been done for ideological reasons, with the aim of confusing the international community and has been at the expense of stagnating or even declining performance with respect to U.N.-defined living standards.[11]

McGuire and Frankel (2004) have described well this situation:

> Revolutionary Cuba since 1959 has outpaced most other Latin American and Caribbean countries at reducing infant mortality rates and raising life expectancy at birth. Pre-revolutionary Cuba from 1900 to 1958 did even better, however, outperforming all other Latin American countries for which data are available. Pre-revolutionary Cuba became Latin America's unlikely champion of disease mortality and incidence decline [This author (RJS) would expand this assertion to include most Asian and African developing countries] despite experiencing slow economic growth and high income inequality, a record that is inconsistent with the "wealthier is healthier" interpretation. It achieved this distinction despite being ruled by governments sometimes portrayed as corrupt, personalistic, patronage-ridden, subordinate to U.S. business interests and neglectful, at best, of the exploited and downtrodden. We attribute pre-revolutionary Cuba's rapid mortality and morbidity decline to its health care system's accessibility to a large fraction of the poor and to features of the island's history, geography, labor union movement, and political system that contributed to this accessibility.[12]

During 1900–58, Cuba was a developing democratic and capitalist nation, built by South European and West African immigrants, supported by the U.S. and most Western countries, and challenging already the observed "wealthier is healthier" relation due to its special characteristics. In 1957, Cuba ranked 11th and 44th within the Americas and the world, respectively, as a middle-income per capita nation with integral human development indices rating ahead of the nations that later would be known as the "Asian Tigers." In 1959–2007, a decline can be observed in

9. The one article whose rights an extensive number of Cubans might enjoy, in the author's estimation, is Article 15: (1) Everyone has the right to a nationality. (2) No one shall be arbitrarily deprived of his nationality nor denied the right to change his nationality. See United Nations. Universal Declaration of Human Rights. New York: U.N. 1948. www.un.org/overview/rights.html

10. In addition, there is the special U.N. Declaration of the Rights of the Child. New York: U.N. 1959. www.unicef.org/lac/spbarbados/Legal/global/General/declaration_child1959.pdf, which entered into force in 1990, and the International Covenant on Economic, Social and Cultural Rights, as well as a several other international human rights instruments identified through an internet search.

11. United Nations. *Report on International Definition and Measurement of Standards and Levels of Living.* New York: U.N. Publ. (Document E/CN.5/299), 1954. Main living standards: health-demographic conditions; feeding and nutrition; education; working conditions; employment conditions; community consumption-saving; transportation; housing; social security; human liberties.

12. Pritchett L, Summers LH. "Wealthier is Healthier." *Journal of Human Resources* 1996; 31:4 (Fall):841–868, introduce the empirical regularity, which is well discussed by McGuire JW, Frankel LB. "Mortality Decline in Cuba, 1900–1959: Patterns, Comparisons, and Causes." *Latin American Research Review* 2005:40(2):83–116. http://muse.jhu.edu/login?uri=/journals/latin_american_research_review/v040/40.2mcguire.html; and by Stusser RJ, Dickey RA, Norris TE. "Enhancing global rural health utilizing comprehensive and electronic primary health and life care and research." Personal Analysis Working Paper, Havana, Dec. 2007. http://rational.fortunecity.com/papertablerrh.htm. Others interpret Cuba's socioeconomic catastrophe, health decrease and distortion since the 1990s, due to the regime's grip on political power, as proof of the high productivity of Cuba's healthcare. See, Evans RG. "Thomas McKeown: Meet Fidel Castro: Physicians, Population Health and the Cuban Paradox." *Healthcare Policy* May 2008;3(4):21–32. This matter is well updated in: Commission of Growth and Development. *Health and Growth*. Washington, D.C.: International Bank for Reconstruction and Development/World Bank, 2009. www.growthcommission.org/storage/cgdev/documents/healthandgrowthfull.pdf.

all of Cuba's economic indices except for military activities and expenditures (Table 2).

Most of the standards of living achieved by Cuba by 1958 declined under socialism. Though the Gini index of income inequality decreased as a result of forced redistribution policies, other government policies created inequities with respect to access to rights, liberties, media, land-phones (cell phones and internet since the 1990s), as well as to other standards of living. Community paramilitary participation increased through nationwide vaccination and formal sanitation campaigns that concealed the essential nature of these organisms and their primary use in surveillance, indoctrination, terrorizing, and suppression of human rights. Cuba's human development index, which rose significantly from 1900 to 1957, grew very slowly or stagnated during socialism along with income per capita.

Cuba's Integral Human and Health Development Transitions

From 1900 to 1958 Cuba experienced a difficult transition from colony to republic, progressing through 10 elected administrations (and even three right-wing tyrannies). Cuba's population transited from a pre-modern, oppressive, unproductive, undernourished, and sedentary society to a modern society where rights, freedoms, productivity, high levels of nutrition, exercise, sports, elderly, and non-infectious diseases were prevailing. Cuba also transited to longer life with increased integral quality, and to longer healthy periods of integral and higher quality of physical, mental and social health.

During socialism, political, industrial, nutritional, exercise and cultural transitions in Cuba stagnated or even recessed, while demographic and physical epidemiological transitions continued. Transferred to Cuba from the USSR were very effective community repression organizations and human and electronic espionage industries aimed at stimulating global ideological subversion and terrorism against the U.S. The USSR also provided resources for dual use (peaceful and warmongering) nuclear technology and biotechnology. Overall, Cuba has suffered tragic negative transitions—regression from an advancing modern society to a pre-modern civil industry slowdown; set back with respect to rights and liberties; length of life span retardation; and depression of quality of life—close to or worse than those suffered by the retarded Burma and North Korea.

Cuba's health transition must be analyzed in terms of length and quality of physical, mental and social health. Better feeding of pregnant women (for embryo and fetus) and promoting breast feeding for six months have boosted the physical health of newborns and young children, though after 7 years of age, 99% of citizens suffer full hunger and misery. The latter conditions, together with an environment of extreme censorship, indoctrination and terror, have contributed to the stagnation and retardation of children's cognitive, emotional and behavioral mental and social health, and decreased length of integral healthy periods with a distorted health quality. The suppression of human rights, the decline in living standards, brainwashing, and 24–hour surveillance and intimidation have brought about a set of illnesses in children and adults not yet included in the WHO's International Classification of Diseases. They range from mild to severe acquired and chronic mental and social cognitive health regression, retardation, alienation, suffering and inability of children and adults to discriminate between fiction and reality, as well as irrational and fanatical hate of modern countries' libertarian and developmental symbols, ideas and institutions, with thoughtless and automatic behavior.[13]

The Soviet-style universal primary health care system of Joseph Stalin, enriched by Mao Zedong, created and supported these disabling mental and social illnesses, which have become the dark side effects of the Cuban Family Physician Program, also being applied in Venezuela, Bolivia, Ecuador, etc. Within it, the Cuban physician—captive, impoverished and

13. Immediately after the 9/11 attacks this author began to investigate on these matters: Stusser RJ. e-Response. For a Global Health Research Initiative on Fanatic Terrorism Causes and Prevention. BMJ 2001 (Sep 24). http://www.bmj.com/content/323/7314/0.1/reply.

Table 2. Cuba: Selected Socioeconomic Indices and World Rankings

System	Market Economy		Democracy	Socialism
Index / Year	**1800**	**1900**	**1957**	**2007**
Population (million)	0.6	1.6	6.4	11.3
GDP million international Geary-Khamis $	**4000**	**12000**	16000	41303
Real estimated GPD with World Bank norm				~34182
(World highest rank)	**(24th)**	**(23th)**	(49th)	(74th)
GDP percapita internation. Geary-Khamis $	**700**	**1000**	**2406**	**3625**
Real estimated perc. with World Bank norm				**~3000**
(World highest rank)	**(22nd)**	**(28th)**	(44th)	(110th)
% GDP for Health	**5**	**11.3**	**7.2**	**6.3**
(World highest rank)	**(24th)**	**(23th)**	(49th)	(74th)
Health percapita	**30**	**135**	**173**	**346**
(Calculated in real US $)	**—**	**135**	**173**	**170**
Physician monthly mean wage Cuban peso	**50**	**100**	**300**	**500**
(Calculated in real US $)	—	**$100**	**$100**	**$25**
% GDP for Education	—	—	**23**	**9.8**
% GDP for Military	—	—	20?	**40**
(World highest rank)	—	—	—	(1st)
Kcal available (per-head daily)	—	—	**2500**	3295
(Real availability- food subhuman quality)	—	—	—	**2500**
Protein gr. Avail (per-head daily)	—	—	**80**	80
(Real availability- food subhuman quality)	—	—	—	50
% population in urban areas	**15**	**30**	**54**	**75**
% deteriorated infrastructure	—	—	—	**90**
Bus/Train/Car seats availab. (per head)	—	—	**0.02**	**0.002**
Row/ Motor Boats availab. (per head)	—	—	**0.001**	**0**
Electricity avail. (hours blackouts/week)	—	—	**0**	**70 5–20**
Fixed Phones availab. (per head)	—	—	**0.02**	**0.02**
Fluent/Warm Water availab. (per- head)	—	—	**0.25**	**0.025**
Human Development Index	**0.1**	**0.337**	**0.659**	0.863
(World rank)	**(40th)**	**(35th)**	**(25th)**	(51st)
% Poor Population	**99**	**80**	**60**	**98**
% Extreme poverty	**95**	**67**	**33**	**90**
% Rights & Liberties Suppressed	**90**	**50**	**40**	**80**
GINI Income inequity index	—	—	.57	.55 .45
Liberties inequity index	—	—	**20**	**98**
Free- information inequity index	—	—	**25**	**98**
Internet & cellular inequity index	—	—	—	**95**
Corruption perception index (rank)	—	—	**25**	**> 67**
% Health Protection by Unions	**0**	**50**	**90**	**20**
% Community Participation	**33**	**50**	**67**	**90 50**
% Community Repression	**50**	**5**	**10**	**100**
% Women Social Participation	**25**	**50**	**67**	**90 75**
% Health-Political Will	**33**	**67**	**75**	**90 75**
% Adult Literacy	**5**	**46**	**79**	98
(functional illiterates)	—	—	**5**	**10**
(censorship to read, write & talk)	—	—	**20**	**99**
% Primary School Enrolment	**10**	**30**	54	97
% False School Promotion	—	—	**10**	**30**

Note: Figures in bold are author's preliminary estimates; other figures are official estimates.

Source: U.N. Universal Declaration of Human Rights. NY: U.N. Publ; 1948. www.un.org/overview/rights.html; MINSAP. [Ten Years of Revolution in Public Health.] La Habana: Ciencias Sociales, 1969; Cuba's Health Statistics Bureau. [Annual Health Statistics Reports 1973–2010]. Havana: MINSAP, 1974–2011; Maddison A. Statistics on World Population, GDP and Per Capita GDP, 1–2008 AD. www.ggdc.net/maddison/oriindex.htm; U.N. Statistical Yearbook(s) 1948–2008. 1st-53rd Issue(s). NY: U.N. Publ; 1948–2009.

confused—becomes the main advocate with patients in the community for passive acceptance of political oppression and endurance of the lifetime suffering in the island, and where the Cuban missions operate, without appealing to the legitimate right to dissent and seek change embodied in the U.N. Declaration of Human Rights. In pro-democratic countries where they serve, Cuban physicians function inversely, promoting Trojan Horse-type rebellions while providing humanitarian help.

Cuba's Human Development and Health Enigmas

The essential elements of Cuba's self-sustainable development originated during the period of the Spanish colony (1492–1898) as well as during the often-alleged period of U.S. imperialist exploitation (1899–1958). In 1959–61, most liberties that had been achieved were suppressed and citizens militarized for Cuba's silent civil war and to go abroad as guerrillas or as soldiers in support of the Soviet empire's expansion. This caused a depression of income and of most living standards, equalizing 99% of the population in poverty at the bottom of the scale. Cuba's economy needed exceptionally large subsidies from overseas (from the URSS) while the Cuban authorities blamed the U.S. commercial embargo (in place since the early 1960s) for the poor economic performance (in spite of 200 other possible trade partners) to distract attention from the inefficiencies of the Soviet system and Cuba's resistance to pay back international trade credits and external debts. The second socioeconomic chaos (of 1990–2011) has been also blamed on external sources, this time the Soviet ideological desertion and loss of trade with the USSR. With these pretexts, Cuba's highly repressive regime has justified driving the lives of most Cubans back to the times of the colony, with meager survival support in inhumane mental and social health conditions.

The anomalies and contradictions analyzed earlier regarding Cuba's health statistics (lowest infant mortality rates and early neonatal rates, high stillbirth rates, highest induced abortion percents, stagnated maternal mortality ratio, and highest infant/maternal mortalities distance or ratio compared with the rest of countries) raise again questions about the consistency of Cuba's very low infant mortality rates during 1971–2010, and of the strongly and inversely associated high life expectancy at birth. Eberstadt, discoverer of the "health crisis in the USSR," questioned in 1984 the consistency of Cuba's infant mortality rates pointing to contradictions among lower rates in vital statistics, higher rates in life tables, and high rates of infectious morbidity reported. In addition, he reported that U.S. intelligence documents gathered from Granada revealed Cuba's advice to the government to have two sets of statistics: one secret to know the real situation and another public to diffuse ideal statistics for propaganda reasons.[14] Eberstadt also observed that Cuba's high reading, writing and instruction levels came together with very high levels of censorship regarding what to read, write and express, and non-critical acceptance of a one-person and party-unique source of information.

It is clear that the "Cuban health and education for all" programs, combined with community fear and terror, have undermined individual initiatives to bring about change during the past 52 years. These policies have promoted the disintegration of civil society and the propensity to be involved in military-ideological activities abroad, and have arrested the peaceful national progress and foreign cooperation. These adverse effects on Cuba's society and on that of other nations influenced by Cuba's health and education policies should be also considered by U.N. agencies in their integral evaluation of human development and health.

Cuba and South Korea's Human Income and Non-Income Development

Cuba's 1957 life expectancy at birth was 64.2 years, 11 more than South Korea's 53; yet in 2007, it was 78 years, one fewer than South Korea's 79. Cuba's adult literacy in 1957 was 79%, nearly twice South

14. Eberstadt N. "Did Fidel Fudge the Figures? Literacy and Health: The Cuban Model." *Caribbean Review* 1986; 15:2:5–7 and 37–38, analyzing Hill KE. "Appendix 1: An Evaluation of Cuban Demographic Statistics, 1938–1980." In Hollerbach P. and Díaz-Briquets S. *Fertility Determinants in Cuba*. Washington, National Academy Press, 1983.

Table 3. Human Development: Cuba and South Korea 1900; 1957; 2007–8, 2011

Index Country /Year	Political-civil-economic rights / liberty, world rank. Freedom House/ Heritage Foundation	Maternal / infant mortalities ratio, world rank (author)	Life expectancy at birth, world rank UNDP	% of Adult literacy & of enrolment world rank UNESCO	GDP per capita I G-K$, world rank, Maddison & World Bank /IMF	Human development index, world rank UNDP[a]
Cuba						
1900–02	**3+3 / 40**	—	**32 (35th)**	46	**~1000 (30th)**	~0.320
1957	**4+3 / 50**	**3.9**	**64.2 (31st)**	79	2406 (44th)	~0.658 (25th)
2007	7+7 / 29	**10.8 (170th)**	78.5 (32nd)	99 Mean/Expect	3764?(110th)	0.863 (51st)
2008	7+6 / 28			schooling	GNI percap. PPP	
	7+6 not free		79	(10.2) (17.7)	No data	No data
2011	182th / 29 repressed 177th					
S-Korea						
1900–05	**7+7 / 30**	—	**~28 ( )**	**~25**	**~800(>100th)**	**~0.215**
1957	**5+6 / 40**	**1.9**	**52.5 (58th)**	46	1206 (82nd)	**0.444(60th)**
2007	1+2 / 68	3.6 (67th)	79.2 (26th)	99	19614 (24th)	0.937 (26th)
2008	1+2 / 69			Mean/Expect	GNI per capita PPP	
	1+2 free 48th / 70		79.8	yr schooling	29518 (27th)	0.877(12nd)
2011	mostly free 35th			(11.6)(16.8)		

Note: Figures in bold are author's preliminary estimates; other figures are official estimates.

Source: Freedom House. Freedom in the world 2010. http://www.freedomhouse.org/template.cfm?page=549&year=2010 and Heritage Foundation. Indexes of economic freedom. WCAS, 2011. http://www.heritage.org/index/ranking; UNDP. Human development reports, 1990–2010. NY: UNDP Publ. http://hdr.undp.org/en/reports/global/hdr2010/ ; Maddison A. Statistics on World Population, GDP and Per Capita GDP, 1–2008 AD. http://www.ggdc.net/maddison/oriindex.htm; UNICEF. Annual Reports' Statistical Tables, 1990–2010. http://www.unicef.org

a. Estimated with HDI Interactive Calculator, 2011. http://hdr.undp.org/en/statistics/data/calculator/.

Korea's 46%, and currently they are both at 99%. Cuba in 1957 had a GDP per capita of $2,406 (1990–international-GK$), twice South Korea's $1,206 (and higher than Singapore's $2,318); yet in 2007, Cuba's GDP per capita of $3,625 was one-fifth of South Korea's $19,243 (and one-eighth of Singapore's $28,138). (Table 3)

During 1959–2007, Cuba, subsidized primarily by the USSR and Venezuela and with very weak relations with the U.S., experienced very slow economic growth rate, ranking 18th and 110th in the Americas and in the world, respectively, and one of the worst records in human rights violations, competing with North Korea for the world's worst position. In the UNPD's Human Development Report 2010, Cuba appears as having underestimated rights violations, reporting 33% of rights being violated when the socialist regime has suppressed 80% of human rights to 99% of its own population. Meanwhile, South Korea's economic and human rights components of human development have continued to improve in close relations with the U.S. In 2010, South Korea ranked 12th in the world in the UNDP's human development index, while Cuba held the 51st place (for 2009, as no statistics for Cuba were presented for 2010). This report confirms "that human development is not equivalent to economic growth and that substantial achievements in human development are possible even without fast growth. Earlier reports identified Cuba (and three other countries) that attained higher human development levels than other countries at similar income levels. These achievements were possible because (economic) growth had been decoupled from the processes determining progress in the social dimensions of human development." However, studying old UNDP controversies, this is not the Cuban case.[15] There is enough evidence to support the counter-hypothesis that in Cuba, the integral growth and progressive and equalizing distribution of income, liberties, health care, education, food, housing, and other living standards, by a growing middle-class between 1900 and 1958, made possible the 1959–2010 achievements, attributed erroneously by Cuban officials and outside observers only to the socio-egalitarian policies of the revolution.

APPROACH TO THE CUBAN HEALTH MYTHOLOGY

In 1953–1956, Fidel Castro with the "Moncada" Program distorted Cuba's historical realities. Initially, he did not have much of an impact on public national and international opinion. However, this changed when an editor from the *New York Times* visited Castro in the Oriente mountains and opened a door to Castro in the world scene and later in the Cuban scene.[16] Misinformation regarding a revolutionary mythology diffused by this U.S. reporter and writer is not an original contribution of the Cuban revolution. Previously, Stalin in the USSR manipulated Walter Duranty in 1922–36 and Mao in China maneuvered Edgar Snow in 1934–70.

First Myth: Cuba's Underdevelopment. Cuba's economic and social development during 1902–58 was based along these lines: Cuban republican corrupt democracy and capitalism supported by the U.S., brutally exploited, impoverished and increased colonial social inequalities, converted the island into one of the most underdeveloped and corrupt countries in America and the world, with the lowest levels of health, education, welfare, science, arts, sports, etc. In 1957–1958 reporter Herbert Matthews bought into the complete package of Castro's myths, misinforming U.S. and world citizens and Cubans in the island through a feedback mechanism from the U.S., while diffusing the picture that the revolution was libertarian and righteous.

Second Myth: Violent Revolution as Unique Solution. Rural and urban guerrillas were legitimized as the ones that brought about the fall of Batista and the only solution to the country's ills.

- 1953—Moncada Program written after the defeat in attacking the barracks allegedly with the principal objective of implementing the 1940 Constitution;
- 1957—Sierra Maestra: 400 troops with 50 telescopic rifles instead of the mythology of 18 men with low caliber weapons;
- 1957–58—Guerrilla War: murders, burning of sugar cane plantations, and bombs to terrorize the Cuban army, government and people;
- 1959 forward—All Cuban exiles to the U.S. or other countries were Batista's followers and criminals;
- 1959–1961—Herbert Matthews misinformed the U.S. public and the world that the U.S. pushed Cuba into the arms of Russia, and Castro was building a purified socialism "free of Stalinist excesses." Matthews never interviewed thousands of counter-revolutionaries and rebel farmers of the Escambray Mountains who were banished to distant towns in other provinces and prisoners of Gulag-type UMAPs that were created to intern religious believers, homosexuals, and intellectuals forcing them to work in agriculture.

Third Myth: Cuba's Victimization by the U.S. The myth of Cuba's victimization by the U.S. runs as follows: Socialist Cuba, a small and peaceful country, was victimized by U.S. hostility and an economic blockade. The nation is the most sovereign, equal, solidary, disinterested and free of vices in the world; also the healthiest and happiest one, flourishing with regard to welfare, education, etc.

The Successive Initial and Health Myths' Connection. There is a temporal sequence and inverse rela-

15. Huge obstacles in the U.N. Assembly to measure quantitatively human rights violations in the human development report are revealed in the illuminating paper of Klugman J, Rodríguez F, Choi H. "The HDI 2010: New Controversies, Old Critiques." Human Development Research Paper 2011/01. New York, UNDP. http://hdr.undp.org/en/reports/global/hdr2011/papers/HDRP_2011_01.pdf

16. DePalma A. *The Man Who Invented Fidel: Castro, Cuba, and Herbert L. Matthews of the New York Times*. New York: Public Affairs, 2006; he detected the general and health myth's connection. The polemic correspondence between Matthews and Draper (Draper T. *Castro's Revolution. Myths and Realities*. New York: Frederick A. Praeger Publishers, 1962), is very illuminating, as well as the works of Nelson L. *Cuba: The Measure of a Revolution*. Minneapolis, MN: University of Minnesota Press, 1972; Clark J. *Cuba: Mito y Realidad. El Testimonio de un Pueblo*. Miami-Caracas: Saeta Ediciones, 1992; Suchlicki J. "Myths and Realities in Castro's Cuba." CUBA FACTS, no. 19, January 2006, http://ctp.iccas.miami.edu/; and Romeu JL. "Statistical Comparison of Cuban Socioeconomic Development." *Cuba in Transition—Volume 5*, 1995:293–301.

tionship between socialist Cuba's socioeconomic, political-military and moral-cultural myths declining until the late1960s, and health myths blossoming from 1962–72; this relationship is well analyzed by DePalma and evidenced in Matthews' last book.[17]

The Creation of the Health Myths. Castro characterized republican Cuba's public health and health care system as feeble and achieving extremely poor results. Since 1962, when socialist Cuba embarked in a successful vaccination campaign against poliomyelitis using the Committees to Defend the Revolution (CDR), this form of campaign using community repression corps began to be reported by PAHO and UNICEF as having great accomplishments.[18]

During 1962–68, in competition with the U.S.-led Alliance for Progress with respect to halving infant mortality in the Americas, Fidel Castro and Ministers José R. Machado Ventura, Heliodoro Martínez-Junco, and some statisticians silenced the infant mortality increase and life expectancy decrease that occurred as a result of the chaos created by the implementation of Soviet-style socio-economic and political system, civil war, guerrillas abroad, and impoverishment of 99% of people. In 1969, Castro and his allies designed another campaign following the style of the "10 Million-Ton Sugar Harvest" aimed at halving at any cost infant mortality by 1979. A famine in the new state-owned sugar cane and livestock farms created a desperate migration of agro-workers to inner town and city slums and an increase in infant mortality. In 1991–2000 the government silenced a second famine, with a corresponding infant mortality increase and life expectancy decrease, as well as the continuation of peripheral neuritis, Dengue fever, hemorrhagic conjunctivitis, and other epidemic outbreaks, to protect the health care image and foreign tourism income.[19]

Sower and Fertilizer of Health Myths: Since 1969, Prof. Vicente Navarro of Johns Hopkins University's Public Health School and Editor-in-Chief, *International Journal of Health Services*, made visits to Cuba to observe the national health system. In one trip he was invited to participate in meetings of the Ministry of Public Health (MINSAP) at the national, provincial and regional levels as well as to visit facilities.[20] The articles by Navarro and subsequently by Milton Roemer of the University of California, Los Angeles, and Cuban officials sowed and fertilized the health myths still in vogue today.[21] Navarro and Roemer were never allowed to interview non-official experts, government opponents or political prisoners in Cuba. However, no one forbid them from interviewing Cuban exiled medical professionals in the U.S. and elsewhere. Lacking firsthand information about the party, local power and intelligence services and trans-

17. Matthews HL. *Revolution in Cuba: An Essay in Understanding*. New York: Charles Scribner's Sons, 1975, is the most complete compendium of Cuban revolution myths.

18. Werner D. "Health care in Cuba: a model service or a means of social control or both?", in David Morley, Jon E. Rohde and Glen Williams, Editors. *Practicing Health For All*. Oxford: Oxford University Press, 1983. pp. 17–37. Although Werner assimilated the socioeconomic myths, he seems to be the first to write about healthcare population control.

19. Personal communications of the author with municipal party leaders, some while riding in horseback in Las Tunas, 1972–74; and personal experience of the author and communication with family physicians of Plaza Community Policlinic.

20. Navarro's exceptional access is probably attributable to interventions by Martínez-Junco and Machado Ventura due to Castro's interest in recruiting a special spokesman for the Cuban public health system. Afterwards, Navarro was adviser to Salvador Allende's socialist Chilean government. Mathews acknowledged in his last book that he had studied the first two articles published by Navarro and exchanged correspondence with him, contributing to sowing the health myths..

21. See, e.g., Navarro V. "Health, health services and health planning in Cuba." *International Journal of Health Services*. 1972; 2(3):397–432; Navarro V. "Health services in Cuba: An initial appraisal." *New England Journal of Medicine*. 1972; 9; 287(19):954–9; Roemer M. "Political ideology and health care: hospital patterns in Philippines and Cuba." *International Journal of Health Services* 1973; 3:487–92; Roemer M. *Cuban Health Services and Resources*. Washington, D.C.: PAHO, 1976; Roemer M. "Health development and political policy: the lesson of Cuba." *Journal of Health Policy Law*. 1980; 4(4):570–8. A paper by Navarro published in 1980 [Navarro V. "Workers' and community participation, democratic control in Cuba." *International Journal of Health Services* 1980;10(2):197–216] on Castro's democracy evidenced his friendship with Machado Ventura, who in 1969–71 organized the one-party People's Power pilot project in Matanzas, generalizing it to Cuba in 1976 after 17 years without any elections.

mission of terror, they praised the CDRs, organizations that controlled the lives of Cuban citizens.

The rise of the health myths in the 1970s was followed by their reinforcement in the 1980s, a slowdown in the 1990s with the discredit of Soviet and Cuban socialism, and resurrected in the 2000s as a black swan against the "wealthier is healthier" observed association, manipulating selectively the preventable economic catastrophe and still surprisingly improving infant and child mortality rates, and thus the inverse covariate life expectancy at birth. This Cuban revolution mythology has proven to have had a distorting impact on developed countries' academies, on physicians inside Cuba—mainly through feedback from abroad—and finally on the countries where Cuban medical missions are deployed.

CONCLUSIONS

This paper has documented and provided a comprehensive and balanced view of Cuba's progress in improving primary living and health care in the last centuries. It has also brought to the fore contradictory evidence regarding the ratio between high maternal and low infant mortalities, and high fetal and low early neonatal mortalities, supporting old disputes regarding inconsistencies in Cuba's very low infant mortality and high life expectancy at birth during socialism. More evidence to elucidate these inconsistencies shall appear when transparency by the state increases in the future.

In Cuba's human development it can be observed a strong and direct relationship between income, health and education. This relationship has been influenced by higher and lower exercise of human rights in the first and last stages of the 20th century. Without the initial phase of self-sustaining economic growth between 1899 and 1958, the subsequent phase of economic growth with subsidies between 1959 and 2011 would not have been possible and neither would have been the fragmented health and education achievements. The view presented here supports the general observation that wealthier countries (even if middle income) are healthier and the broader relationship that the freer, better-informed and wealthier a country, the healthier it is physically, mentally and socially, according to the WHO definition of health. It is necessary to distinguish between political will and political violence regarding health. When a government focuses only on infant mortality, it is preventing the integral development of the health of its population. Some traces of the old Soviet-Chinese style have revealed themselves on the mythology of the Cuban socialist revolution, distorting Cuba's long-term tradition of western scientific medicine and public health (absent in Russia and China), on the health results of the last decades, and on developing countries that have assimilated those policies. Without a thorough understanding of the real advances in Cuba's health indices, underestimated in the republican period and overestimated in the socialist period by a totalitarian government, any forecast of resources to plan in advance the transition of the health sector will always be below the genuine health needs of the population, as was the case in the USSR, which hid a health crisis for more than 30 years.

Without distributing progressively and integrally income, liberties, and other modern living standards among all, the development of human life—including health care, welfare and education for all in Cuba or any other country of the world—is pure fiction. The UNDP should include the percent of human rights observed by each country based on the U.N. Declaration of Human Rights of 1948 (updated with the rights for the child and others), as civil and political aspects to complete and strengthen the human development index for 2012.