

Humanitarian Health International Team (HHIT) - Cuba

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Country Overview

In 1959, when Fidel Castro and his allies overtook the government, the Republic of Cuba became a socialist state. The consequences of this action had profound effects on the health care system. At that time there was little to no health care in rural areas, one hospital, a very basic public health system, and approximately 6300 physicians in Cuba (Cooper et al., 2006). A few years after the revolution 3000 of those physicians left Cuba (Cooper et al., 2006), so there had to be an infrastructure put in place that would provide the necessary care to all Cubans. Despite being shunned by the United States and other countries, the Republic of Cuba has independently built the healthcare system that it needs to care for its population.

They are equipped with an excellent primary care network, and their public health has been said to be “unequaled” (Cooper et al., 2006). Currently they operate under a national health system, where the government is financially and physically responsible for its citizens (Merz, 2005). Despite the U.S. embargo put in place in 1960, and a loss of funding from the Soviets in 1991, Cuba’s capabilities of meeting the emergency health care needs, reducing the numbers of non-communicable diseases, and controlling infectious diseases such as polio, neonatal tetanus, diphtheria and pertussis, is impressive (Cooper et al., 2006), and it provides the proof that what they are doing is working. With a population of 11.2 million (WHO, 2012), an average income of approximately \$1000 per year (Cooper et al., 2006), and only 8.6 percent of their Gross Domestic Product (GDP) going towards healthcare (WHO, 2012), it’s been no small undertaking to make the necessary improvements to their system. Interestingly, vital support for the economy continues to come from Cubans living and working outside of their country, sending part of their earnings back to their homeland (BBC, 2012).

Pertinent Population(s) to Include Vulnerable Population(s)

The most vulnerable populations in Cuba are those living in poor housing and those without proper drinking water and sanitation (CIA, 2014). Housing is one of the most pertinent issues for Cuba as between 15-20% of homes are regarded as being in either fair or poor condition (Socialism and Democracy, 2011). With numerous do-it-yourself homes and poorly constructed dwellings, a large percentage of the populations lost their homes or the deterioration of the homes was accelerated during Hurricane Sandy in 2012 (Socialism and Democracy, 2012; United Nations, 2012). Because of the poor sanitation and water quality in these homes, a large percentage of the population is at risk for developing cholera. Since 2012, there have been 700 cases and 3 deaths reported in Cuba (CDC, 2014a).

The United States Central Intelligence Agency (2014) reports that 6% of the total population does not have access to clean drinking water (4% of the urban population and 13% of the rural population), and 7.4% of the population does not have improved sanitation (6% of the urban population and 12% of the rural population). With approximately 75% of the population living in an urban area, which is >20% higher than the global average, this equates to 330,000 people without improved drinking water and almost 500,000 without proper sanitation living in close proximity (CIA, 2014; WHO, 2014). Because of these poor sanitary conditions, the leading food and waterborne diseases are bacterial diarrhea, hepatitis A, and typhoid (CDC, 2014; CIA, 2014).

In addition, the population as a whole is also vulnerable to vector-borne disease, specifically Dengue Fever, due to the climate and also in part to the collapse of vector-control programs (Bulto et al., 2006; Index Mundi, 2014). Finally, with a high maternal mortality rate

(73 deaths for every 100,00 live births), the pregnant woman is also a vulnerable population (CIA, 2014).

Health Care Infrastructure

Cuba's health profile is tracked by the non-governmental organization Medical Education Cooperation with Cuba (MEDICC), which reports that there are 248 hospitals throughout the 14 provinces, with 85 general hospitals, 35 clinical/surgical hospitals, and 25 pediatric hospitals (MEDICC, 2007a). There are also 470 community clinics (polyclinics) that provide health education, prevention, and environmental monitoring (MEDICC, 2007a). The physician to population ratio is 1:160, and the nurse to population ratio is 1:125. With 77,00 physicians, 33,000 of which are family physicians, >99% of the population is covered by a primary care provider (MEDICC, 2007a).

Cuba has a strong health care system that is bolstered by research and which provides free, universal, and accessible health services to the entire population (MEDICC, 2007a). Overall health of the residents is a governmental priority and a 1999 report ranked Cuba as having the best health situation among 25 countries in Latin America and the Caribbean (MEDICC, 2007a). Cuba also has the largest medical school system in the world with 20,000 students currently enrolled and is free to all Cubans who wish to study medicine (MEDICC, 2014). The school system includes 21 medical schools, four dental schools, and four nursing schools throughout the country (MEDICC, 2014).

Population health is a priority and it is bolstered by a primary care network comprised of doctor and nurse teams that live in assigned neighborhoods and are responsible for providing care to its residents, which on average is equal to approximately 150 families (MEDICC, 2007a). The primary focus of these teams is health promotion, prevention of disease, prenatal care, and

early detection of infection (MEDICC, 2007a). This emphasis on preventative and primary care has eradicated many diseases, decreased infectious disease to a minimum, and children are vaccinated against more diseases than in any other country in the world (MEICC, 2007a). The final result is that the health of Cuba's population is on par with the world's industrialized nations (MEDICC, 2007a).

Endemic Health Concerns

Of note is the fact that the cause of death for the majority of Cubans is the same as the rates for highly developed countries, such as the United States (WHO, 2012). They are: heart disease (197:10,000 people), followed by cancer, chronic lower respiratory disease, stroke, and unintentional injury (MEDICC, 2014). And, the average life expectancy is 76 for females and 81 for males (WHO, 2012). The most significant issue facing Cuban health care is not an epidemic of a life-threatening disease, or a lack of trained professionals to care for their people, but the lack of resources to update their polyclinics and hospitals with the technology that is needed (MEDICC, 2007b).

For those not familiar, when the U.S. embargo was put in to place it effectively cut off the majority of items that can be imported from the U.S. to Cuba, either directly or via another country (TREAS DEPT), making any importing of state-of-the-art equipment nearly impossible. To initiate a resolution to the problem of bringing their medical facilities up to date, in 2004 a program was started that would modernize all 470 community polyclinics, and that would ensure 52 hospitals and tertiary facilities would become "centers of excellence" (MEDICC, 2007b). Because of the lack of funding from the Soviets, and the obstacle that the U.S. embargo places on receiving updated equipment, Cuba is definitely lacking the means to complete their "centers of excellence". According to MEDICC, the scheduled completion of the "centers of excellence"

and updating of the clinics has not stayed on track (MEDICC, 2007b). This lack of modernization increases the risk of endemic health issues. Without proper equipment and facilities, healthcare providers are increasingly limited in what they can do for the population and any medical crises that occur (MEDICC, 2007b). While no specific comorbidities in Cuba stand out in the literature, the Centers for Disease Control (CDC) states that, over the past few years there have been active cases of cholera, histoplasmosis and rabies reported (CDC, 2014a). This statement provides recent examples of potentially escalating crises the Cuban health care system may be facing, and a foreshadowing of how ill prepared they are to face them.

Potential Government and NGO Partners in Cuba

The Ministry of Public Health (MINSAP) is a Cuban governmental agency that works at provincial and national levels to set health research priorities and determines major health problems affecting the Cuban population. This process is done based on the country's health policy framework and attempts to maximize utilization of resources (Alvarez, Artiles, Otero, & Cabrera, 2010). MINSAP is currently utilizing a strategic plan called "Public Health Projections in Cuba for 2015" that sets goals for the country similar to the United States Healthy People 2020. The public health projections in Cuba 2015 have eight priority areas that include (Alvarez et al., 2010):

- 1) Environmental factors
- 2) Behavioral factors
- 3) Non-communicable diseases
- 4) Oral health
- 5) Emerging and re-emerging communicable diseases
- 6) Disability

- 7) Special environments
- 8) Special groups

Medical Education Cooperation with Cuba (MEDICC) is a NGO established in 1997 that strives for better health outcomes and diminishing inequalities in care. MEDICC continues work set out by the American Association of World Health (AAWH) to mitigate effects of the medicine and food embargos placed on Cuba which have decreased supply of medicines and diagnostic tools (MEDICC, 2014). MEDICC acts as a liaison between the US and Cuban medical and public health schools and organizations. In addition, MEDICC runs a peer review journal “International Journal of Cuban Health and Medicine” which publishes articles by Cuban and other international medical and population health specialists (MEDICC, 2014). MEDICC helps to bring Cuba into the world health community and decreases its isolation when it comes to population health (MEDICC, 2014).

The Federation of Cuban Women (FMC) is an NGO established in Cuba in the 1960s. Interestingly, its inception was supported by Fidel Castro. The organization is massive with branches throughout all levels of Cuban society that reaches out to all women and has a visibility of up to 82% of all Cuban women over the age of fourteen (The Federation of Cuban Women, 2014). The organization promotes health, working with the country’s health care system to increase literacy, vaccination rates, and providing education on hygiene, breast-feeding and sex education (The Federation of Cuban Women, 2014). FMC would be an excellent resource for dispersing information to those in country.

Habitat-Cuba is an NGO started two years prior to a similar but more well-known NGO habitat for humanity. Habitat-Cuba is a nonprofit organization that assists with housing, and attenuation of environmental hazards. Habitat-Cuba’s largest contribution to the country is its

international NGO relationships that have assisted the nation in obtaining recourses for building and development that would otherwise be unattainable due to the embargo. In addition, Habitat-Cuba investigates and researches use of untapped resources for development such as bamboo for construction (A Look at Cuban NGOs, 2002).

Determinants and Disparities

Disparities in the literature primarily appear attributable to the embargo. Barry, 2000 discusses lack of vaccines, medications to include insulin have weighed heavily on Cuba. In addition, 50,000 cases of optic and peripheral neuropathy that have occurred which has been suspected to be caused by malnutrition due to food shortages. A rise in infant esophageal stricture has been attributed to exposure to lye due to lack of soap. Infection rates have gone up due to lack of chlorination treatment to water sources (Barry, 2000). This indicates that the largest disparity in Cuba is isolation and increasing the availability of imports and resources would be crucial to any aid and nation building efforts in the country.

As discussed, Cuba has faced severe embargos which have left the country with a deficit of much needed medicine, equipment and food, however one study indicates that when it comes to health, they may be doing something right. According to one ecological study of Caribbean and South American countries, Cuba had the most favorable health indicators of all those included (Cardona, Acosta, & Bertone, 2012). One article noted that “Cuba has achieved first world population health status despite a minimal economic base. Far from marginalizing medicine, Cuba has by far the world's largest physician workforce” (Evans, 2008, p. 1). Evans, 2008 goes on to elucidate a theory that Cuba’s ideologically driven public health policies focus not only on medical determinants but also on nonmedical determinants of health such as education, nutrition, housing, employment and social cohesion. In addition, Cuba’s

“Community-Oriented Primary Care” (COPC) is a system in which physician and nurse teams come out to the populations they are assigned as opposed to those in the population coming into the hospital. This in theory decreases inequalities in access to care (Evans, 2008). The higher ratio of physician to population, and access to care would indicate an advantage when providing aide and humanitarian services to Cuba.

Despite the country’s adaptation to embargos and scarcity of resources, Cuba remains an economic third world country (ThirdWorldPlanet.com, 2013). However, Cuba is striving to improve the health of its population. The ministry of public health after an extensive research process has determined eight target areas for the country to improve upon, three of which are determinants of health (Alvarez et al., 2010):

- 1) Environmental factors to include weather and climate change, and exposure to substances and other physical hazards
- 2) Behavior determinants such as diet, physical activity, alcohol and cigarette use
- 3) Special groups such as children, women and older adults

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