

Cuba's Health System

The Cuban Approach to Health Care: Origins, Results, and Current Challenges

Evolution in the Revolutionary Period

Through the pre-revolutionary period before 1959, Cuban medical practice and research were highly influenced by the tenets and scientific approach of the US and French schools. With the arrival of the Fidel Castro government, this turned out to be a plus and a minus: Cuban physicians were highly trained and well respected, but nearly half of them left for the United States when the new government set about drastically reforming the health sector. Thus, from 1959 through 1967, when accumulated expertise was most needed, the island of six million people lost 3,000 of its 6,300 physicians and found itself with just 16 professors of medicine and a single medical school. (1) (2)

Under the mandate of the country's new leadership - which defined health and education as social responsibilities of government and individual rights of citizens - it would be the job of this lean medical corps to create a unified national health care system, and provide universal, accessible, and free health services to the whole Cuban population.

The task was daunting given the health picture in Cuba at the time, revealing wide disparities across the island and a particularly precarious existence for the rural poor. Only 11.2% of farm worker families drank milk, and only 2% were eating eggs, according to a Catholic University Group study. (3) Worse was the predicament of the eastern mountainous regions, historically home to the poorest of the poor. Here, makeshift cemeteries dotted the coastline, where families had given up hope of flagging down a passing ship to get help for a sick or dying loved one.

In the 60s, physicians at the helm of the new health system took bold steps to recruit doctors for the Rural Health Service, setting up 50 new rural hospitals; establishing over 160 community clinics in urban areas; and initiating the national children's immunization program. Just as importantly, they moved to train more health personnel.

In the 70s, the first investments were made in new general hospitals and pharmaceutical production plants. The community clinic ('polyclinic') model of primary health care was reinforced and expanded, taking on health education, prevention, and environmental monitoring. Maternal-child health, from the start a priority for the new health system, evolved into the first national comprehensive health program; it would later be joined by three more: infectious diseases, chronic diseases, and the elderly. As the numbers of medical graduates rose, more Cuban health professionals joined international service abroad to provide free medical services primarily in the nations of Africa and Latin America. By the end of the next decade, the cumulative record showed Cuba had posted nearly 20,000 Cuban health professionals abroad. (4)

By the 1980s, Cuba's health system began to merit attention from the World Health Organization, UNICEF, and other international agencies anxious to identify viable models of health services in developing countries. It was also in this decade that tertiary care facilities and research received priority attention: medical specialization expanded to 55 fields, and national institutes were established to act as national reference centers (centers of excellence) for the rest of the country. This process included national programs for prenatal

screening, installation of the first nuclear magnetic resonance equipment in Latin America, and an organ transplant program. By the end of the decade, Cuba had expanded medical education to 21 medical schools spread across the country.

The 80s was also the decade for two decisive developments which became hallmarks of Cuban medicine. The first was the takeoff of the biotechnology industry, which would put Cuba in the forefront of global vaccine research. The second was the introduction of the Family Doctor Program in 1986, which located doctor-and-nurse teams literally next door to their patients. By the early 90s, over 95% of Cuban families would receive primary medical attention in their own neighborhoods. (See Challenges for Cuba's Family Doctor-and-Nurse Program, Reed, G. *MEDICC Review*; 2000:2(3).

http://www.medicc.org/publications/medicc_review/II/primary/sloframe.html)

The Economic Crisis of the Nineties and Health Care

With the collapse of the socialist bloc, Cuba's island economy lost 85% of its trade in two years, threatening the economy and the health system with collapse. What's more, the Cuban Democracy Act (CDA) of 1992 tightened the US embargo on Cuba at this most vulnerable moment. (See: *Denial of Food and Medicine: The Impact of the U.S. Embargo on Health and Nutrition in Cuba*, Reed, G. and Frank, M. American Association for World Health, 1997. www.medicc.org/embargo.php).

The results were devastating: from 1989 to 1993, Cuba's economy shrunk by 35%; the hard currency available for medicines, equipment and supplies by 70%; and Cubans' daily caloric intake dropped by 33%, proteins by 39%. Fuel shortages ground transportation and water pumping facilities nearly to a halt; blackouts extended to 16 hours a day in the heat of the summer; Cuban peso salaries became nearly worthless (reaching 145 to the US dollar); food was scarce and rationed; and urban dwellers headed for city parks in search of firewood for cooking fuel.

The remarkable paradox is that - with the exception of the 1992-93 neuropathy epidemic (5) and a few "early warning signs" such as increased low birth weight - Cuban health indicators held the line. In some cases, especially as the island began to find its way out of the crisis, they actually improved.

Infant mortality was 10.7 per 1,000 live births in 1990, down to 9.4 by 1995, and to 7.2 by 2000. Under-five mortality shows the same pattern: 13.2 in 1990, 12.5 in 1995, and 11.1 by 2000. Only life expectancy dipped slightly during the worst years: 75.2 in 1989, 74.8 in 1995, and back up to 76 by 2000. (Source: *Annual Statistical Yearbook*, Ministry of Public Health, Havana, 2003).

The Results: Explaining the Paradox

Analysts have explained Cuba's health results in the face of adversity by pointing to the following key components:

- During the worst years of the crisis, the **health status of the population remained a fundamental government priority**. In fact, the Cuban Parliament actually increased the health sector budget in Cuban pesos and the share of GDP earmarked for health care at the expense of spending for the military and state administration. At the same time, the health sector hard currency budget was forced down by two-thirds as a result of dropping exports.

Table 1: Cuba's Public Health Budget – 1990, 1995, 1998

Year	Health Budget*	Per Inhabitant	% of GDP	% of Natl. Budget
1990	1,045.1	98.6	5.3	7.4
1995	1,221.9	111.3	5.8	8.8
1998	1,473.1	132.4	6.4	13.1

*in millions of Cuban pesos
Source: Ministry of Finance, Havana.

- **Although scarcities abounded, they were shared**, prompting a report published by the UNDP in 1999 to state, “An evaluation of 25 countries in the Americas, measuring relative inequalities in health, revealed that Cuba is the country with the best health situation in Latin America and the Caribbean. It is also the country which has achieved the most effective impact with resources, although scarce, invested in the health sector.” (*Study on Human Development and Equity in Cuba*. UNDP, 1999: p.103).
- **Key medical resources were centralized and moved to where they were most critically needed.** In this context, the Minister of Public Health initiated a Tuesday morning meeting of all major health sectors to assess the exact amount of hard currency available that week, and decide which purchases were possible and essential (often only the life-saving ones were made). Similar weekly sessions were held in all Cuban hospitals, to tally the medications on hand and send out an SOS for those patients not covered by current stocks. A program soliciting international donations at one point yielded some USD\$20 million annually in medicines and equipment, under the consistent proviso that international agencies could inspect end-use facilities to see their donations were getting to the intended patients.
- **The educational status of the Cuban population itself worked for continued hygiene measures and health education.** While many of the other “social determinants of health” spiraled downward, the average educational level of Cubans by 2002 was ninth grade (Source: *Libro Blanco 2006*. MINREX;2006, Havana, Cuba.); secondary school (through 9th grade) was required; and over 99% of young people (ages 15-24) who graduated from secondary school were going on to high school. (Source: *Objetivos de Desarrollo del Milenio: Cuba, Segundo Informe*, July, 2005; Instituto Nacional de Investigaciones Económicas, La Habana, p. 33). As has been amply demonstrated in international reports, the educational level of a population (and especially of women) augers well for health promotion and disease prevention, and this was certainly the case in resource-scarce Cuba in the 1990s and remains so today.
- **The dedication of Cuban health professionals**, working under the most stressful conditions, was without doubt, indispensable for the Cuban population to emerge from the worst of the crisis with their health status essentially intact. Heart surgeons, riding to work on bicycles, would wait half an hour for their hands to stop shaking before entering the operating room. Nephrologists were working round-the-clock to dialyze ever-more patients on ever-fewer artificial kidneys. Clinicians in hospitals

across the island were phoning each other, the Ministry and colleagues abroad to find life-saving antibiotics for their patients.

- **The health status of the Cuban population, vastly improved** by the health care system since 1960, provided a sound foundation which could not be easily eroded. By the 90s, Cuban children were being vaccinated against 13 childhood diseases -- more than any other country in the world, including the United States. A host of diseases had been eradicated altogether, infectious diseases were at a minimum, and Cubans were dying of the same chronic conditions described in the mortality charts of industrialized countries. A significant socio-political corollary was that the majority of Cubans trusted the health care system to work for them.
- Perhaps the most important single catalyst determining the positive outcome from the precarious 1990s was **the presence of a solid community-oriented primary care network accessible to virtually every family in Cuba**. The family doctor-and-nurse teams, responsible for the health of some 150 families in a given neighborhood, concentrated their attention on health promotion, prevention of disease, environmental cleanup, priority attention to children and the elderly, prenatal care, and early detection of infection and chronic disease. Most of these activities required little in the way of material support, but they went a long way towards keeping the levels of disease from reaching the already over-extended hospitals wards and emergency rooms.

Challenges Facing Cuba's Health Care System Today

The collapse of socialist Europe and the tightened US embargo on Cuba did not take an even toll on all levels of Cuba's public health system: the greater the specialization, the greater the harm that was done. This is true, of course, because more specialized treatments require sophisticated and expensive equipment, patient circuit kits and other supplies, specially trained personnel, professionals completely updated in their field, and continuous investments in research. In Cuba during the 1990s, all of these were imperiled. Hospitals barely had light bulbs and first-generation antibiotics, equipment was old and in disrepair for want of parts, and all attention and resources were focused on the immediate patient load.

As Cuba continues to emerge from the crisis, its highly trained and dedicated medical science community looks around to find the physical plant of hospitals and research centers are no longer capable of sustaining their diagnostic laboratories, their ability to dispense quality patient care, or their essential research. In short, Cuba has the accumulated medical training and intelligence to move forward, but faces serious challenges to refurbish and rebuild the physical plant and provide updated technology.

Thus in 2004, a national program for refurbishing the country's 444 community polyclinics was carried out and 52 hospitals and tertiary institutes were designated to become national "centers of excellence" once they were themselves remodeled and newly equipped. The first of these new centers were completed in 2006 -- the Hermanos Ameijeiras Hospital, Pando Ferrer Ophthalmological Institute and the Enrique Cabrera Clinical-Surgical Hospital (all in Havana).

Synergies in the System Today

One of the hallmarks of the Cuban health system since the early 1980s has been its research results and applications -- ranging from high-tech biotechnology and vaccine R&D, to broad community-based epidemiological studies on chronic diseases.

The health system - its universal access and coverage, as well as statistical records - has provided the formidable backbone for research, enabling massive informed-consent participation in clinical trials of new medications and vaccines, as well as longitudinal studies on conditions such as chronic vascular diseases and cancer.

The Cuban philosophy is "closed-loop" research, in which investigation priorities are based on priority health problems that need solving, whether outbreaks of disease (such as meningitis or hepatitis); the financial urgency of replacing expensive imported drugs; or the conditions that come with aging. Research is carried out, and then results applied nationally and/or internationally, thus "closing the loop." Vaccine research is currently being carried out into such "neglected diseases" as cholera, dengue, tuberculosis and leptospirosis.

In addition, the universal nature of the health system has greatly facilitated national studies on key topics. One such study on the disabled has led to reforms in the health and education systems to more adequately meet the needs of these persons. (See *Por la Vida*, Casa Editorial Abril, La Habana, 2003.). National registries - in everything from sickle cell anemia to twins - have also been developed as a way to direct better attention to specific populations within the country.

As Cuba emerged from the economic hurricane of the 90s, the country's health system began to share its experience more widely with other developing countries, engendering South-South synergies that continue to develop today, both in medical services, research and medical education (see *Cuba and Global Health* <http://www.saludthefilm.net/ns/cuba-and-global-health.html>).

The Road Ahead

Cubans are wont to say: '*no es fácil*' (it's not easy), but just as apt to say '*no hay problema*' (it's no problem). And this paradox could certainly be used to describe where the ever-evolving Cuban health system finds itself today.

There is no doubt that resources - material, financial, and human - are stretched as Cuban health authorities attempt to cover their own population and carry out an expanding program of global cooperation in health, unprecedented in scope for any developing country. While some new resources are procured from South-South agreements, particularly with Venezuela, the US embargo continues to throw up serious obstacles to attaining the latest medications and technology. And the program to refurbish Cuban hospitals, converting over 50 into centers of excellence, has not kept pace with original timetables. All of this, of course, places a particular burden on health professionals in the country once again.

The challenges are many and will remain so for some time. These include re-organizing the system where necessary, mainly at the primary care level and in medical education; finishing the remodeling of dilapidated hospitals and institutes, plus the effective management and maintenance of these new facilities; increasing the efficacy and quality of medical attention and preventive programs; and paying sufficient attention to the opinions of health care professionals as the system addresses each of these issues.

Notes & References

1. Centro Nacional de Información de Ciencias Médicas. *Emigración Médica*. 1968. A total of 1,975 had left the country by March, 1965, and by the end of 1967, another 1,025 had applied to do so. (pp. 21 and 26).
2. Medina, C et al. Recuento histórico de la enseñanza de la medicina en Cuba. *MEDISAN* 2001; 5(2):46-51.
3. Agrupación Católica Universitaria, "Encuesta de los Trabajadores Rurales 1956-1957". In *Economía y Desarrollo*. July-August 1972;12:198.
4. Database of the Unidad Central de Colaboración, Ministerio de Salud Pública, Havana, 2003, showing a cumulative total of 19,126 health professionals posted abroad from 1963 through 1989. NOTE: This represents the sum total of professionals posted abroad each year. If a person served more than once or more than one year, each "person-year" is counted separately.
5. See Hadad J. International Workshop on Epidemic Neuropathy in Cuba: Report Summary. *MEDICC Review*, VII:7 2005. 27-30.
http://www.medicc.org/publications/medicc_review/0705/cuban-medical-literature-2.html

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