TPG-IHA Senior Executive Trade/Study Mission
Havana, Cuba
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Executive Summary

Cuba sits only 90 miles off the coast of the United States but most U.S. citizens have limited knowledge of how things work in Cuba due to the adversarial relationship and 50-year embargo between the two countries. In January 2015, TPG Health Academy (TPG-IHA) led a delegation of senior healthcare executives to Havana Cuba in order to learn about the Cuban Healthcare system. What the group found was a country that has prioritized health and education above all else. They also discovered a country of friendly people who were more than willing to open up and share their healthcare system and experiences. When the group asked its hosts what were the most pressing issues for the Cuban people, their response included matters such as salary, transportation and housing. Unlike here in the U.S., healthcare was *not* one of the more pressing issues in the eyes of our new Cuban friends.

Background:
In the late 1950s as Fidel Castro came into power, Castro found that healthcare was lacking in both availability and quality to a large portion of the Cuban people. Noting this issue, Castro identified healthcare as a national focus. He began by creating a system that gave greater access to care for those both in the rural areas of the county as well as the cities.

In 1976, taking this one step further, healthcare was formally recognized in the Cuban constitution, which stated, "Everyone has the right to health protection and care."
The country built a system that guaranteed the right of healthcare by providing free medical and hospital care utilizing a system that included both an urban and rural medical service network, the Consultorio neighborhood care system (primary care), polyclinics, hospitals, preventative and specialized treatment centers and free dental care. In addition, the government promotes health through public healthcare campaigns, health education and other measures to prevent the outbreak of disease, which has led to eradication of infections such as malaria.

Throughout this period in Cuba's history, the country's economy was closely tied to the Soviet Union's economy. The fall of the Soviet Union had a significant impact on the Cuban economy and most aspects of the Cuban population's world. Since then, Cuba has nurtured relationships with a number of other countries such as Venezuela, Brazil and Africa. Although these affiliations have been beneficial, Cuba still remains significantly constrained economically requiring the country to rely on others for its own fiscal health. This is not unusual for most Island countries, especially those with limited natural resources. What is unusual about Cuba is that through innovation, this country has found a path that can potentially change its course, especially as relations with the United States and other European countries normalize.

Investments are centrally controlled. This includes all forms of investments including healthcare. Approximately 13% of GDP is attributed to healthcare services and products. There was no time during our visit to Cuba that concern over healthcare spending was articulated. Everyone

with whom we spoke shared the common belief that healthcare is an investment that is necessary for their country to succeed.

Healthcare Basics

Healthcare in Cuba is universal, free of charge and comprehensive to all its citizens.
The national healthcare system operates through the Ministry of Health – a government division that has both fiscal and administrative responsibility over healthcare. This is a bit different than many of the countries that TPG-IHA has visited where these governments maintain all or some of the fiscal responsibility but not necessarily the operational activities. The Cuban Ministry of Health has three goals:

- Improving satisfaction of care;
- Increasing the possibilities of diagnosis and treatment;
- Creating a situation in which healthcare can pay for itself in a self- sustaining model.

The delivery of care in Cuba is organized into three levels. These levels include the Consultorio (primary care triage) and the Policlinic at the first level, the general hospital at the second level and the specialty hospital at the third level. The Cuban healthcare system has attained the successes that it has through the use of a strong primary care and preventative system. The population is actively involved in the preventative healthcare through social and community organizations.

Lessons Learned

Primary Care

In many ways, the Cuban system is one that the United States is striving for, as primary care and population health are at its core. In the U.S., most young physicians train as specialists. This is not the case in Cuba. In Cuba, all physicians are trained as primary care physicians and are required to practice in primary care for a number of years prior to having the opportunity to specialize. In addition, preventative care is not only the focus of the primary care physician and the patient, but of the community as a whole.

Primary care has been the basis for healthcare transformation in Cuba. The country's healthcare was revamped first in 1959 as it restructured its model from a centralized system to one that was based more locally. At the same time that the delivery of medicine began changing, medical schools began to focus its training on social determinants of health, health promotion and prevention. Prior to that time most of the physicians in Cuba were specialists and Cubans needing healthcare went directly to the emergency room to receive most of their care. A subsequent revision of the new healthcare model occurred in 1984 when the primary and community-based healthcare model was put in place. Family care clinics or Consultorios were created. These primary care centers consist of a physician, nurse and social worker who provide healthcare care as well as reside within a specified community. Although these three caregivers have little choice as to the neighborhood in which they will live and practice, the relationships often last for years.

The staff of the family care clinic will either see the patient in the office or, since they live in the same community, go to the patient's home. There are 11,486 family practice doctors practicing within Cuba. Each family physician cares for approximately 150 families (approximately 1000 individual patients). The Consultorio practices population health medicine including:

- Care for acute illness and rehabilitation after illness;
- Environmental health basics including how their patients live, what they eat, and their hygiene;

- Health promotion;
- Disease prevention.

The Consultorio not only deals with the medical aspects of one's care but also the psycho-social issues that may arise. It is understood that there is a direct connection between them. Each family covered by the Consultorio has a family record that includes the family dynamics and any other familial habits or issues that may be of importance. In addition to the family record, each patient has an individual record, which consists of both medical and pyscho-social information.

Understanding a patient's health in context with the broader family constellation allows the primary care team to provide better care. It also helps to build mutual trust. This trust has translated into improved communication as well as improved adherence to medical care. The group had the opportunity to not only meet with the physician and nurse within a Consultorio but with one of their patients as well. The patient had recently been released from the hospital and was seeing his primary care physician to review the care that he received and to get instructions on taking the medicine that was prescribed in the hospital. It was clear from the conversation that this gentleman considered his doctor not only a leader in his care but his friend (he specifically articulated this to the group).

Healthcare, like other resources in Cuba, are limited. Due to the resource constraints that exist, care is rationalized to the level of necessity. These decisions are made by the primary care physician, the patient and their family and not by administrative means. There seems to be very little pushback or anger by the patient when rationalization occurs due to the strong patient-physician relationship.

In addition to the Consultorio, level one care in Cuba includes the Policlinics. Every Consultorio is tied to a Policlinic where a patient can receive specialist care at the ambulatory level. A patient does not have to obtain permission from the Consultorio to receive specialist care at the Policlinic, but most patients choose to do so as they see their primary care team as their initial and "go-to" healthcare support.

Prevention

The care received through the Consultorio is based on the slogan "Prevention for Health". The system stalwartly believes that self-examination and family care is the foundation for health. This allows for a strong health promotion and prevention programs for healthcare in Cuba. The Cuban government believes that health and healthcare are an investment in the countries future and that prevention is a cornerstone to this investment. One visible example of this is infectious disease, which at one time was a major cause of morbidity and mortality in Cuba. This is no longer the case. All children within the country are vaccinated. Vaccinations are given initially through the Consultorio and later in childhood through the school system. This community-based model has shown great success as a number of infectious diseases have been eradicated across the entire country.

The country addresses prevention not as an afterthought but in a very conscious way. An example of this is infant mortality. At one time, Cuba's maternal and infant mortality were very high and leadership across the country believed that this issue needed to be addressed. A system was put in place that requires women to see their physician at least 12 times during a pregnancy. In addition, women who are at risk of a problem during pregnancy are offered additional support through one of the 142 "maternal homes" within the country. The "maternal homes" provide specialized neo natal care, enhanced nutrition and self-care education. This focused effort in prevention has significantly lowered both maternal and infant mortality. In fact, Cuba's infant mortality is lower that found in the United States.

Another area of significant focus around prevention is HIV/AIDS. Cuba, like many other countries has struggled with this deadly disease. The Cuban healthcare community has chosen not only to address care for those with the disease through medication and supportive care but also to address the prevention aspect of the condition. Healthy sexual hygiene education begins in primary school in the 5th grade and continues on through adulthood. In addition, a house-to-house education program, free condoms and "clean needle" programs have been put in place. The country has seen great success in these types of preventative programs and the spread of HIV/ AIDS has been significantly decreased.

Quality of Care and Chronic Illness

Quality of care practices and metrics are an important part of the Cuban healthcare system. Cuba struggles with many of the same illnesses that we do in the United States.

1. Cancer
2. Cardio Vascular Disease
3. Neurovascular (stroke)
4. Influenza
5. Accidents

Similar to the United States, Cuba utilizes both preventative care and chronic illness guidelines. These guidelines are both promulgated and implemented by the National Institute of Epidemiology and Hygiene (the "Cuban CDC"). This organization is responsible for teaching, research and policy of healthcare standards, guidelines and measurement. The organization focuses its work at the community and primary level of care but does very little at the second level of care (hospital level). Oversight of the guidelines is done at the Level 1 of care and managed at the Policlinic level. The person responsible for oversight of quality care evaluates the entire team including both nurse and physician care. If re-education is needed, it is done at a peer-to-peer level and not through administrative intervention. Although many of the guidelines are similar to the United States, they are not exact due to the scarcity of resources within Cuba. An example of this is mammography. The only women that receive mammography are those who are symptomatic or are considered to be high risk.

This also holds true for guidelines associated with chronic conditions such as diabetes. It is understood that best practices may include blood sugar monitoring and medication management but that these resources are often not available. In Cuba, blood sugar monitoring is done at either the Consultorio or Policlinic and is not done on a daily basis unless the patient is unstable. In addition to biometric monitoring challenges (i.e., blood sugar),medication management for diabetes and heart disease are also challenges. Basic medications such as metformin and beta-blockers are typically available, however many second and third line medications are not.

In addition to care guidelines, health care metrics are followed closely.
Today there are five quality programs including:

1. Child and maternal health;
2. Senior healthcare;
3. Medical emergency care;
4. Transmittable diseases (infectious disease);
5. Non transmittable diseases (most specifically obesity, diabetes and cardiovascular disease).

Each of these programs include between 20 to 30 associated measures. Although metrics are collected on a national basis the methodology for collection is relatively primitive. Indicators of health are evaluated every three months. Doctors have computers in their office but the

information is shared via paper to the statistics department on a weekly basis. Feedback on data collected at the Consultorio is given regularly.

Aging Population

Similar to the United States, Cuba has an aging population. Today, 18.5% of Cuba's population is over the age of 60. As health prevention continues and improved clinical outcomes continue to grow, so will the percentage of older Cubans. By the year 2020, 30% of the population will be over 60 years old. The Cuban government has recognized that this trend will cause a strain on both the healthcare system within Cuba as well as other community resources. In order to address this issue, Cuba has put in place a number of programs to help support their senior population. There are 126 homes for the elderly and 31 disabled clubs. In addition there are a number of senior day care centers. The group had the opportunity to visit a geriatric rehabilitation center. Patients are referred by their Consultorio or Policlinic. The center is similarly comprehensive as the other parts of healthcare. The clinic is a multi-disciplinary center that addresses both physical, cognitive and pyscho-social issues its senior patients. Patients are engaged in the center for anywhere from 90-360 days having regular evaluations sent to their Consultorio.

The challenges that we have in the United States around end of life do not occur in Cuba. The major reason for this is due to the patient-provider relationship that exists in Cuba. Discussions pertaining to end of life occur most often at the Consultorio level between the patient, their family and the primary care team. The concerns of withholding care due to financial reasons do not occur in the same way as it does in the U.S. In Cuba, a shared decision model is utilized outlining the benefits and implications of the treatment discussed and is a decision made together.

Innovation

For a number of years, the Soviet Union was a major supporter of Cuba in both its economy and products. This relationship somewhat muted the effect of the United States embargo. The fall of the Soviet Union in 1990 created a situation of desperation for the Cuban people in general and their healthcare in specific. The combination of the United States embargo and the fall of the Soviet Union created the need for Cuba to produce both vaccines and medications. As stated earlier, there is a paucity of second and third generation medications available. Generics are much more utilized in Cuba. There are 862 generics utilized in Cuba with 80% made in within the country. Only 20% of the generics utilized are made outside the country.

In addition to small molecule medications, Cuba has a successful biotech industry. The biotech program began in 1980 with the opening of twelve biotech organizations within the country. The industry in Cuba takes a problem-oriented, not market-oriented approach. There are shared responsibilities and no internal competition, which allows each of these companies to flourish. To date, there have been 236 drug approvals coming from the pharmaceutical drug industry. Forty- two biotech products are sold to the Cuban Ministry of Health with the remainder commercialized and sold to 57 countries. The biotech industry is both cash positive and self - sustaining. This successful commercialization has allowed for continued investment in both research and production. The main focus of the industry at this time is cardiovascular and oncology, as these are two main causes of both morbidity and mortality within the country. Cuba has found success in the pharmaceutical manufacturing arena as intellect and political will are the only necessary ingredients for success.

Healthcare as a Revenue Producer

As stated earlier, medical supplies are scarce in Cuba due to the fall of the Soviet Union (80% of their trade) and the U.S. embargo. One resource that Cuba does have in great supply is manpower. In 1959 there were 6,000 doctors who cared for the inhabitants of Cuba. In 1963 the Cuban Cooperation program for health workers began and today Cuba has over 50,000 healthcare professionals as part of the program.

Cuba has created an education system that creates large numbers of healthcare professionals. These doctors and nurses do not pay for their education and are asked to "give back" to the Cuban system. In some cases, this means practicing in rural areas that do not have appropriate healthcare resources. In other cases, it means being transferred to other countries to give care to the underserved. Cuba supports healthcare to over 100 countries in the world. In fact, Cuba has one medical school that supports non-Cuban students who then return to their countries to support their underserved. Today, 52% of the economy is based on exportation of professional services through the Cuban Cooperation Program, which sends healthcare resources to more than 120 countries as their primary form of national revenue. This special group of healthcare workers is deployed across the world to not only support a country's' primary healthcare system, but to also address issues such as malaria, ebola and earthquakes.

Conclusions:

The 2015 TPG-IHA trip to Cuba was timely for a number of reasons. First, one month prior to the mission, the United States and Cuba announced the initiation of talks regarding the resumption of normalized relations. Although little had yet officially changed during our trip, there was a great deal of talk and excitement around the potential for relaxed relations.

A second reason for timeliness centers on how the United States – in its effort to reform its own healthcare system – can learn lessons from the Cuban healthcare system.

In Cuba, the government promises its population access and provision to healthcare. More importantly, access is found at the community level through a strong primary care system. For the United States, the Accountable Care Act begins the path to access to insurance. The next step is creating a system that offers care to appropriate primary and preventative care. This is necessary in order for the United States to successfully attain the goals we want to achieve. Our group learned that a strong primary care system *can* successfully address a number of challenges that we face today including breaks in communication between the healthcare system and patients and their families, adherence to care and effective resource allocation. The trust and relationships that are formed within the Cuban community with the Consultorio was something that the group identified as a significant factor in the success of their healthcare system.

In regards to quality of healthcare, Cuba has a national set of goals that they strive to address as a country. The United States also has a set of goals but they are not always clear and consistent. We have quality metrics such as Star ratings, NCQA measures and other accreditation metrics but our goals tend not to be standardized nationally. This lack of consistency is an ongoing concern by many healthcare organizations and physicians. Strength comes with common goals.

The third area of focus in the triple aim is cost. Interestingly, the group noted that they had not heard anyone speak about cost being an issue for the Cuban system. The reason for this is most likely that Cuba has made healthcare a priority both for today and for the country's future.

They see healthcare as an investment. This allows them to aggressively address health and healthcare prevention as a foundation of their system. We in the United States know that our present system is unsustainable but we have not yet clearly identified whether our system and the costs associated with the system are part of a long-term investment.

Overall, the delegation agreed that their experience in Cuba and understanding of the country's healthcare system was a great learning experience. They group stated that the lessons they learned on the trip will help them to affect change within the reforming system we have here in the United States.

TPG-IHA (www.tpg-iha.com) develops and conducts educational programs in countries outside the United States for senior healthcare executives.