

The Coronavirus Pandemic and the Costa Rican Health System (INCAE Business School, 3/22)

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Abstract

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What is the message? In Costa Rica, the National Health System includes multiple mechanisms that are coordinating healthcare activities as the country faces the challenges of the COVID-19 pandemic.

What is the evidence? Alvaro Salas has vast experience managing public health emergencies. He was the President of the Costa Rican Social Security (CCSS) during the Figueres Olsen government 1994-1998. He is known as one of the founders of the primary healthcare public system in Costa Rica. Salas was also Director of the Hospital Calderon Guardia, a third level public hospital, and Board member of the (CCSS). He is currently a Professor of Public Health at the University of Costa Rica.

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“The day will come when a sneeze in the East will generate a cataclysm in the West,” Libia

Herrero, MD, said in a talk about viruses at the University of Costa Rica, some years ago. This day has arrived! Against the pandemic, public institutions need effective action to stop transmission and provide necessary treatment. Prior experience and the ongoing response to COVID-19 in Costa Rica offer important lessons.

Since the 1980s, when Costa Rican authorities established the National Health System, the country has faced multiple epidemics and pandemics with satisfactory results. What allowed the country to achieve these results? What are the reasons why the cholera epidemic that originated in Peru in the early 1990s with hundreds of thousands of cases and hundreds of deaths, only had 35 cases in Costa Rica—half of which were by people who caught it abroad. Similar success happened with SARS, H1N1, and others. In this article, we discuss some of the features that allowed Costa Rica to effectively deal with previous pandemics and are being brought to bear on COVID-19. We hope this experience will provide insights to public authorities in other countries.

Costa Rican Health System

Costa Rica has a National Health System (NHS) through which the government coordinates its efforts to deal with a pandemic. The NHS, which was established by executive order in the mid-1980s, defines roles for different actors in the system.

Institutions

Multiple institutions are important across the scope of the NHS. Each of these actors participate in carrying out and coordinating efforts against a pandemic in Costa Rica.

- **Ministry of Health:** The Ministry of Health plays two roles: (1) it provides health services at the first level of care, based on the Primary Health Care strategy; (2) it is the political arm, directly related to the President of the Republic, in the health sector.
- **Costa Rican Social Security System:** The Costa Rican Social Security System (CCSS, for its acronym in Spanish) provides general, specialized, and hospital medical services. The CCSS manages the public network of hospitals and clinics throughout the country.
- **University of Costa Rica:** The University of Costa Rica oversees the training of human, administrative, and technical resources, including doctors, nurses, microbiologists, dentists, pharmacists, and others.

- **National Institute of Aqueducts and Sewers:** The National Institute of Aqueducts and Sewers (ICAA, for its acronym in Spanish) is responsible for supplying water for human consumption and for channeling wastewater.
- **National Insurance Institute:** The National Insurance Institute (INS, for its acronym in Spanish) administers professional risk insurance programs.
- **Other ministries:** The Ministry of Planning and Economic Policy and the Ministry of the Presidency participate as organs of the national executive.

Four principles

Since its inception, four basic principles of the National Health System have shaped political and technical efforts. The first and most important of these principles is that the Costa Rican state is responsible for the health of all citizens. Second, the Ministry of Health is the guiding institution for health matters. Third, integration and coordination of the multiple institutions that constitute the NHS is imperative. Fourth, promotion and prevention are the foundation of the health system. These principles constitute the legal framework on which the National Health System is based.

Distribution of services and skills

The broad distribution of health facilities around a relatively small country (about 5 million people over 51,000 square kilometers) allows the population to access services without having to travel long distances. In 1994, when the Health Sector Reform law was approved, the Ministry assumed stewardship for sectoral health, establishing headquarters in each of the cantons and administrative regions around the country.

In turn, the health system provides effective coverage with administrative and medical staff. Technical and professional personnel are part of the staff at the headquarters. Health Ministry personnel include experts in public health, statistics, and epidemiology.

The CCSS has health facilities in each of the country's 82 cantons and seven health regions, starting with the first level of care. The CCSS manages 1,113 Basic Teams for Comprehensive Health Care (EBAIS, for its acronym in Spanish) distributed in each community around the country—one facility and team for every 5,000 inhabitants.

The CCSS also provides health services at the second level of attention through 117 Health Areas Headquarters (HAH) located in the main cities of each canton. These HAH serve as a professional and technical support team for the EBAIS, with general doctors and some specialists, professional nurses, dentists, microbiologists, social workers, psychologists, and pharmacists, to carry out all activities related to prevention, health promotion, healing, and rehabilitation. Each health area manages its operating budget, which gives them great flexibility and autonomy.

Finally, the CCSS offers a third level of attention through 29 general and specialized hospitals for patients referred from the primary level of attention (i.e., EBAIS). This network of health facilities promotes early detection and eases the navigation of patients through the system.

Support systems

Five key support systems throughout the country facilitate these efforts, including education, the central coordination role of the NHS, the presence of the National Public Health Laboratory, health care financing programs, and a national digital health record. First, the NHS leverages the high education level of the country's citizens. Since the inception of the Costa Rica public education system more than one hundred years ago, primary education has been obligatory for both girls and boys, paid for by the State. With a 97% literacy rate, citizens can follow authorities' instructions. This behavior is supported by the confidence Costa Ricans have in the country's health institutions.

Second, the fact that a single political-technical institution, the National Health System, coordinates efforts at the highest level helps generate a single message. The NHS makes decisions that become executive orders and allocates financial resources to cover the needs of pandemic care for the attention of all citizens—insured and uninsured, national and foreign—as defined by the legal framework.

A third feature that strengthens the capacity of the system to face pandemics is the National Public Health Laboratory (INCIENSA, for its acronym in Spanish). All laboratory samples for coronavirus, dengue, H1N1, and Chikungunya, among others, are confirmed at INCIENSA, even when the CCSS clinical laboratories also carry out rapid tests to rule out or declare a patient as a carrier of the disease. This fact strengthens the credibility and confidence of the doctors and

nurses who are caring for patients at all three levels of attention. Also, the NHS has health surveillance services with many field epidemiologists in each of the leading health areas and regions.

Fourth, the health sector financing scheme is public, which facilitates the channeling of resources in case of an emergency. The central government finances the Ministry of Health and the University, through budget allocation. The CCSS has a tripartite financing system where employers, workers, and the state contribute jointly to the health insurance fund, pension insurance, and administer the non-contributory regime. To help fund the public expenditures, the INS generates revenues by selling professional risk policies to companies to protect their employees. Also, the ICAA generates revenues through direct payment for water services.

Fifth, Costa Rica has a national digital health record (EDUS, for its acronym in Spanish). EDUS provides a medical record for all citizens that can be accessed from any health facility within the network.

Coronavirus Outbreak in Costa Rica

The first coronavirus case in Costa Rica was detected in March 6, 2020. The pandemic arrived in Costa Rica through three foreigners: two Americans and one Cuban. The latter passed the virus to sixteen people at a regional hospital in the public system, Hospital San Rafael de Alajuela, about 20 kilometers north of the country's capital, San Jose.

The Costa Rican healthcare system reacted quickly. Immediately, the network of health areas and hospitals responded by reorganizing services and redistributing patients—both hospitalized and outpatient—from the affected facility. The goal was to cut the transmission of the virus among hospital personnel, patients, family members, and health personnel.

As a result of these actions, healthy people no longer had to go to the contaminated hospital. They were able to be cared for in nearby hospitals and health areas to support the hospital in trouble. In this way, they were able to fill their prescriptions and receive laboratory and cabinet examinations in network hospitals.

Testing for COVID-19 happened quickly, with INCIENSA undertaking all the tests. Epidemiology

personnel carried out a sweep of cases in the hospital and among patients attended by a sick doctor. By March 18, 2020, the system ruled out 855 suspected cases and identified 69 positive cases, with one death of an 87-year-old man. The search for suspicious cases continues. When laboratory results arrive, the health authorities treat them as positives.

Care has been distributed in multiple locations. Two cases were being cared for in Intensive Care Units, and seven in public hospitals. The rest were isolated in their homes, supervised by EBAIS personnel.

Several institutions within the national public health system support the ability to create this continuity of care. The national EDUS digital health system has helped link together the efforts. More broadly, the complementary network of health stewardship services is facilitating service reorganization. Financially, CCSS approved a supplemental budget to send home all sick and suspicious people, the caregivers of patients or suspects, in order to help cut transmission of the virus.

Looking Forward

As of March 18, efforts continued in order to detect patients early and decrease transmission. Public gatherings are prohibited, schools are closed, working from home is encouraged, and borders are only open to nationals and residents. The NHS continues to work to ensure that the virus does not have a more significant impact on cases or lives.

Our hope is that the Costa Rican National Health System and its coordination mechanisms are strong enough to—once again—deal effectively with a pandemic. Many countries around the world lack comparable mechanisms. Indeed, we are starting to see governments, such as in Spain, having to “take over” public, private, military, and civil health facilities in the country to address the COVID-19 pandemic. Our key message is that it is critically important for countries to have coordination mechanisms, such as those in Costa Rica, to bring together fragmented health care activities when we face challenges such as COVID-19.