

# **The Experience of Nicaragua in Managing the Covid Pandemic**

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## **Introduction**

Nicaragua, the third poorest country in Latin America, has a population of approximately 6.7 million people. Nicaragua has one of the most advanced and democratic systems for autonomy for her indigenous peoples, with over 30% of national territory titled in the name of 23 indigenous and Afro-descendant territories. She is among the first countries in the world in gender equality. Nicaragua has the most extensive and well-equipped public health system in Central America and has just inaugurated the first medical oxygen plant in the region. The National Reference Diagnostic Center is one of the pioneer laboratories of molecular biology in Latin America, second in the region. In Nicaragua, public health care is free. Education in the public school system is also free. A study in May 2021 by the World Health Organization and Oxford University included Nicaragua among the ten safest countries for travelers in relation to Covid 19. So, it should be no surprise that Nicaragua has dealt successfully with the Covid 19 pandemic. Though that is not what you would have read in the international press during the pandemic.

I have lived in Nicaragua for most of the last 43 years, arriving only a few months after the July 19<sup>th</sup>, 1979, triumph of the Sandinista Revolution which overturned a US backed dictatorship installed in the early 1930's. Twenty days after the triumph, the government's leadership declared that free health and education were human rights for their people. The country had what I used to call a "honeymoon" for almost two years with the building of new schools and health clinics, a national literacy campaign that substantially reduced illiteracy and the introduction of a national community-based health system, starting with training community health volunteers, known as "brigadistas".

The honeymoon was short lived. At the opening of the Literacy Campaign Museum in Managua in late 1981, the very first images were the pictures on the wall of the more than 40 student literacy brigadistas that had been murdered by the counter revolutionary forces, financed by the United States. In 1984, Nicaragua brought the US to the International Court of Justice for the bombing of a national port and other war crimes. In 1986, the ICJ ruled in favor of Nicaragua, but the US refused to accept the verdict and refused to enter the indemnification discussions, which were calculated at 17 billion dollars at the time.

The end of the war was negotiated in 1989. Elections were held in 1990, and the US backed opposition won, because it was made very clear that if they did not win, the war would continue. The neoliberals continued in power until 2006, when the FSLN returned to power, via elections, and today, 17 years later, many of the dreams of the Revolution have become a reality or are well on their way.

I want to share this reality with you today too because of what I experienced nine years ago in Liberia, West Africa with the onset of Ebola. What was ever present in my mind during that time was the

conviction that if Liberia had also been supported over the years in developing a community based public health system with sufficient internal infrastructure and public services for her people, which is the case of Nicaragua, thousands of lives would have been saved. Ironically, the same thing could be said for the United States, where more than a million people died of Covid 19 and continue to do so now at the rate of about 250 or more per day.

I feel that it is important that public health and socio-economic development specialists, especially those from the global South, become more aware of what really happened and is happening in Nicaragua, not only during the pandemic but also before, with the hope of increasing communication and learning from this experience to be better prepared for future disasters.

## **Preparations for the Inevitable First Case**

Nicaragua began to prepare for the Covid pandemic even before Covid was declared a Public Health Emergency of International Importance on January 30, 2020. On January 21<sup>st</sup>, the Ministry of Health (MINSa) held a press conference to warn the population about the risk of a pandemic and recommended preliminary preventative measures. Nicaragua was one of the first countries in the region to set out its Covid strategy. On January 30<sup>th</sup>, the government established an inter-institutional commission to ensure a coordinated and comprehensive approach to fighting the pandemic. On February 9<sup>th</sup>, MINSa issued a joint protocol with the Pan American Health Organization (the Americas' branch of the WHO) for the preparation and response to the risk of Covid 19 to ensure adequate surveillance and early detection of suspected and confirmed cases. Preventive measures, based on WHO/PAHO protocols, were established to reduce the transmission of the virus and a communication strategy was prepared to better inform and educate the population and to ensure early detection of suspected cases at border crossings, both official and unofficial. Health checkups upon arrival at the Managua airport had been in place well before Covid but were strengthened.

The initial protocol also designated 19 hospitals to specialize in Covid 19 cases, of which one in Managua would address severe respiratory diseases. Among other resources, at the start of the crisis, these hospitals were equipped with 562 intensive care beds and 449 ventilators. The Protocol also included greater preparation of primary care health units for addressing respiratory symptoms at a national level, training of public and private personnel, and the acquisition of protective equipment. Special emphasis was placed on increasing contact tracing capacity. Before the first case was detected, the Ministry of Health's 36,000 health workers had received training on the virus. The government also set about to strengthen the population's defenses against the pandemic within the community before the first case. It intensified its vaccination program to reduce the level of other respiratory diseases such as influenza and pneumonia that would make the fight against Covid more difficult by using similar health resources.

158,000 volunteer community health brigadistas were trained to help combat the pandemic. In early March, MINSa personnel and the brigadistas went door to door all over the country to take an updated local census, taking note of people over 65, people with chronic illnesses, children, and to discuss with each household the basic measures of prevention. They also encouraged those who had not been vaccinated for the flu or pneumonia to go to the nearest health center to put themselves and their families up to date. It should be noted that vaccinations are not mandatory, but most of the population takes advantage of the month-long yearly vaccination campaigns. The brigadistas made over five million home visits (about four visits per household) to educate people, identify possible Covid cases and address misinformation.

These home visits were not new to the population. MINSa personnel and volunteers work together on vaccination campaigns, and other preventative actions, for example, the fumigation of homes to decrease the threat of dengue. As a result of these types of actions, malaria is now mainly concentrated

in a few areas of the Caribbean Coast, and it is probable that it will soon be completely eradicated. MINSA personnel and brigadistas also completed a national nutrition census- height and weight- of children under six, approximately 1,386,32 boys and girls, to identify families that might need additional nutritional support for their children. MINSA also organized 66 mobile clinics to attend rural areas that were identified as more vulnerable.

Another key part of the strategy was to train 9000 people to monitor the 19 points of entry to the country used by visitors or Nicaraguans returning to their country. People who entered Nicaragua by air or land were asked to self-isolate for 21 days, during which they received phone calls and sometimes visits from MINSA to monitor their health and detect possible new cases of transmission. Nicaragua deliberately did not close her borders as she wanted returning travelers to use official crossing points. Non-official but known crossings were also monitored. MINSA also set up a free, well/staffed hotline with 150 operators to attend both cell and landline telephones for people to request assistance, advice, etc. The hotline received 110,000 calls in its first month of operation.

With respect to public transport, a daily disinfection program was carried out in 10,000 public transport buses and 23,000 taxis as well as in more than 10,000 schools and 130 open markets of high volume in Managua. Disinfections outside of Managua were twice weekly.

## **The Decision to Not Lock Down**

Before the first case was detected, the president of Nicaragua, Cro. Daniel Ortega addressed the nation to update all on what the government was doing and to announce that the country would not close down, despite the pressures to do so. In a country where about 80% of jobs are in small businesses, small farming or in the informal sector, the government faced a dilemma. Should it confine people to their homes, knowing that most would lose their incomes and their capacity to feed their families? How would the 40% of Nicaraguans who live in rural areas survive if not able to sow their crops, given that the peak of the pandemic coincided with one of the main planting seasons.

The country had already suffered an almost total lockdown less than two years earlier when, in April of 2018, well financed opposition groups, initially using student protesters in front of a Jesuit University, accused the government of not doing anything to put out a fire in a natural forest reserve. When that didn't spark a response, the accusation changed to accuse the government of obeying IMF recommendations to implement cuts to social security benefits. Demonstrations started and immediately social media was flooded by fake news of massacres which convinced some that this was true. A second round of well-organized attacks in major cities and towns started almost immediately. By mid- July, peace was restored but during those 4 months, the country did experience a real lock down and over 200 people were killed, including 20 police officers.

Damages to the health sector during the violence included 18 buildings damaged, including 4 hospitals invaded and looted, as well as the looting of 2 regional health main offices and 1 maternal waiting home. 107 MINSA vehicles were destroyed, 15 totally and 92 partially; these included new ambulances and mobile clinics. Medical equipment was destroyed as well as medicines robbed.

Nicaragua's economy, which had been growing on average at 5% per year (third highest growth rate in Latin America) was severely damaged by the events of April to July 2018. Growth dropped to minus 4% in 2018 and minus 3.9% in 2019.

It was clear that the challenge of designing a national Covid response in Nicaragua had to consider not only fighting against the virus but also preventing to the extent possible, another blow to the economic recovery and development efforts of the government. Today it is very clear that both Nicaragua's

decision to not close down the economy and the strategy to contain Covid were the best for the country. By refusing to lock down, the government saved the country from economic disaster. Nicaragua's economy has recovered swiftly from the pandemic, with GDP growing by more than 10.3% in 2021 and 3.8% in 2022.

## **The First Case**

The first case of Covid, a passenger coming through the international airport in Managua, was detected on March 18<sup>th</sup>, 2020. In neighboring El Salvador, the first infection arrived on the same date and a lockdown was declared two days later. Honduras, whose first case arrived a week earlier, did the same. Costa Rica, to the south, imposed a lockdown on March 16<sup>th</sup> and closed its border completely three days later. Those three countries insisted that Nicaragua join in closing the regional economy, but Nicaragua resisted. Nor did the government close public schools or universities, although there were no sanctions or penalties if families chose not to send their children to school. Nicaragua public schools also offer free lunch to all students, and during that pandemic, in poorer areas, that was increased to two meals a day. Private schools did close, but most of their students were technologically equipped for online classes.

Nicaragua's health authorities remained focused on identifying patients with symptoms and ensuring they received the treatment they needed while also monitoring those patients' contacts to ensure that they isolated appropriately. Their strategy was to "flatten" the curve of virus cases as quickly as possible. The most critical months of the pandemic were May to July of 2020 when it was more than clear that Nicaragua was into the phase of community transmission. Exact numbers of cases were always difficult to calculate, because, as a WHO report had indicated, 80 % of infections were mild or asymptomatic, and therefore not counted if no test had been done. MINSA decided to only count cases that had been confirmed by positive PCR RT testing given that that pneumonia and other illnesses also normally affected death rates.

Each Tuesday, from the beginning of the pandemic, MINSA has published a report on the number of active cases, deaths, recoveries, and those still under medical attention. By August of 2020, numbers were gradually falling, although they peaked again in mid 2021. The weekly report of April 25, 2023 informed that 15,679 positive coronavirus cases had been detected in Nicaragua so far. Of these cases, 15,443 individuals have recovered, 245 have died and 9 remained active and undergoing responsible medical treatment. WHO later reported that Nicaragua had one of the lowest rates of excess deaths during the pandemic.

MINSA's efforts were complemented by the great majority of people and businesses in the country who followed MINSA's recommendations. In general, Nicaraguans were doing more to protect themselves by wearing masks and ensuring they kept physical distance and by applying systematic hygiene measures at home, and in public and private establishments. While tourism came to a halt and hotels and restaurants closed, many other businesses and outdoor markets stayed open with precautions in place.

## **Opposition Aggression Once More, Fake News to Create Panic**

Nevertheless, MINSA and the government's efforts came under constant attack by a vast campaign of the opposition in Nicaragua and abroad to discredit the government's efforts to address and control the pandemic. Opposition media spokespeople and never heard of before private medical associations scorned the government's efforts to control the pandemic, accused the government of negligence or even that the country was in denial about the pandemic. They deliberately sowed fear and suspicion among the Nicaragua population so that at first, some people were not only terrified about the virus but

even also of using free public health services that were available. As a result, some people would not go to a health center or the hospital on time, resulting in more severe illness and in some cases, death.

International media also continued to severely criticize Nicaragua's response to the pandemic, parroting the local opposition media. Even as the pandemic subsided in Nicaragua, the Washington Post (8/8/20) was calling the government's response "bizarre and dangerous". The Financial Times (10/4/20) reported Nicaragua's Covid statistics in October but gave the impression that the number of cases were part of "worsening economic and social crisis". And in February 2021, the Guardian criticized Nicaragua's "stumbling response to the coronavirus pandemic". The picture that emerges is that there was considerably more coverage of dire predictions than of the surprisedly mild outcome as the pandemic ran its course.

On May 25<sup>th</sup>, during the worst moments of COVID in the country, the government decided to combat the misinformation campaign and published a 75-page report describing its strategy to tackle COVID-19. Much of the strategy was already in place as early as January, but in the paper the different elements were set down clearly and the reasons for taking them are explained in detail. MINSA also informed, correctly as it can be seen today, that the situation of the pandemic was under control. That accusations of a health system in crisis, of hospitals collapsing etc, were just not true.

## **Challenges, Support and Constraints**

Long gone are the days when epidemics of polio, diphtheria, measles etc affected the population and especially children in Nicaragua. There were areas of the country in 1980 that had never seen a doctor or nurse, especially in areas in the Caribbean Coast. I remember being contacted by a missionary nun in Waspam who told me that children were dying in a small Miskito community on the Rio Coco, and no one knew why. It was diphtheria. The norm now is that Nicaragua has an annual three-week vaccination campaign in all health and community centers throughout the country. This year's started on April 12<sup>th</sup>, and as usual, is offering vaccines or boosters for about 17 diseases, as well as administering vitamins and anti-parasites etc. This year's campaign also includes boosters for Covid.

With respect to Covid vaccines however, Nicaragua did not initially receive support from the usual sources of financing from two major multilateral funders, the World Bank, and the Interamerican Development Bank. When they finally did get some support, it was later and much less than given to other countries. Both Banks bowed to the pressures of the US imposed sanctions (also called illegal coercive measures which the US has applied to 40 countries) despite Nicaragua being recognized as one of their top clients in terms of transparency and results.

When the WHO supported vaccine sharing began, Nicaragua received a limited amount from a donation from India and other countries and began vaccinations, giving priority at first to people over 65 hospitalized with chronic conditions. As more vaccines came in via WHO or other country donations, over 65ers were vaccinated and then the next older age bracket etc. The most recent donation of vaccines came from Hungary and consisted of 1,042, 800 doses. At present at least 95% of the population of Nicaragua has been vaccinated against Covid, the highest level in Latin America along with one other country.

## **Support from Friends**

When the Revolution triumphed in July of 1979, Cuba immediately came to Nicaragua's assistance by sending teachers and medical personnel to help to start addressing the needs of the most vulnerable population. Their doctors and teachers went to the far corners of the country where previously there had been no contact with any type of government officials, especially in the areas of the Caribbean

Coast and the Rio Coco, which is the northern border with Honduras. I remember their anguish at seeing the state of the poor children in Nicaragua at a time when Cuba itself was guaranteeing 1 litre of milk per child for their own population. Over the years, before Nicaragua's education system developed into what it is now, many Nicaraguans went to Cuba to study medicine and other subjects. Years later, Cuba helped Nicaragua set up places on the Caribbean Coast where Nicaraguan students could come for their final years.

When Nicaragua began to plan their pandemic response, the Henry Reeve brigade of Cuban doctors, virologists, epidemiologists, and intensive care specialists came to Nicaragua to share their Covid and other disease protocols and the catalogue of medicines that they were using in Cuba and other countries where they were helping. The Brigade also did a national diagnostic of the primary attention component of the health system in Nicaragua.

Again, I recall my experience in Liberia when Ebola, thought to have disappeared at one moment, came back stronger than ever. My advice to World Bank and WHO management in DC was the need for more health workers, MDs, and nurses especially and I specifically suggested the need for medical support from Cuba, that had been offered several years before but not accepted due to pressure from the US. Fortunately, the Minister of Health in Liberia requested, and Cuban assistance arrived and made the difference according to the Minister, with whom I worked very closely.

## **Underlying Factors for the Success of Nicaragua's Strategy to Deal with Covid 19 and Future Challenges**

The above has been a summary of the successful experience in dealing with the Covid pandemic in Nicaragua from the point of view of a health strategy. But it is also very important to summarize other long-term factors that have contributed to the continuing development of the country that enabled the health system to work very efficiently. These include the following:

- a. Excellent macro-economic management of the economy,** starting in 2006 when President Ortega was reelected. The government began to formulate National Development Plans, evaluated and updated every four years. The latest (4<sup>th</sup>) is for 2022 to 2026. Priority is given to health (22.2%) and education (23%) in the national budget especially since 2007 to the present<sup>1</sup>. Health budget in 2006 was \$US 111.9 million and in 2020 it was US\$ 468.6. million. The InterAmerican Development bank recently ranked Nicaragua as 2<sup>nd</sup> in Central America and fourth in all Latin America in health investments.
- b. Health Sector development since 2007.** The Nicaraguan National Health System is made up of public and private subsystems. The public subsystem is with MINSAs, Social Security, Army Medical Corps and National Police Medical Services. MINSAs model is MOSAFC - Family and Community Health Model. For more information, MINSAs has a web portal where anyone can access and have information on main illnesses, hospital admissions, causes of death at the national, department and municipal levels, etc.<sup>2</sup>.

### **Achievements over the past 16 years of the health sector include:**

- **Increase in number of trained health professionals.** In 2006, there were 22,083 health workers, in 2020, 36,649. In 2006 there were 2,715 MDs, in 2020, 6,045<sup>3</sup>.

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<sup>1</sup> <https://www.asambleanacional.gob.ni>

<sup>2</sup> [www.minsa.gob.ni](http://www.minsa.gob.ni).

<sup>3</sup> [www.minsa.gob.ni](http://www.minsa.gob.ni).

- **More health facilities.** Since 2007 the government has inaugurated 24 new hospitals, with high technology equipment and the necessary medical specialists. Another 15 hospitals are under construction or are planned. MINSA counts now with 1,565 health units throughout the country.
- **Integration of Natural Medicine into the System:** The promotion of the use of natural medicines is an essential part of the Nicaraguan public health system. From 2015 to the present, MINSA has established 315 natural medicine clinics throughout the country to offer alternative and complementary therapies to the population. The Institute of Natural Medicine and Complementary Therapies (IMNTC), has trained over 15,202 health workers in the use of natural medicine, guaranteeing a comprehensive healthcare system with cultural identity.
- **There are a total of 181 mothering centers (casas maternas),** located close to hospitals or a health center where rural women are attended up to 2 weeks before the estimated date of birth. In 2006, there were 50 of these centres, there are now more than 178 and a total of 67,224 women were attended in 2020.
- **Other special programs include** Love for the Smallest, a special national program for children at risk of malnutrition or who need early child stimulation and Everyone has a Voice, a special program that attends over 189,00 people with physical disabilities.
- There are now **15 Centers for Psycho/social needs** and a National Center for Child Mental Health
- In 2007, specialized surgeries for heart and kidney problems for children were done by international brigades but now there are specialized surgeons and equipment covering those needs at the national La Mascota Children’s Hospital in Managua.
- **New drug plant.** Since 2018, Nicaragua has a drug plant with the capacity to produce 12 million influenza vaccines per year and which plans to produce Covid drugs, such as Interferon Alfa/2B and Covid vaccines.
- **Achievements in development and health statistics from 2006 to 2021 include**

|                                              | 2006     | 2021     |
|----------------------------------------------|----------|----------|
| Poverty                                      | 48.3     | 24.9     |
| Extreme Poverty                              | 17.2     | 6.9      |
| Maternal Mortality (per 100,000 live births) | 115      | 37.0     |
| Chronic child malnutrition                   | 21.2     | 9.3      |
| Life expectancy (F)                          | 76 years | 79 years |
| Life expectancy (M)                          | 70 years | 73 years |

**c. Development of basic infrastructure throughout the country (roads, energy, telecommunications, water and sanitation)**

- i. **The country is connected.** Nicaragua has the best roads and road maintenance in Central America, including connecting the country with two highways to the Southern Caribbean Coast (Bluefields and Pearl Lagoon) and just recently, one to the Northern Caribbean Coast, to Bilwi. The existence of an extensive paved road system, and continuing investments in increasing access to water and sanitation, electricity, and communication technology make it possible for medical teams, equipment and supplies to be mobilized quickly.
- ii. National communication system (phone, cell and internet service available in 85% of the country, compared to 30% in 2007)
- iii. 99.4 % of the population has access to electricity compared to 43% in 2007, 75% of energy is renewable (wind, hydro, geo/thermal, and bio/mass.

- iv. 93% of urban households have piped water compared to 65% in 2007. In rural areas, 55% have access to water compared to 26.7% in 2007.
  
- d. Development of a highly efficient national disaster prevention and mitigation system, SINAPRED.** In the last two years, there have been three major hurricanes but due to excellent preparation and the capacity to quickly reach soon to be affected areas, very few people lost their lives, not the case in neighboring countries.
  
- e. Nicaragua has achieved 92% food self-sufficiency** via programs with small farmers and cooperatives.
  
- f. Support to small producers and entrepreneurs via subsidized loan programs.** Problem of unemployment caused by April 2018 and the pandemic on its way to being resolved.

These are the reasons why most Nicaraguans have faith in their government's capacity to confront pandemics and to manage the economy in general. It should only be a matter of time before Nicaragua's effective response to the pandemic is internationally recognized, especially as it is in such contrast to most other countries. Time will tell.