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Strategies for Dealing with the Challenges of COVID-19 to **Ecuador's Civil Registration System**

by Vicente Andres Taiano Gonzalez, Gustavo Pedroso de Lima Brusse, and Vinícius Souza Maia

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INTRODUCTION

Early on, Ecuador was one of the countries most affected by the coronavirus (COVID-19) in South America. It had a high concentration of cases in the city of Guayaquil, in the province of Guayas. On 12 March 2020, the Ministry of Public Health declared a state of emergency in all parts of the national health system: this affected laboratory services, epidemiology and control units, air ambulances, medical and paramedical services, and hospital and outpatient services. The government warned of the imminent possible appearance of COVID-19 and tried to prevent large-scale spread of the virus among the population. Through Executive Decree No. 1017, dated 16 March 2020, the president declared emergency rule and a curfew throughout the national territory.[1]

Death records initially peaked at around 6,700 in the first 15 days of April (the monthly average for Guayas is 1,800 to 2,000 deaths). The provinces of El Oro, Pichincha, and Manabí followed, but with considerably fewer deaths recorded during the same period. With intensive care units full and an increase in deaths in Guayas, funeral homes were unable to cope with the high number of deaths at home. It quickly became clear that there was not enough forensic medical staff to handle the high and sudden demand for the collection of bodies and registration of deaths. The government created a task force to expand efforts in Guayaquil to meet this demand. The General Directorate for Civil Registration, Identification and Certification (DIGERCIC) worked closely with the task force to obtain death registration data in real time; it also had its workers go inside funeral homes to ensure quicker and more efficient access to the service.

The emergency situation caused by the pandemic directly affected the basic principles that underlie the country's civil registration and vital statistics (CRVS) system, such as

- its statistical role — the ongoing registration of civil acts and events, which allows for the inflow of data to generate statistics; and
- its social role, ensuring access to basic human rights.

1 Garcés, L. M. 2020. defensa.gob.ec/wp-content/uploads/downloads/2020/03/Decreto_presidencial_No_1017_17-Marzo-2020.pdf

The timely registration of births and deaths has been a challenge during the pandemic due to increased socioeconomic, cultural, and geographic barriers: social distancing and restrictions on movement within and between cities and provinces affects the most remote populations as well as those who live in poor urban areas. Other factors at play are economic recession and the feminization of home care activities, among others.

In this context, the CRVS system needs to be resilient[2] by introducing protocols based on current legal regulations that allow for public needs and demands to be met in a timely manner. Having solid and reliable data makes it possible to enhance development policies and to identify needs to improve planning, monitoring, and follow-up.

This paper presents the emerging response of Ecuador's CRVS system to the COVID-19 pandemic since March 2020. It also highlights the main strategies that were put in place to guarantee that its operations would function so that civil acts and events could be registered during the health emergency.

ANALYSIS

Challenges that the pandemic posed to operating the civil registry

In normal times, a civil event is registered in person at a DIGERCIC office using a set process. Before Ecuador's civil registry was modernized, which began in 2008, the process was overly bureaucratic. Users had to submit many documents and go to several appointments. The infrastructure was precarious, and not enough staff were available to deliver the service.[3]

Because the system was poor, dishonest operators set up corruption schemes.

Users were very dissatisfied with the service. There was a lack of timely access, and getting documents was costly, especially for the most vulnerable populations.

In 2008, an agreement was reached between the Inter-American Development Bank and the central government. After a long restructuring process and large-scale investment in the CRVS system, many of these problems were solved or greatly reduced.

With the arrival of the COVID-19 pandemic, it was not possible to provide ongoing in-person services. Emergency measures were put in place thanks to innovations in the system over the last 12 years.

Several intermediate steps in the process had to be reviewed and adjusted. Normally, a death registration that had been certified by a doctor had be filed by someone on behalf of the deceased at the civil registry office. There the registration was finalized and documentation was issued. With the need for social distancing, this process became too risky. Registration activities had to be adapted to the situation: the focus was on minimizing risk exposure by health professionals, family members, and DIGERCIC officials.

The way the offices operated also needed to be reviewed. The offices face high daily demand, with dozens or even hundreds of people gathering every hour at DIGERCIC facilities for bureaucratic procedures. Given the pandemic, each service had to be re-evaluated based on infection levels in each territory.

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2 Here, resilient is understood as an institution's capacity to maintain its operations in times of crisis and disaster and to return to normal operations without qualitative losses or significant post-crisis structures. Resilience is different from resistance or reaction to processes of institutional change that are caused by an institution's development because of political will to transform its means or objectives. ecologyandsociety.org/vol20/iss4/art23

3 Inter-American Development Bank. 2018. dx.doi.org/10.18235/0001286

Essential registration processes, mainly births and deaths, were given temporary priority. This meant a temporary interruption of other services, such as registering marriages and divorces and issuing identification papers. These services were gradually restored as the epidemiological situation of each territory improved.

Another aspect that was especially relevant for CRVS systems was providing the necessary data so the pandemic could be managed using statistics, open public communication, and government transparency. Thanks to the information collected and the daily updates on the country's health situation, appropriate decisions and measures could be taken.

One of the most important characteristics of the CRVS system is continuous and permanent operation: this allows certain recurring tasks, such as renewing documents, to be done over and over again. As travelling to government offices for bureaucratic reasons during a pandemic is not advisable, internal administrative measures had to be taken to provide concrete solutions to the public.

The short-term challenges that the need for social distancing posed were only part of the issue. It was clear that the continuity and quality of the country's CRVS services were linked to structural issues. For this reason, various measures taken before the pandemic, as the system was modernized, played a key role when it came to the system's capacity to respond to issues caused by the pandemic. Some of these measures include implementing the online civil registry system (REVIT), digitizing services, and introducing mobile teams to bring services closer to the public. Emergency measures could be built on these medium- and long-term initiatives and will remain as a resource in Ecuador's CRVS system in the future.

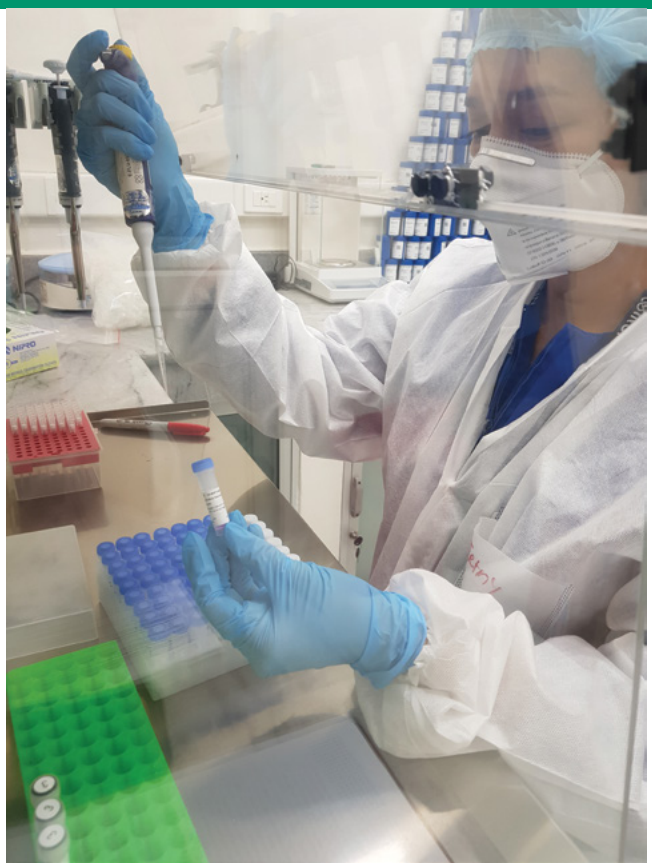


Photo: National Institute of Public Health Research (INSPI)

Deaths from COVID-19

Death registration is the primary act that takes place once a person has died; it marks the closure of the legal identity process. In Ecuador, this happens based on the statistical death form that is signed by the competent authority. Outside the country, the medical certificate of death is required for registration. An ordinary death registration is one made within 48 hours of death. If this time elapses, the regulations call for an extraordinary death registration.

Until 2016, these paper documents were filled out in person in a civil registry office and then sent to the National Institute of Statistics and Censuses (INEC) for statistical purposes. Once the REVIT digital registry was in place, the process changed. Deaths reported in health facilities involved other state agencies in addition to DIGERCIC, such as health and safety institutions as well as INEC. This meant increased coverage, better quality records, and more timely results.

Photo: Juan Ordonez / Unsplash

Records are created in digital format in health institutions and then sent to DIGERCIC for processing and to INEC for immediate statistical updates. In the past, members of the public had to go to an office to fill out paperwork and obtain the final document.

The emergency situation created by the pandemic meant that the part of this process that was normally done face to face at DIGERCIC offices had to be done online. To ensure that the information is high quality and authentic, each submission goes through an internal review process before the registration is done or any documentation is issued; the applicant may need to provide more documents or review their application so it meets all the legal requirements. At the end of the process, the applicant can retrieve the final document electronically from the DIGERCIC website.

Attributing the cause of death involves identifying and interpreting what the doctor or authorized staff who certified the death reported. This is done after the information is received and the INEC form is filled out. On 25 March 2020, the World Health Organization published the emergency ICD-10 code for COVID-19.[4] The new code was used for those who died after a confirmed diagnosis and for suspected or probable cases; the cause certified by the doctor or authorized person appears as "presumed COVID-19" and/or "respiratory diseases" for those who died after having symptoms similar or related to COVID-19 but who had not had a test confirming the diagnosis.

Considering all the causes of death, the peak was recorded in April 2020 in the province of Guayas. A large proportion came from Guayaquil: there were 815 deaths in Guayas on 4 April, for a total of 12,139 deaths in April. Compared with the death rate for the same period in 2019, the difference is 84.64 percent.[5]

In general, the most affected areas were the Costa and Sierra regions, as shown by data recorded up to the month of August. The Ministry of Public Health published this data as part of an update on coronavirus cases in Ecuador.[6] The situation in Guayas began to return to normal in May, with a large decrease in the number of deaths. In June, the numbers finally reverted to normal levels, showing 1,819 registered deaths. A domino effect took place in nearby provinces, with the same trend observed in the Costa region (Figure 1). The same was not true in the Sierra-Centro region, where there was an increase in deaths from all causes. The province of Pichincha showed an increase of 40.43 percent compared to the same period in 2019.

4 Pan-American Health Organization. 2020. paho.org/arg/index.php?option=com_docman&view=download&alias=468-covid-cie-codigos-2020-03-25-espanol&category_slug=documentos&Itemid=624

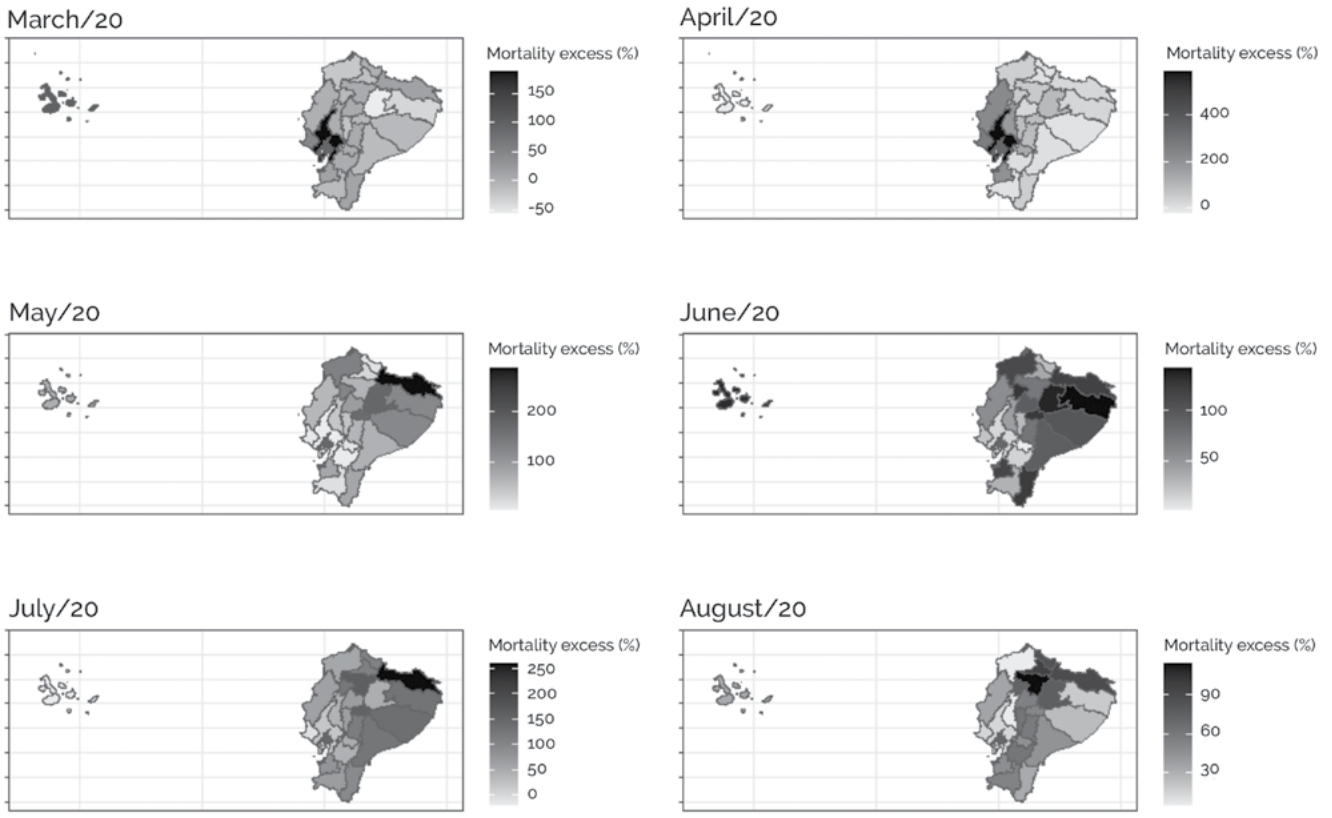
5 DIGERCIC. 2020a. registrocivil.gob.ec/cifras

6 DIGERCIC. 2020b. registrocivil.gob.ec/wp-content/uploads/downloads/2020/10/protocolo_reanudación_de_servicios_v_2.0-signed_asg30092020.pdf

Other provinces that showed an increase in the death registration index for deaths from all causes in April were Santa Elena with 90.26 percent, Manabí with 65.74 percent, and Oro with 65.28 percent more deaths than were registered in the same period in 2019 (information up to 15 July 2020).

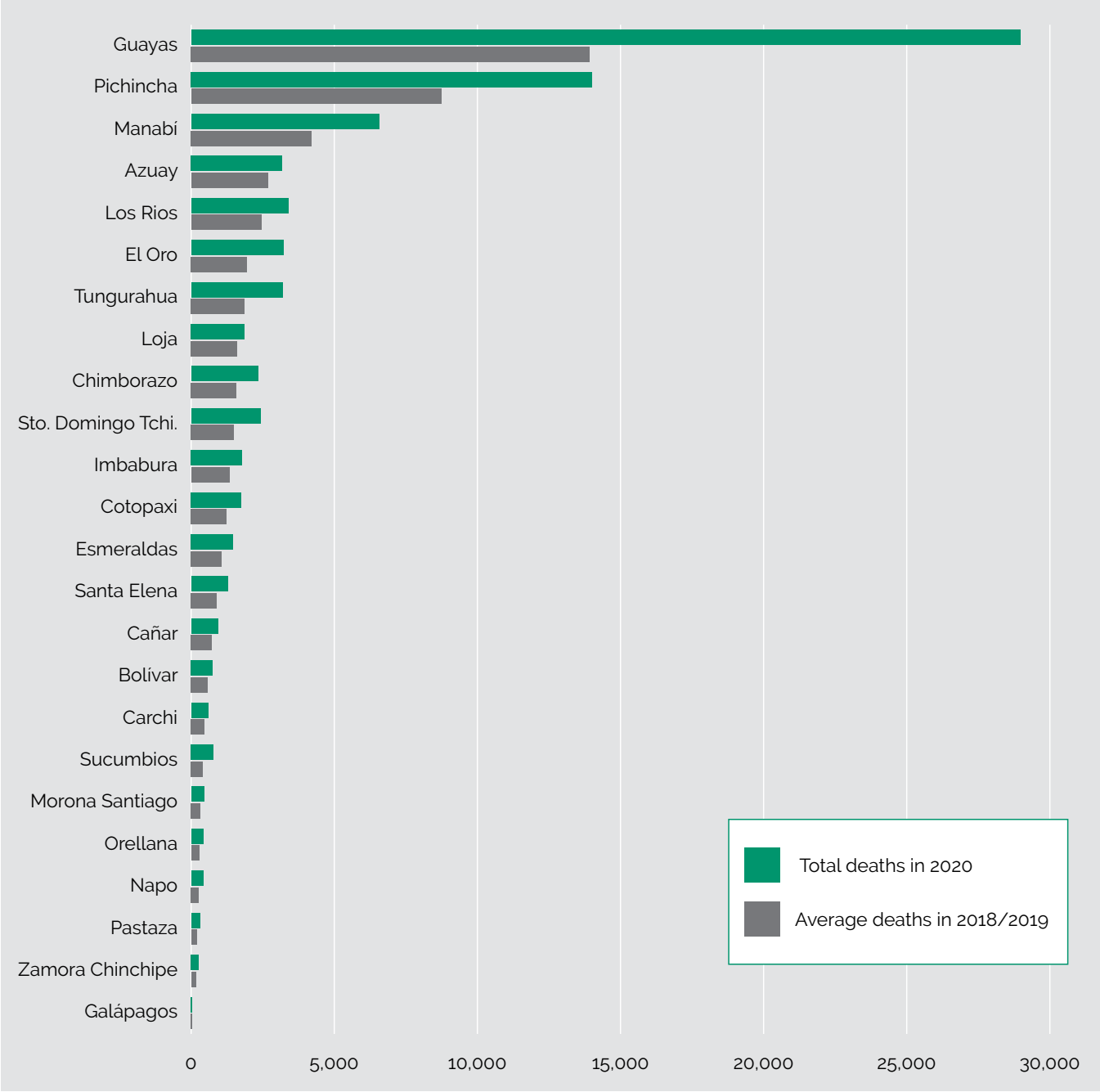
Figure 2 shows the total number of deaths in 2020 for each of Ecuador's provinces (1 January to 31 August) compared to the average number of deaths in the same period in 2018 and 2019. Figure 3 shows the monthly distribution of deaths for the entire country, with the number of deaths peaking in April, as shown.

Figure 1: Excess deaths in Ecuador (%) during the pandemic compared to the average of 2018 and 2019 (1 January to 31 August).



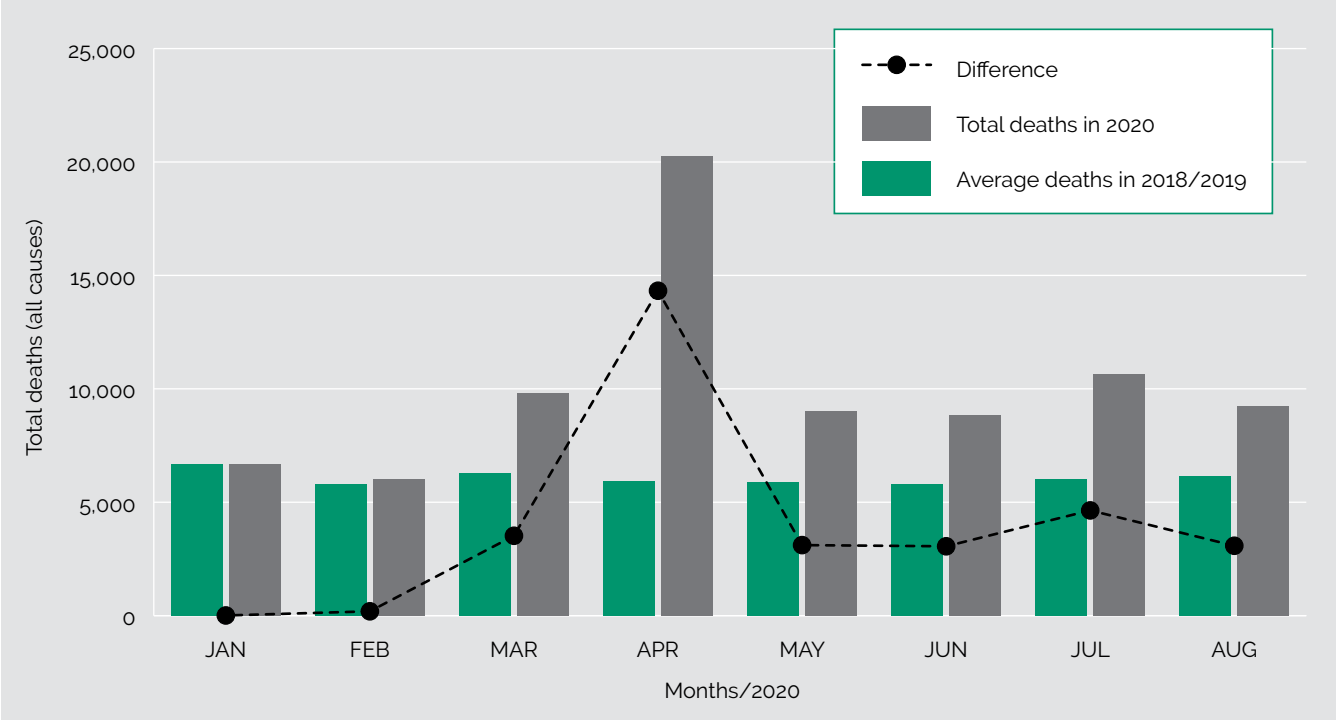
Source: General Directorate for Civil Registration, Identification and Certification (DIGERCIC), 2020

Figure 2: Total deaths in 2020 by province (1 January to 31 August) compared to the average number of deaths in the same period in 2018 and 2019.



Source: General Directorate for Civil Registration, Identification and Certification (DIGERCIC), 2020

Figure 3: Total deaths in Ecuador by month in 2020 (1 January to 31 August) compared to the average number of deaths in the same period in 2018 and 2019.



Source: General Directorate for Civil Registration, Identification and Certification (DIGERCIC), 2020

Demand for registering civil acts and events in Ecuador by region

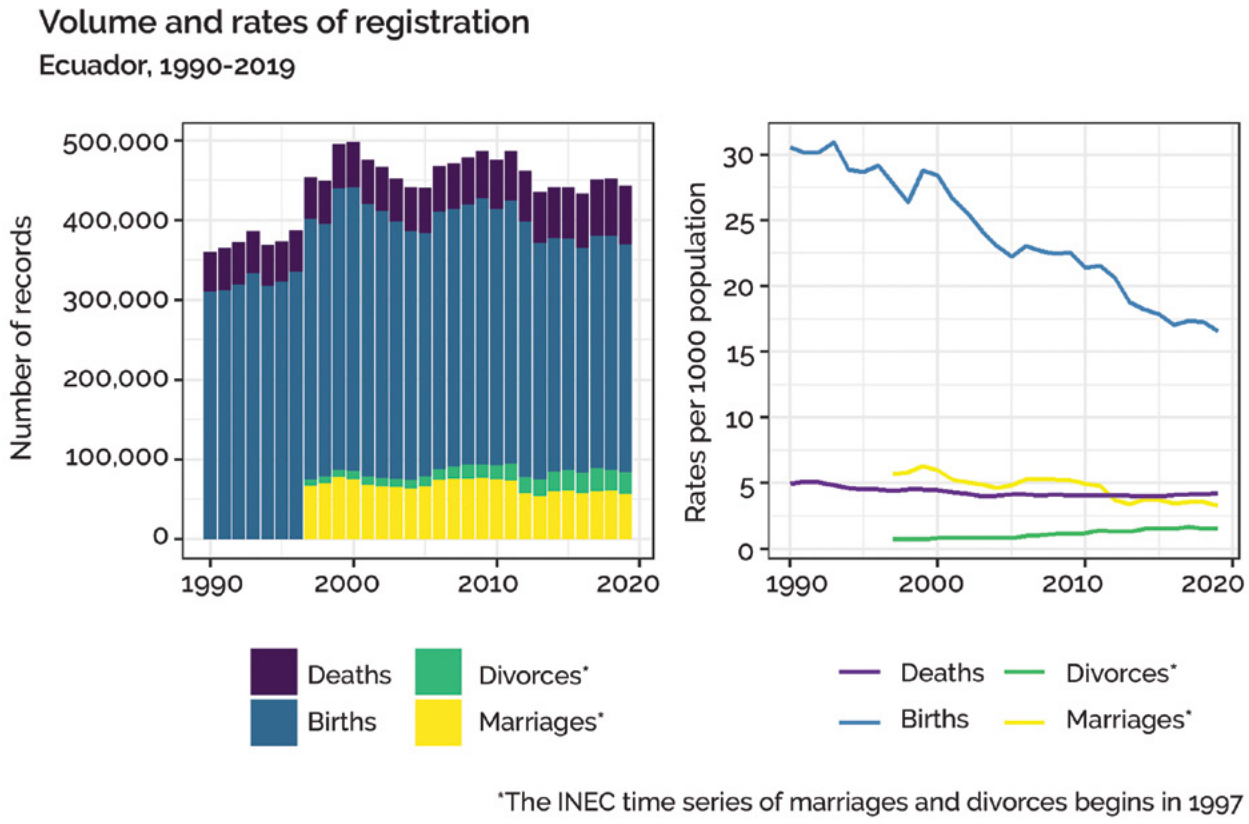
As seen in the previous section, the pandemic affected the country unevenly. However, the quality of CRVS services in the country as a whole seems to be linked to demographic and structural issues. Regional populations show important differences, both in number and in age structure. This directly impacts demand for registering civil acts and events. A large part of the country's population is concentrated in the Costa (52.5 percent) and Sierra (41.9 percent) regions, with a significant part living in the Amazon (5.1 percent). Only about 0.4 percent of the population lives in island regions (Galapagos) and in remote areas that are excluded from the figures.

Today, Ecuador is at the intermediate stage of demographic transition. Its population is growing at a slower rate (less than 2 percent) but still shows a significant increase due to demographic inertia.

The most visible evidence of this transformation is the decreasing birth rate (Figure 4). It had already had a significant decline between 1990 and 2018, falling by 44 percent. Mortality levels did not change significantly during that period, but they will likely increase gradually in the coming years due to the change in demographics.

This is a period of great demand for civil registry services, given that birth registration is still rising and deaths are gradually increasing (Figure 4). Although the death rate varies, this does not impact the level of demand, since the population is also increasing.

Figure 4: Number of registrations and rates of births, deaths, marriages, and divorces.



Although the number of marriages has decreased since 2013, the drop is not significant; annual numbers were stable through 2019. Divorces have increased significantly since 1997, from 8,500 in 1997 to 26,800 in 2019. In terms of demand for civil registry services, marriages and divorces together numbered 78,500 in 1997 and 83,600 in 2019. The increase in the number of divorces exceeded the drop in the number of marriages.

There were about 450,000 applications for registry services (births, deaths, marriages, and divorces) in 2017, 2018, and 2019; this figure does not include other services, such as issuing identity cards.

During the highest peak of the pandemic, efforts focused on registering deaths and births. About 1,800 planned marriage ceremonies nationwide could not take place in March and April due to the pandemic; service resumed in May to address the pent-up demand. The new online system and work shift scheduling started in June, when service was fully restored. Civil marriages were conducted using all available biosafety measures.

At the same time, the processing of divorces was delayed. As demand for divorce processing is not high under normal circumstances, no exceptional measures were taken.

Underregistration in Ecuador

In the last population and housing census in Ecuador,[7] two questions were included about civilian records: did the person have an identification card (and therefore was registered in the civil registry) and, if not, was the person registered? Of the 14,483,499 people who took part in the census, only 161,244 (1.11 percent) answered that they did not have an identification card and were not registered. This is consistent with INEC estimates on the underregistration of births.

In terms of civil registration of live births (those born and then registered at some point in their lives), Ecuador can claim to have a complete registry of its population. However, as Peralta notes, it is still difficult to confirm the completeness and quality of death records.[8]

Regional differences are important: up to 2 percent of the population living in the Amazon region are not registered, while 0.8 percent of those in the Sierra region are not registered. At the national level, the general level of underregistration is low. No significant gender differences were found in this matter.

According to civil registry data for 2020, underregistration of children under 5 years old fluctuates between 44.2 percent in the province of Galapagos and 3.5 percent in the province of El Oro, with the national average being 16.47 percent. As a result, the national birth registration coverage is estimated at around 83.5 percent. Regions such as Galapagos (55.8 percent), Bolívar (60.2 percent), Zamora Chinchipe (61 percent), and Cañar (64.4 percent) have coverage below 65 percent.

MEASURES TAKEN IN RESPONSE TO CHALLENGES POSED BY COVID-19

This section addresses the main initiatives that DIGERCIC took starting in March 2020 in response to the COVID-19 pandemic. These measures were needed not only to meet the great demand for death registrations due to the pandemic, but also to ensure the health and safety of service providers and users of Ecuador's civil registry system. The aim was to keep the registration levels of births, marriages, and deaths as high as possible and to provide reliable information to institutions, media, and academia by updating data in the web portal every day.

Among the main actions done as part of the health emergency measures are medium- and long-term processes. These include modernizing the civil registry system, creating a mobile teams strategy, and using REVIT, the online vital statistics registry system. Some short-term actions were taken as well.

Short-term emergency protocols

Coordinated integration of hospital units

Starting on 20 March 2020, DIGERCIC coordinated the death registration process for deaths caused by COVID-19 with the hospital unit health network, the Ecuadorian Institute of Social Security, the Ministry of Public Health, and private hospitals and clinics. This was done so there would be direct contact between the civil registry and the doctors who issue death certificates. The goal was to safeguard the health, safety, and wellbeing of members of the public; ensure the safety of civil servants working in person; and keep the epidemiological barriers aimed at containing the virus from being compromised.

7 INEC. 2010. ecuadorencifras.gob.ec/censo-de-poblacion-y-vivienda/

8 Peralta, A. et al. 2019. pophealthmetrics.biomedcentral.com/articles/10.1186/s12963-019-0183-y

On 24 March 2020, the central government created a task force through a presidential decree to create a specific protocol for the removal of bodies in Guayaquil, the national epicentre of the pandemic. The civil registry took an active role in developing guidelines for the death registration process for those who died at home.

Service provision strategy

The National Emergency Operations Committee set up a colour-coded system for the progressive return to face-to-face activities. Provinces were classified from red, representing strict isolation and social distancing measures, through yellow and green, representing progressively greater easing of restrictions.

Based on the colour-coded classification system, DIGERCIC developed an action plan that provided guidelines for managing human resources as well as for biosecurity standards that apply in all government offices. These include social distancing measures recommended by the health authorities, the use of face masks, and frequent hand washing. The service provision strategy allows the institution to continue providing services while controlling demand to avoid crowding at face-to-face service desks.

Work shift scheduling and new offices

DIGERCIC aims to control demand for services and the number of people who enter its offices through work shift scheduling; this allows for safety measures to protect everyone involved. Public demand for the identification service is high. Certification services can be accessed through 38 DIGERCIC offices: these are coded as yellow and have printing stations. Users must make an appointment online to visit an office.

Starting on 20 April 2020, five health establishment civil registry offices (ARCES) were added to allow for birth registrations to be completed in a timely manner. Starting on 4 May 2020, DIGERCIC added birth registration services in 45 offices nationwide, Monday to Friday from 8 a.m. to 12 p.m. Services became available under the new work shift scheduling program that started on 4 May 2020; the goal was to avoid crowding in offices, with users scheduling their appointments online.

By the end of May 2020, 80 offices had been set up to process birth registrations, and 75 offices and three ARCES sites had been set up to process death registrations. By the end of June, 162 of the 209 offices and eight ARCES sites nationwide had been set up. This showed a progressive resumption of services and ensured the country's children's right to an identity.

Starting on 26 May 2020, 12 offices were open in regions where mobility and isolation restrictions were relaxed; a decline in the number of infections and a reduction in mortality rates changed the colour classification of these regions to yellow. As mentioned above, marriage license services were gradually resumed for those whose marriage ceremonies were delayed by the outbreak of the pandemic. Starting on 23 June 2020, after pending requests were addressed, the issuing of new marriage licenses resumed in 91 offices nationwide.

Virtual office online service desk

During the pandemic, services were available through the virtual office 24 hours a day, seven days a week. The government issued birth, death, and marriage certificates; identity cards; and common-law documents, among others. The result was 46,004 registered users in May 2020 and 58,064 in June 2020, compared to 12,984 and 12,350 registered users in 2019 in those same months.

Starting on 3 April 2020, online applications for death registration were processed using a digital platform. This process is available for all causes of death: the family member who applies for the service attaches the digital INEC death form, which contains general information about the deceased and the cause of death, signed by the doctor in charge. As part of the process, the civil registry validates the information and sends the death certificate directly to the email address on file; this brings services closer to members of the public.

Processing death registrations online was prompted by the challenges posed by the pandemic. This shift happened as software upgrades were being done. For some cities, using services through the virtual office offers a superior experience compared to in-person visits. One example is the metropolitan district of Quito, where 70 percent of registrations are done online. From the time this strategy was put in place to the corresponding end date between 15 July and 31 August 2020, 28,672 death registrations were made online: this was 50.6 percent of the total for that period.

This new mechanism is in line with the institution's resilience capacity and with the government's Digital Ecuador policy. The national government is promoting this policy with the aim of digitizing as many processes as possible, continuing to join forces, and developing strategies that ensure digital inclusion nationwide.

Daily data updates

As part of the pandemic strategy, information was handled transparently for the public and for the media and academia. The latter two groups rely on having figures updated daily so they can communicate and evaluate the data in a timely manner. The permanent report to the National Emergency Operations Committee is the basis for decision-making for public policy and government decisions.

Starting on 18 April 2020, death figures were published on the internet to keep the public informed about vital statistics. Starting on 20 April 2020, DIGERCIC made web data on daily provincial and regional death registrations public.[9] Data is published alongside an explanation of variables and metadata to help readers better understand the fields used for publishing death figures.

Identity card renewal

Based on the government mechanisms that are in place, the civil registry issued an administrative resolution on renewing identity cards that are expired or about to expire. This resolution was issued in keeping with the declaration of emergency rule to ensure the right to identity in all its dimensions and scope.

9 DIGERCIC. 2020a.

At the same time, the public was encouraged to get the Certificate of Identity and Civil Status, which has the same data and validity as the identity card and the same expiry date during emergency rule.[10] In this way, members of the public who wish to renew or replace their identity card could use their Certificate of Identity, which they can get through the virtual civil registry office rather than having to visit in person. As an example, 419 certificates were issued in February 2020 (before the pandemic), compared to 4,245 in April in an emergency context; this figure nearly doubled to 8,424 in May.

Fee waivers

It was agreed during the National Emergency Operations Committee plenary session on 27 March 2020 that fees for issuing ordinary and extraordinary death certificates would be waived during the state of health emergency decreed by the national government. This would eliminate economic barriers to access to timely registration and guarantee greater coverage. The most vulnerable Ecuadorian families who lost loved ones during the pandemic would therefore not have to worry about paying for the certificate or going to the bank.

Emergency protocols based on long-term initiatives

Modernization of the civil registry system

At the end of 2008, after an institutional audit, it became evident that the infrastructure of Ecuador's civil registry was obsolete and inadequate.

- It did not meet the technical requirements for its administrative, operational, and technical functioning;
- Most of the infrastructure was not owned by the civil registry;
- Computing centres and archives throughout the country were not physically secure and were not able to protect sensitive information; and
- There was no clarity in the processes.

This situation caused the service to be inefficient and of low quality.

This is why Ecuador undertook the Modernization of the National Civil Registry, Identification and Certification System – Massification Phase. Between 2010 and the present, it increased its budget by 21 percent (around US$48 million). To date, it has implemented 84 percent of the project outlay, which in absolute terms is around US$233 million. These are the main areas and elements of the project:

- Element I: Increased coverage;
- Element II: Higher service quality;
- Element III: Project monitoring and control; and
- Element IV: Project evaluation.

All elements are key to ensuring timely access to civil registry services nationwide, with an emphasis on updating technology, improving infrastructure, and enhancing workforce talent. The modernization project continues: it has resulted in the electronic travel document, e-passport, and a new identity document. All of these comply with international standards and new security measures. The plan is to replace all equipment, programs, and software with a biometric authentication service (fingerprint and face recognition).

10 The difference between the two documents is that the certificate is a printable electronic document. The identity document is a physical card with its own characteristics that correspond to current technical and legal regulations.

Online vital statistics registry system

Another measure that is helping to modernize CRVS systems, and which has been of primary importance during COVID-19, is REVIT, the online civil registry. REVIT records information on deaths and live births via the national health system: online statistics are then generated, and underage children are visible. Information is shared immediately with INEC and the Ministry of Public Health.[11] Until 2015, this work was done manually in health facilities, leading to problems such as late delivery of documents and duplication of birth registrations.[12]

Automating the death and live birth registration process

- helps to reduce the underregistration of births;
- makes the generated data more reliable;
- makes it easier to monitor and quantify births;
- allows the government to register and consult information on the mother and the newborn; and
- allows for the unique identification number (NUI) that is assigned to each infant to be generated, which means the registration process can begin right after birth.[13]

During health crises or emergency situations, the fact that the REVIT system interoperates with other systems mitigates various challenges related to access, such as

- geographical barriers;
- social distancing; and
- movement restrictions within and between cities and provinces that affect the more remote populations and those living in poor urban areas.

Photo: Bryan Delgado / Unsplash

A prompt response by the system is essential in times of health crisis to facilitate immediate decision-making. The need for an internet connection is a socioeconomic and cultural barrier in some regions of Ecuador.

The REVIT system was not meant to resolve underregistration during a health crisis such as COVID-19, but since it was created in 2015, and thanks to constant improvements, it has matured and is working well. From mid-2014 to May 2017, 570 agreements were made with the country's public and private entities so their doctors could take part in implementing this system. Around

11 Torresano Melo, M. et al. 2018.

12 Mora, K. et al. 2017.

13 Torresano Melo, M. et al. 2018.

1,660 medical users of the health system have been part of these agreements, which by May 2017 had resulted in 250,000 electronic records of live birth.

Given that a large percentage of deaths take place at home and thus outside the REVIT system, coverage needs to be expanded to further improve the registration of deaths — both the number and the quality of the records.

Mobile teams

DIGERCIC created the mobile team strategy to reduce underregistration in geographically remote areas and areas with vulnerable populations. Socioeconomic and cultural factors, as well as geographical conditions, mainly in low-income rural areas, discourage parents from visiting civil registry offices to register their newborns in a timely manner.[14]

For this reason, agreements with other public institutions, private companies, international organizations, and decentralized autonomous governments allowed mobile teams to issue certificates to high-priority groups as needed.[15]

Having mobile teams changed the concept of the State, which went from being an inert and static one that waits for citizens to go to a service desk to being more proactive and dynamic. The State now actively seeks to progressively eliminate geographical and economic barriers that prevent citizens from accessing legal identification documents.[16]

In the context of the pandemic, mobile teams made it possible to overcome socioeconomic, cultural, and geographical barriers and to bring services closer to the most vulnerable populations at a time when movement within and between cities and provinces is restricted. Thanks to new administrative mechanisms, civil registry services could be brought closer to the vulnerable population safely, despite the restrictions. The mobile team strategy will continue and will be reinforced after the pandemic.

STRUCTURAL AND OTHER CHALLENGES OF ECUADOR'S CIVIL REGISTRY SYSTEM

The CRVS system is a key pillar for consolidating more and better public policies, especially those that focus on vulnerable populations. The challenge for the region and for Ecuador after the pandemic will be to

- ensure the lowest possible levels of underregistration; and
- perfect institutional mechanisms and protocols so the quality of the information being registered meets the highest standards.

For this reason, as mentioned by the Organization of American States, it is important to take a multifaceted approach to evaluate and improve registry quality and to strengthen the capacity of CRVS systems.[17] In this way, governments can respond to demand for access to public services and ensure access to citizens' rights, starting with the accurate and timely registration of legal identity.

Based on data analysis carried out nationwide and on the actions taken during the pandemic, various structural and other challenges have been identified.

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14 Taiano, G. V. 2019. clarciev.com/IMG/pdf/Revista-CLARCIEV-Edicion2.pdf

15 Ibid.

16 Ibid.

17 Organization of American States. oas.org/sap/docs/puica/Documento_Criterios_para_los_sistemas_RC.pdf

Integration with the health system

Urbanization and the concentration of the population in a few urban centres makes it easier to develop CRVS systems. It is then possible to invest in health institutions and services on a large scale, leading to a synergy of registry quality and coverage.

However, historical, national, and regional circumstances can make it difficult for the system to evolve. The implementation of REVIT has meant that much progress has been made in Ecuador in terms of birth and death registration, as well as service quality, as DIGERCIC has modernized. Challenges persist, such as the large proportion of deaths that occur at home (46 percent in 2018),[18] but these can be overcome. They call for active solutions by the state to ensure that these events are registered in a timely and accurate manner.

Integration with the country's health system — which is still quite segmented between the Ministry of Public Health, the Ecudorian Institute of Social Security, and the private sector — is essential in this framework. It is also quite complex. Once again, implementing REVIT allowed progress in this area by simplifying communication between the health professional or institution, DIGERCIC, and INEC: this improved both timeliness and quality. For this reason, one of the most important remarks in this document is the need to continue expanding REVIT coverage to improve the registry and its quality.

Quality of the registry

Furthering the qualifications of medical professionals or authorized persons to improve the quality of reporting of causes of death is still a challenge; this is a problem that analysts have often pointed out.[19] [20] It was the subject of a Bloomberg Data for Health initiative[21] that sought to train physicians in certification of causes of death and in the use of REVIT for that purpose.

In emergency situations such as COVID-19, information may not be accurate if registrations are not timely or if the professionals in charge of death certificates do not fill out the statistical reports correctly. When this is the case, a precise codification of the cause of death is missing. These factors have a direct impact on the quality of the registry and therefore on the generating and follow-up of statistics that allow us to fully understand the impact of the pandemic and to respond accordingly.

Culture of registration

Progress in how well the CRVS system works depends on the joint responsibility of private and public agents. Although the quality of the public apparatus for processing registrations has improved, incentives for individuals to use the service desks are needed so that underregistration can be reduced and the quality of the information can be improved.[22] These incentives often begin with providing public services such as education, health, and social security. Still, in cases of poverty, social vulnerability, or geographic isolation, more actions or integrated actions are needed to create

18 INEC. 2019. ecuadorencifras.gob.ec/documentos/web-inec/Poblacion_y_Demografia/Nacimientos_Defunciones/2019/Principales_resultados_ENV_EDF_2019.pdf

19 Peralta, A. et al. 2019.

20 Rosero, A. P. C. et al. 2018. revistamedicahjca.iess.gob.ec

21 McLaughlin, D. and Lopez, A. D. 2019. doi.org/10.1590/1980-549720190016.supl.3

22 AbouZahr, C. et al. 2015. doi.org/10.1016/S0140-6736(15)60173-8

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conditions so operations can improve. In the case of Ecuador, actions that have been adopted include a mobile team strategy, initiatives such as Digital Ecuador, a differentiated fee structure, and integration with other public and private actors, such as health institutions and funeral homes.

The population of Ecuador has a great diversity of customs and cultures. A major challenge is to expand vital event registration coverage in diverse contexts while respecting the rights of different peoples and nationalities, as their communities and cultures may not be automatically included in the mainstream. The mainstream view presupposes that vital events occur in institutional spaces and that the population is more and more concentrated. As a result, attempts to strengthen civil registration systems must consider various factors and barriers when people need to register. Registration must be convenient, accessible, and close to the citizens. In some territories in Ecuador (especially in rural areas), the civil registry service is still difficult to access. Mobile teams play a key role in mitigating this situation.

Being able to educommunicate with the public about the culture of registration is important, too. The State must create a strong communication campaign with educational components using a rights-based approach. In this way, the public may be educated about a culture of timely registration on a mass scale, especially in provinces where, due to structural factors, citizens do not access DIGERCIC services in a timely manner. It is vital to use inclusive language to reach all segments of the population where this problem is identified and, above all, to continue promoting the mobile team strategy.

Opportunity to register

On a smaller scale, some citizens have trouble accessing birth registration in a timely way. This makes it difficult to plan public policies, especially in crisis situations such as COVID-19. A mobile team strategy is one way of addressing this problem; it must be looked at again during the reassessment of post-pandemic risks.

Poverty and geographical isolation

Socioeconomic and cultural factors, as well as geographical conditions — mainly in poor rural areas — discourage parents from visiting civil registry offices to register their newborns in a timely manner.[23]

23 Taiano, G. V. 2019.

Factors such as a weak culture of registration and socioeconomic and geographical inequalities are reflected in the challenges mentioned above. The geographical scope of the Amazon, for example, influences the quality and especially the timing of registrations. It is evident that, in addition to the variables mentioned, progress in terms of coverage and record quality depends on specific contexts.

Legal deficiencies and information and communication technologies

As part of the Digital Ecuador policy, processes are being simplified through digitization. Red tape is being reduced for the four basic laws that support the civil registration system:

- Protection of the person and confidentiality of information;
- Laws on electronic signatures;
- Digital government; and
- Identity theft.

Personal data protection laws grant confidential status and legal protection to information in birth and death records. The government provides information and services through information and communication technologies (ICT); electronic governance laws provide for regulations on digital signatures to make electronic processes legally valid. In turn, identity theft laws provide support to mitigate the risk of misuse of personal information.

In many developing countries, these laws are still low in scope: that is, they do not form a legal framework that can introduce cultural, social, and technological changes, such as ICT systems. These gaps are part of a set of intrinsic problems in the CRVS system that result in a substantial portion of the population not registering births or deaths.

In Ecuador, DIGERCIC is digitizing its services and complying with confidentiality provisions and the appropriate use of personal information, which increased during COVID-19. Developing a digital platform for registering deaths online, strengthening the virtual office for issuing certificates and required documents, and offering an online scheduling system all serve to promote digital policy and safeguard the health of both staff and users during a health emergency.

CONCLUSION

States must commit to transforming the institutions that register civil acts and events into essential care agencies. This includes promoting all civil registration services and ensuring that they are provided during emergency situations. In some cases, this means creating new protocols.

The case of Ecuador illustrates how during the pandemic — despite quarantining, restricted movement, high mortality rates, and other factors that paralyzed the country without warning — the government created technical and administrative strategies so that civil registry services could continue.

The emergency processes and protocols developed during the pandemic were possible thanks to the resilience of DIGERCIC's institutional framework and its ability to adapt its response and service to an extraordinary situation. These strategies included

- expanding registration channels while maintaining privacy and confidentiality as a basic principle;
- doing a permanent debugging of the database; and
- remotely confirming information (through a stronger web platform) by creating an online death registration service as the number of deaths increased because of the pandemic.

The constant training of care personnel, a working cooperative administration system that strengthens the mechanism for recording and collecting data, and the publication of daily updates make it possible to generate statistics for public policy that is responsive in fragile contexts. The daily updates had a positive impact among the public and in the media, since there was a certain mistrust of the numbers provided by other ministries. That is why the Government of Ecuador committed to share the daily death data from all causes through DIGERCIC, so the public had access to more information to help them know what was happening in the country.

In an emergency situation, decisions are made quickly. There is no time to create new structural systems. Also, any health crisis or emergency is accompanied by an economic crisis, which leaves the country with few alternatives for spending or large-scale funding programs. This means it is advisable to make long-term investments in robust infrastructure. Two examples are the modernizing of the civil registry over the last 13 years and the creation of REVIT: these processes, which require time and resources, led to resilience and the flexibility to adapt new protocols and respond to the demand triggered by the COVID-19 crisis.

The emergency challenged how all public services are provided. Several lessons were learned along the way. The biggest challenge was to act diligently and efficiently, as quickly as possible, in a context with no known best practices while also addressing the fear that permeated in-person settings and Guayas and Guayaquil in their darkest days. The work was possible thanks to the government's will and DIGERCIC's decision to keep offering services and to adapt to new methodologies and practices.

The COVID-19 pandemic is a challenge that can be addressed by

- taking a cross-sectional approach to the needs of the new reality;
- undertaking short-, medium- and long-term strategies that make it easier to overcome structural barriers; and
- providing timely care to the most vulnerable populations, such as the elderly, people with disabilities, and various ethnic populations.

In such an emergency situation, CRVS systems and institutions are called to be resilient. They must continue to ensure that the civil registry continues to function for members of the public and upholds the public's rights.

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