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IMPACT OF THE COVID-19 PANDEMIC ON OPERATIONS OF NATIONAL CIVIL REGISTRATION AND VITAL STATISTICS (CRVS) SYSTEMS

2020



SDD
Statistics for
Development
Division

IMPACT OF THE COVID-19 PANDEMIC ON OPERATIONS OF NATIONAL CIVIL REGISTRATION AND VITAL STATISTICS (CRVS) SYSTEMS 2020



This report was prepared by
the Pacific Community with input from partners of the global CRVS group.

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Acronyms

APAI-CRVS	Africa Programme on Accelerated Improvement of Civil Registration and Vital Statistics
COVID-19	Coronavirus disease 2019
CRVS	Civil registration and vital statistics
UNECA	United Nations Economic Commission for Africa
OAS	Organization of American States
RMS	Rapid mortality surveillance
SPC	Pacific Community
UN LIA	United Nations Legal Identity Agenda
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UN LIA TF	United Nations Legal Identity Agenda Task Force
UNSD	United Nations Statistics Division
WHO	World Health Organization

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Executive Summary

The COVID-19 pandemic has impacted on the ability of governments to maintain services and routine functions, including the operation of national civil registration and vital statistics (CRVS) systems. The UN Legal Identity Task Force (UN LIA TF) developed technical guidance in March 2020 on actions that could be taken by countries to maintain CRVS services during the pandemic. This was followed by a survey conducted between March–April 2020 by the UN LIA TF to investigate the impact of the pandemic on CRVS, as well as national responses. Online workshops were held in different regions of the world to disseminate these guidelines and to provide a platform for countries to share their experiences during the COVID-19 pandemic. In addition to the UN LIA TF, several other international agencies have issued supplementary technical guidelines on CRVS management during the pandemic. This report reviews the survey responses and governments' experiences in conducting CRVS management during the pandemic, summarises the negative and positive aspects of the impact, and makes recommendations for future assessments of the longer-term impact on CRVS operations.

Sixty-one countries responded to the survey, nearly half of which were in Africa. Most countries reported some impact on CRVS system operations, from complete closure in six countries – although for temporary time periods – to partial closures in about half of the countries surveyed. Partial closure usually involved restricted office hours and staffing; however innovative approaches were observed, including suspending full registration procedures and pre-registering vital events. In other settings registration services were limited, while other government agencies, such as health facilities or notaries continued registration activities. Finally, some countries limited services to registering deaths, for example, but not births and marriages. In a third of responding countries, there were no changes to CRVS operations, either through the provision of online services, or because CRVS was prioritised as an essential government service.

Where CRVS offices remained open, 40% of countries reported reductions in staffing, staff rotations, split rosters and other human resources response measures. Establishing appointment systems for registration was adopted by several countries. Improved sanitation and hygiene measures and social distancing were introduced in many settings. Staffing changes were accompanied by telephone, remote and digital services in around half of surveyed countries, with 'work from home' procedures established. Operational changes to alleviate the impact of COVID-19 on registration services were implemented in a third of the countries surveyed. These included moratoriums on registration fees, or expanded periods to complete registration. The most commonly reported change, in one third of countries, was the development of online services, or the extension of existing digital services. An increase in inter-ministerial cooperation processes was seen in 20% of responses, largely within the health sector. Despite lockdowns and reductions in services, the health sector remains a source of information on births and deaths. Finally, 15% of countries reported rolling out campaigns to inform the public of the importance of continuing to register births and deaths, on where and when registration services can be accessed, and government plans for CRVS continuity.

The survey responses reviewed here mainly cover the impact of COVID-19 on the civil registration aspects of the CRVS system. Although the impact on compilation of vital statistics was not explicitly covered in the survey, the impact on registration operations would likely have an impact on vital statistics operations. In the absence of direct information on the latter, this report summarises information on prior knowledge of the functional status of vital statistics operations in survey respondent countries, along with information on current reporting of COVID-19 mortality to

international agencies that compile data to monitor the international health impact of the pandemic. Although about two-thirds of the survey respondent countries do not routinely submit vital statistics data to the World Health Organization, they reported COVID-19 deaths to global monitoring organisations. This indicates that there is a functioning mechanism for reporting deaths in those settings, often through the health sector, and these experiences could be used to strengthen their overall national vital statistics operations beyond the current crisis.

As the COVID-19 pandemic has continued beyond 2020, there is a need to conduct a follow-up survey to understand the longer-term impact on CRVS systems, as well as government responses. A follow-up survey should consider country experiences in moving services online, including privacy and data security issues and how they have been handled. The follow-up survey should also collect information on: the impact on vital statistics operations in terms of timeliness and completeness of registration and data compilation; experiences in medical certification of COVID-19 deaths and use of verbal autopsy methods for assigning causes of death; the ability of CRVS systems to measure excess mortality from COVID-19; the ability of CRVS systems to support wider government programmes, such as identification of individuals for vaccination and social protection; and other longer-term impacts of the pandemic on CRVS.

Finally, despite the impacts of COVID-19 on the provision of civil registration services and the capacity of governments to compile vital statistics, there are some potential positive outcomes: 1) increased attention to mortality statistics for monitoring the pandemic impact; 2) enhanced data management through digitisation; 3) improved intersectoral collaboration in vital event notification, and; 4) improved community awareness of CRVS. It is likely that these positive outcomes will help catalyse the development of national CRVS systems to provide these essential public services as well as meet the data requirements for planning and monitoring human development programmes.

Introduction

Background

Civil registration is defined as the universal, compulsory, continuous, permanent and confidential recording of the occurrence and characteristics of all vital events. Civil registration is conducted primarily for purposes of establishing legal documents that are provided for under the law, which enable individuals to prove their identity. It is a function of government to ensure that every vital event is recorded and therefore known and compiled into population-level vital statistics. For health sector purposes, registration of births, deaths and causes of death are of critical importance. Taken together, national systems that organise all these functions are termed national civil registration and vital statistics (CRVS) systems. The United Nations has launched the UN Legal Identity Agenda (UN LIA) which was officially endorsed in March 2020. The UN LIA is based on the framework of national CRVS systems as a platform for identity management, and relies on efficient and continuous implementation of CRVS systems to achieve its stated goals. However, measures to control the COVID-19 pandemic have required restrictions in routine business operations and community movement to varying degrees in different settings in order to limit disease transmission. These movement restrictions have affected implementation of CRVS operations and programmes in many countries.

As part of its mandate, the UN Legal Identity Agenda Task Force (UN LIA TF) – comprising representatives from various UN agencies – launched a short survey in March 2020 asking countries to provide information on the impact of COVID-19 on their national CRVS systems. The survey was administered via email to heads of civil registration authorities, and comprised four broad questions on the impact of COVID-19 on CRVS operations, and on various aspects of the national response to this impact. A total of sixty-one countries around the world responded to the survey during March–April 2020, as well as five states in Australia. In addition, the Pacific Community (SPC) in collaboration with members of the Global CRVS Group and the UN LIA TF delivered a series of webinars in April 2020 to countries in different regions of the world, designed to reaffirm the UN principles and recommendations for CRVS systems; they also disseminated global guidelines on the management of CRVS systems during the COVID-19 pandemic. Several partner institutions of the UN LIA TF and SPC, issued additional technical guidance to countries between April and August 2020, pertaining to specific issues in relation to technical aspects of CRVS functions. As the world monitors the impact of the pandemic, there has been an increased awareness of the importance of death registration and reporting of mortality statistics. Accurate information on mortality patterns have also been essential to responding to the crisis.

In its capacity as the Chair of the Global CRVS Group, SPC commissioned a report that would analyse and document the impact of COVID-19 on CRVS operations. This report provides a review of the survey responses, webinar discussions and technical guidelines, and presents a summary of national experiences in maintaining CRVS systems during the pandemic. The report also makes recommendations for future assessments of the impact of COVID-19 on CRVS systems.

Methods

The review provides a detailed analysis of country-specific responses to the survey issued by the UN LIA TF and co-chairs. The survey comprised four questions:

1. Is civil registration considered an essential service in your country?
2. What are the impacts of COVID-19 on the registration of vital events and the functionality of the civil registration authority, in general?
3. What are the working arrangements being implemented or planned to be implemented during the current or possible upcoming COVID-19 containment period to ensure continuity?
4. How is your office addressing the impact of the COVID-19 pandemic on the registration of vital events? What are the recommendations to the civil registration offices to ensure that all births, deaths, marriages and other vital events are registered during this time?

The national responses were compiled into an online database hosted [on the UNSD internet portal](#). For this report, the responses to each question were reviewed across countries, and categorised according to several broad themes for descriptive analysis. In addition to the quantitative analysis of impact and modes of national responses to the impact, a qualitative analysis of responses was undertaken to illustrate the context of the specific themes and categories used to present the findings. This analysis was supplemented by additional information on country responses that were provided during regional internet-based seminars organised by partners of the Global CRVS Group and UN LIA TF in Africa, Asia, the Pacific, Latin America and the Caribbean regions. Subsequently, documents and information from a range of international agencies – WHO, UNICEF, UNESCAP and others – were analysed to understand the nature of guidance provided to countries within their area of operations.

Results

Status of national CRVS systems as essential services during the COVID-19 pandemic

Table 1 provides a quantitative overview of the number of countries from four broad regions that responded to the survey. A total of 61 countries responded to the survey, with nearly half of these located on the African continent. There were considerably lower levels of participation from other regions, with no responses from any countries in Europe. The only countries from the Middle East region that responded were Iran and Bahrain (included under Asia). Notably, there were no responses from several of the larger countries that have been most severely affected by the pandemic, namely: China, India, Brazil, South Africa, Russia and the United States, among others.

A large portion of the respondent countries mentioned that the CRVS system had been declared an essential service, necessitating continuous operations for registration of births and deaths, while marriages, divorces and other vital events were mostly put on hold during the pandemic. However, in some larger countries, such as Bangladesh, Nigeria and Uganda, the CRVS system was not labelled as an essential service, which might have led to relatively less attention to maintenance of operations. It should be noted, this survey was conducted during March–April 2020, at the very early stages of the pandemic in Africa and South Asia; hence why there may have been less focus on this matter at that time. However, there could have been subsequent actions taken in regard to the operational status of national CRVS systems in these countries as the long-term outlook of the situation became apparent.

Table 1: Status of national CRVS systems as essential services during the COVID-19 pandemic

Region	Countries	Response	CRVS an essential service		
			Yes	No	No response to the question
Africa	60	30	Angola, Benin, Burkina Faso, Cabo Verde, Cameroon, Comoros, Côte d'Ivoire, Djibouti, Ghana, Kenya, Lesotho, Liberia, Madagascar, Mauritius, Mozambique, Namibia, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Tanzania, Tunisia	Eswatini, Guinea-Bissau, Malawi, Nigeria, Uganda	Mali, The Gambia
Americas	56	9	Costa Rica, Guatemala, Mexico, Argentina, Colombia, Chile, Ecuador	El Salvador	Panama
Asia	50	14	Afghanistan, Armenia, Bahrain, Hong Kong, China, Georgia, Indonesia, Iran, Republic of Korea, Lao People's Democratic Republic (Lao PDR), Maldives, Philippines	Bangladesh, Malaysia, Sri Lanka	–
Oceania	15	8	Australia, Cook Islands, Fiji, Marshall Islands, New Zealand, Solomon Islands	Samoa	Vanuatu

Impact of COVID-19 on CRVS operations

The impact of the pandemic on CRVS operations has manifested in different forms across individual countries, as summarised in Table 2. In essence, the impact is a result of the limitations placed on human movement and contact to minimise the potential for spread of the infectious disease. At national levels, the impact has been measured based on three broad categories of service provision – complete closure, partial operation, no change – and a fourth category of service demand.

Complete closure

Owing to the movement restrictions imposed by national governments, CRVS operations were completely closed in four African countries: Angola, Djibouti, Guinea-Bissau and Nigeria. Similarly, CRVS operations were also closed in El Salvador and Samoa. As described in Table 1, the CRVS system was not declared an essential service in four of these countries – Eswatini, Guinea-Bissau, Malawi, Nigeria, Uganda – and hence these operations were not prioritised, in comparison to other services. In Angola, although there was an initial suspension of CRVS operations for 15 days, the survey response stated that death registration was made operational after the initial lockdown period. A temporary closure of registration counters was also observed in Malaysia, where CRVS was not considered an essential service.

Partial operation

About half of all responding countries reported that there were partial changes to provision of, or arrangements for CRVS operations. There were various modifications to either the working arrangements for staff and offices, or to the official registration rules or procedures for registration, which are discussed later in this report. At a broader level though, there were some innovative approaches taken to service modification, as captured in the text responses in Table 2. For instance, Iran adopted an approach of pre-registration of events, with a decision to complete the official process at a later date; this was also applied in several other countries, including Armenia and Afghanistan. Similarly, in Djibouti, although official registration was suspended, hospitals and town administration offices were maintaining lists of events, as a basis for later registration. Another common modification of operations was to restrict registration only to deaths (Angola, Argentina), or to include both births and deaths, but postpone the registration of marriages (Eswatini, Lesotho, Mozambique, and New Zealand).

The design of individual CRVS systems also played a role in how the pandemic affected operations. For example, in Liberia, registration offices were closed, meaning death registration practically ceased; however, as birth registration occurs in hospitals, these processes continued. In Colombia, although registration offices were closed, new arrangements were made for notary offices to provide registration services for births, deaths and marriages. In other settings, such as Namibia, a combination of registration offices and mobile registration services to remote and hard-to-reach communities are used during regular operations; in this instance, the offices remained open but the rural outreach activities ceased. Finally, the competing demand for funding due to COVID-19 led to reduced resources – from government and development partners – and reduced staffing for CRVS operations, resulting in reduced services in some countries (The Gambia, Malawi, Cameroon, Panama, Indonesia).

No change in operations

In about a third of all responding countries, there were no changes to CRVS operations. In some countries, this was achieved through either pre-existing electronic services (e.g. Australia, and Georgia) or implementation of such services after onset of the pandemic (e.g. Bahrain and Costa Rica). In other countries, such as Chile, where CRVS systems were deemed an essential

service, operations continued, with arrangements to activate emergency centres for specific locations where restrictions on movement were put in place. Similarly, operations were reported to be maintained at normal levels in several African countries, including Senegal, Seychelles and

Madagascar; but since this survey was undertaken through March–April 2020, this response may predate the actual onset of the pandemic in these locations.

Table 2: Impact of COVID-19 pandemic on national CRVS operations

Region	Responses	Impact on registration offices			Other impact
		Closure	Partial operation	No change	Reduced demand
Africa	30	4	17	10	13
Americas	9	1	4	3	3
Asia	14	0	9	3	1
Oceania	8	0	3	5	2
		EXAMPLES OF TEXT RESPONSES			
REMARKS		All CRVS activities paralysed (Nigera)	Only death registration open, birth registration postponed (Mauritius)	No impact, birth and death registration as normal (Cabo Verde)	Reduction in declaration of vital events (Cameroon)
		Lockdown halted registration activities (Djibouti)	Registration by appointment only (Malaysia)	Continuity of services maintained (Chile)	Vital events happening in the community are likely being underreported as local notifiers are not submitting reports (Kenya)
		Recording of vital events has practically stopped (Guinea-Bissau)	Notification open, with final registration post COVID-19 (Iran)	No change to operations (Republic of Korea)	Registration services in place but demand reduced (Guatemala)
		Registration closed (El Salvador)	Registration services still available but with more limited office hours (Vanuatu)	Registration proceeding as normal (Fiji)	Low turnout and demand for registration (Solomon Islands)

Reduced demand

In many settings, although registration offices remained open, albeit often with reduced staffing and hours, reduced demand for services from the public was reported. In most cases this was because of lockdowns and restrictions on public movement, making it harder for the public to access registration services (Burkina Faso, Côte D'Ivoire, and Djibouti). In other cases, registration staff felt that the public were avoiding visiting public offices due to fear of infection (Senegal, Mozambique). Kenya also reported an increase in the proportion of births occurring at home, or outside of health facilities, due to perceived infection risk. This has been connected to a decrease in families coming forward to register births. Reduced demand was also observed in Guatemala. The survey response from Mexico noted a reduced demand for birth registration, but an increased demand for death registration, possibly a sign of excess mortality caused by the pandemic.

Changes to working practices for maintaining CRVS operations

Table 3 summarises some of the key changes that were implemented by national governments in order to maintain CRVS operations during the pandemic. Countries that responded to the survey reported changes made to minimise the potential for physical contact, through modified staffing patterns, arrangements for telephonic and/or digital services, and where contact was inevitable, through safe hygiene measures.

Staff rotation

About 40% of the responding countries reported changes to staffing patterns, mostly through staff rotation and rosters (e.g. Benin, Afghanistan, Bangladesh). Other countries reduced staff numbers (e.g. Ghana, Eswatini, Kenya), with the Democratic Republic of Congo (DRC) restricting staff to two persons per office, and Cameroon laying off casual staff. In other locations, virtual appointments (Costa Rica) or registration-by-appointment (Argentina and Malaysia) were adopted to minimise contact and exposure to infection. In Azerbaijan, all documents are being exchanged at the entrance to the registration office. Some countries have also decentralised their operations by nominating local officials (e.g. village chiefs in Lao PDR) to serve as vital event notifiers for temporary registration of events, which minimises the contact between CRVS staff and the public.

Hygiene measures

Countries that did not completely shut down offices reported the introduction of safe hygiene practices, such as social distancing within office premises (Mali, Indonesia, Vanuatu), use of hand sanitisers, and face masks within office premises (Madagascar, Maldives, Hong Kong).

Table 3: Changes to working practices of CRVS operations in response to COVID-19

Region	Responses	Changes to working practices			
		Staff rotation/ minimised contact	Telephonic/ remote services	Digital services	Hygiene measures
Africa	30	15	4	2	8
Americas	9	4	7	4	0
Asia	14	5	5	2	4
Oceania	8	2	2	3	4
		EXAMPLES OF TEXT RESPONSES			
REMARKS		Staff working on rotation basis (Burkina Faso)	Increase in teleworking (Côte d'Ivoire)	Families can upload notifications from health facilities and receive registration documents online (Rwanda)	Hygiene measures introduced in government offices (Burkina Faso)
		Reduction in casual staff (Cameroon)	Teleworking (Costa Rica)	Technological and digital tools being used to provide services (Mexico)	Face masks (Cameroon)
		Rolling shifts, video conferences (Costa Rica)	Teleworking for most staff (Ecuador)	Most registration services are offered online (Bahrain)	Use of masks and sanitisers in registration offices (Côte d'Ivoire)
		In-person services are by appointment only (Argentina)	Teleworking (Chile)	Online notification where possible (Iran)	Masks and sanitiser used in offices (Maldives)
		Public not allowed inside registration offices, documents accepted at entrance (Azerbaijan)	Working from home by telephone (Indonesia)	Online registration of births, deaths and cause of death certification (New Zealand)	Physical distancing in office (Indonesia)
		Village chiefs being asked to help with recording local vital events (Lao PDR)	Public allowed to mail or email documents for registration applications (Cook Islands)	Staff working from home and office, but many services are online already (Australia)	Physical distancing measures in place (Fiji)

*Several countries introduced more than one change

Telephone/remote/digital services

In approximately one-third of responding countries, 'work from home' procedures have been introduced for CRVS operations, which are similar to modified business operations for some other sectors (e.g. banking, education, etc.). The survey responses for several countries do mention the use of such telephonic and 'work from home' procedures, however, the actual details as to the manner in which telephonic and 'work from home' services are being applied in different locations is not specified in the questionnaire responses. During the information sessions, participants did state that these telephonic procedures involved a preliminary noting of events by the staff based on information provided by the citizens, with subsequent follow-up for an official appointment, or submission/collection of official documents. In the case of Cook Islands, the revised procedures now permit the use of postal/email services for document exchange towards registration. Also, several countries utilised existing online services (Georgia, New Zealand), or expanded available services to meet this extraordinary situation (Rwanda, Mexico).

Changes in official arrangements in response to the COVID-19 impact on CRVS

There were a variety of responses to the issue of official arrangements and recommendations for changes in processes and procedures. These ranged from temporary changes to cope with the restrictions of the COVID-19 pandemic, to longer-term changes for sustained improvement in the CRVS system, and in some cases accelerations of changes that were already planned or underway. Table 4 summarises these official changes to CRVS and gives some examples of actions taken by various countries.



Photo Credit: U.S. Navy_3rd Class Dartañon D. De La Garza

Special Instructions

Some of the special instructions issued by governments in responding to the COVID-19 pandemic were operational, and this applied to one third of the countries which returned surveys. For example, in many settings measures, such as a moratorium on late registration (DRC, Argentina, Colombia, Iran), or a removal of registration fees (Mexico, Ecuador), were enacted to compensate for the reduced availability of services or on the public's ability to access them. Campaigns by civil registrars on the

importance of continuing registration procedures have taken place in Namibia, Madagascar and Cameroon, and more frequent reporting periods – at sub-national levels up to headquarter offices – have been introduced in Kenya and Malaysia.

Table 4: Official arrangements and recommendations in response to the impact of the COVID-19 pandemic on CRVS operations

Region	Responses	Official arrangements/recommendations			
		Special instructions	Public communication	Development of digital services	Improved intersectoral collaboration
Africa	30	9	6	7	4
Americas	9	5	0	3	5
Asia	14	5	2	8	2
Oceania	8	1	1	1	2
EXAMPLES OF TEXT RESPONSES					
REMARKS		Government instruction to ensure the CRVS system functions properly even in periods of confinement (Madagascar)	Public being provided with information on CRVS continuity (Côte d'Ivoire)	Plan to connect CRVS system to Internet to enable remote registration (DRC)	Working with health facilities to make sure facility vital events are registered (Kenya)
		Awareness campaign for civil registrars on the importance of continuing registration (Cameroon)	Where offices are unattended, posting contact details of responsible staff at office entrance (Ghana)	Setting up an online system where users will be able to prepare a pre-request for CRVS services (Djibouti)	National Directorate of Civil Registration developing technical and financial support to ensure continuity of civil registration services (Mali)
		Legal limits on notification periods waived (El Salvador)	Communities, health workers, and local notifiers (assistant chiefs) assisting to make sure events are registered (Kenya)	Web-based certificate provision (Colombia)	National Population Register has agreements with other public institutions to allow provision of services during pandemic (Guatemala)
		Medical notification of birth accepted for registration (Colombia)	Public campaigns to inform community of obligation to register births and deaths (Azerbaijan)	Online delivery development (Bangladesh)	COVID-19 death registrations organised directly between health facility and civil registration (Ecuador)
		Memorandum to all civil registrars on guidelines for registration during COVID-19 (Philippines)	Easing of registration requirements for public (Philippines)	Investing more in IT to enhance online services (Indonesia)	Multi-Ministry Civil Registration Coordination Council activated (Iran)
		Burials are being allowed without full registration certificate if special form is issued (Sri Lanka)	Newsletter sent to marriage celebrants and funeral directors with advice on how to respond to COVID-19 (New Zealand)	Online registration seen as way forward (Solomon Islands)	Notification forms provided to Ministry of Health and Internal Affairs to spread registration workload (Cook islands)

Other approaches involved engaging in planning to identify approaches on how to recover from the impact of the pandemic. In addition to the moratorium on late registrations mentioned above, countries are also: planning mobile outreach services (DRC); sourcing additional funding to clear backlogs (The Gambia, Mali); planning collaborations with the health sector (El Salvador) or local chiefs and administrators (Lao PDR) to enable catch-up on registration; and generally making plans for addressing a registration backlog (Lesotho).

Public communication

Fifteen percent of the countries that completed the survey reported that campaigns were underway to inform the public, firstly of the importance of CRVS and registering births and deaths, but also of the current status of the CRVS system, where and when services could be accessed, and what plans were underway for the continuation of services. In New Zealand, public communication also involved sending out periodic newsletters to marriage celebrants and funeral directors with advice on how to carry out their obligations during the pandemic.

Digitisation of services

The most commonly reported action taken by one-third of countries in their response to the impact of COVID-19 on registration services was the development of plans for online service provision. In some settings, such as Djibouti and Sri Lanka, a temporary online system was set up for the public to pre-request CRVS services. In other countries, existing online services were being strengthened to cope with increased demand (e.g. Georgia, Rwanda, Tanzania, Tunisia, Ecuador, Chile, Argentina). In Afghanistan, Bangladesh, Sierra Leone and Kenya, new digitisation plans are underway. Web-based certificate provision is being used in Colombia, and in Solomon Islands registration forms are available online and can be emailed for processing. Finally, in countries such as Australia, New Zealand and Bahrain, full online services were already available for registration, which limited the impact of the crisis on the functioning of the system.

Improved Intersectoral collaboration

There has been a recognition by many countries during the COVID-19 pandemic that CRVS systems can be strengthened through better inter-ministerial cooperation processes, particularly within the health sector. Around 20% of country responses referred to this approach. In the Cook Islands for example, the Ministry of Health has been asked to compile vital event notification forms. In Panama, Tunisia and Kenya, registration staff are working more closely with community health workers and health facilities to ensure registration without family involvement. In other settings, more data sharing between CRVS and health sectors has occurred (Malaysia, Mauritius); and in others collaboration is planned (Nigeria). The pandemic has revealed the critical role of that the health sector could play in supporting registration of vital events. The involvement of the health sector in registration has been particularly recognised due to the essential nature of health services and their continuity despite any lockdown periods being required. In addition, births and deaths that occur at home are often made known to community health staff, who then have an important role in notification and subsequent registration of these events, following the standard or modified local practices.

A long-term outcome of the impact on CRVS systems has been the establishment or strengthening of CRVS committees or other stakeholder groups that will design strategies for CRVS going forward (Cameroon, Côte d'Ivoire). Taken together, all these changes to official arrangements for CRVS in response to the COVID-19 pandemic are likely to be synergistic, and have long-term positive implications for CRVS development activities across the world.

Impact of the COVID-19 pandemic on national vital statistics operations

The movement restrictions that were put in place as a result of the COVID-19 pandemic have had a considerable influence on civil registration operations in several countries, as described above. These operational constraints would also necessarily influence the compilation, submission, quality

and analysis of vital statistics at the national level. However, such an impact would only be perceived at a later stage during the annual CRVS cycle, as statistical operations are usually conducted after a lag period of at least three to six months in most locations. The UN LIA TF survey was conducted during April 2020, and did not include any specific questions in regard to the impact on vital statistics operations; hence there is no direct empirical evidence from survey responses of any such impact.

For monitoring purposes, and to guide planning on how to alleviate the health and socioeconomic impact of the pandemic, there is a need for timely and accurate mortality statistics. These should include accurate population-level data on deaths associated with COVID-19 infection on a daily/weekly/monthly basis, in order to assess the magnitude of the pandemic. In addition, there is also a need for accurate data on all deaths occurring in the population for the same periods. Further, a complete assessment of the pandemic would require time series data on deaths in the population of interest across the same months during previous years, in order to properly evaluate the 'excess mortality' in the population that could be attributed to the COVID-19 pandemic.

Although the UN LIA TF survey did not evaluate the impact of the COVID-19 pandemic on vital statistics operations, this report provides some perspective on this topic through an analysis of background information on the performance of vital statistics operations in the countries that responded to the survey. One component of this analysis is based on the WHO mortality statistics 'data usability' score for each country in 2018.¹ The score measures national mortality data availability and quality in a single metric, which is defined as follows:

WHO data usability score = % completeness * (1 - %ill-defined causes)

Where completeness = the proportion of deaths registered by the CRVS out of the total estimated deaths in the population

And

Ill-defined = the proportion of deaths that are registered with non-specific causes of death

The WHO scores were assigned for each country in the published report ², and are summarised in Table 5 for countries that responded to the survey. The assessment showed that most of the survey respondent countries in Africa do not submit mortality statistics to the WHO; hence the data usability scores could not be estimated. While this suggests that processes for compilation and submission of vital statistics may not be in place in these countries, a scrutiny of international data sources on COVID-19 deaths indicate that all the survey respondent countries were actually reporting deaths from COVID-19 to global monitoring agencies (e.g. WHO). This suggests that certain agencies – possibly within the health sector of these countries – were performing the function of data compilation and submission. Overall, this survey has established that in most survey respondent countries in Africa, the COVID-19 pandemic has affected civil registration operations, but national governments have implemented several interventions to maintain registration. In addition, these countries are compiling and reporting COVID-19 mortality data. Further, all these countries have also completed CRVS system comprehensive assessments supported by the UN Economic Commission For Africa (UNECA) within the auspices of the Africa Programme on Accelerated Improvement of Civil Registration and Vital Statistics (APAI-CRVS). All countries in Asia and the Pacific have also committed to work towards universal registration by

¹Details of the data sources and methods for calculating this score are available from: World Health Organization. WHO methods and data sources for country-level causes of death 2000-2016. Geneva: Department of Information, Evidence and Research, WHO; 2018. Available from: http://terrance.who.int/mediacentre/data/ghe/GlobalCOD_method_2000_2016.pdf?ua=1

²ibid.

2024 and improvement of CRVS systems. Therefore, there is potential for national governments to utilise the experiences from the response to the COVID-19 pandemic along with the findings from the CRVS assessments to design and implement comprehensive CRVS strengthening programmes. Such programmes will improve the availability and utilisation of birth and death registration data for routine administrative and health sector purposes.

Table 5 shows that several of the survey respondent countries in Asia and Oceania do not submit mortality statistics to the WHO, but have completed the CRVS comprehensive assessments. These countries could build on the experiences of maintaining CRVS operations during the pandemic and from compiling COVID-19 mortality data to strengthen their national CRVS systems. However, there are several Pacific Island countries and territories where the COVID-19 pandemic has not yet had an impact in terms of deaths to be reported. Information on CRVS assessments for survey respondent countries in North and South America is not available. However, several of these countries are ranked with partial quality of vital statistics, and it is likely that the experiences from the response to the COVID-19 pandemic would have important lessons for their national CRVS programmes.

Table 5: Current status of countries³ on routine reporting of annual vital statistics to the World Health Organization

Region	Responses	WHO routine vital statistics data assessment			CRVS comprehensive assessment completed	Countries with zero COVID-19 deaths reported to international sources as of 1 December 2020
		No data submitted	Partial quality (50–80%)	Adequate quality (> 80%)		
Africa	31	Angola, Benin, Burkina Faso, Cameroon, Comoros, Côte d'Ivoire, Djibouti, Eswatini, Ghana, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, The Gambia, Tanzania, Uganda	Cabo Verde, Tunisia	Mauritius, Seychelles	Angola, Burkina Faso, Cameroon, Côte d'Ivoire, Eswatini, The Gambia, Ghana, Kenya, Lesotho, Liberia, Madagascar, Mali, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Tanzania	Seychelles
Americas	9	—	Argentina, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Panama	Chile, Mexico	Information not available	
Asia	14	Afghanistan, Bangladesh, Indonesia, Lao PDR, Sri Lanka (since 2006)	Azerbaijan, Bahrain, Georgia, Iran, Maldives, Philippines, Malaysia	Armenia, Republic of Korea	Afghanistan, Armenia, Azerbaijan, Bangladesh, Indonesia, Iran, Lao PDR, Maldives, Philippines, Malaysia	Lao PDR
Oceania	8	Cook Islands, Marshall Islands, Samoa, Solomon Islands, Vanuatu	Fiji	Australia, New Zealand	Australia, Cook Islands, Fiji, Marshall Islands, Samoa, Solomon Islands, Vanuatu	Cook Islands, Samoa, Marshall Islands, Solomon Islands, Vanuatu

Although many countries did not respond to the UN LIA TF survey, almost all have reported deaths from COVID-19 on a daily basis to the international COVID-19 mortality monitoring agencies. From the available information on such reporting from each country, it appears that in some of these countries the data compilation and submission is directly linked to national CRVS systems, while in others such data is largely a function of health sector reporting. Over the course of 2020, several

³Countries included here are those that responded to the UNLIA survey.

countries also reported findings from statistical analysis of excess mortality from COVID-19 (USA, Brazil, Spain); this is indicative of well-functioning routine mortality data collection systems – and potentially CRVS systems – with good timeliness of data reporting and management. There have also been reports of detailed analysis of multiple causes of COVID-19-associated deaths from some countries (USA, Italy, France), which is indicative of good medical certification of cause of death practices. All these examples indicate that robust CRVS systems can enable efficient and detailed assessment of the impact of such infectious disease pandemics, and can provide the necessary data for evidence-based health sector responses for disease control programmes.

Guidelines on CRVS maintenance

As noted earlier, the UN LIA TF had issued guidelines and instructions for maintenance of CRVS operations, in anticipation of the impact of the COVID-19 pandemic on CRVS operations arising from restrictions to movement. These guidelines included several recommendations for national governments, namely: to make arrangements to introduce hygiene measures; review staffing patterns to minimise direct human contact during CRVS processes; make provisions for electronic services; and develop intersectoral collaboration to share workload and administration responsibilities, among others. The responses to the UN LIA TF survey indicate that all the responding countries have generally adopted the guidelines and recommendations for maintaining CRVS operations, and this is a positive outcome.

The United Nations Development Programme (UNDP) also issued supplementary guidance regarding the adoption of various forms of electronic and digital services for CRVS operations, with a focus on the various aspects of privacy, confidentiality and security of data. From another perspective, the WHO issued specific technical guidance for medical certification of causes of death in COVID-19 cases, along with use of specific codes for suspected and confirmed COVID-19 infection. One key limitation of the UN LIA TF guidelines was the absence of any specific instructions for compilation and analysis of vital statistics. However, the United Nations Statistics Division issued guidelines for calculation of excess deaths as a result of the COVID-19 pandemic, by comparing current death registrations with data from previous years for the same time period. The UNECA also issued supplementary guidance for implementation of the UN LIA TF recommendations, adapted to the African context. Finally, Vital Strategies, a non-governmental organization that provides technical assistance for CRVS operations in developing countries, issued a technical package for implementation of rapid mortality surveillance (RMS) programmes for monitoring the impact of COVID-19. This technical package included guidance for notification of mortality events identified through the RMS programme to the nearest CRVS office or local registrar.

In summary, all these guidelines are anticipated to have had a positive impact on maintenance of CRVS operations during the pandemic, as stated in the country responses to the questionnaires, as well as during the webinar information sessions. More information on all these documents are provided in Appendix 1.

Follow-up survey

The COVID-19 pandemic has passed through successive waves in different parts of the world throughout 2020. During this period, national governments implemented customised programmes to maintain CRVS operations, which are likely to have a long-term influence on strengthening national CRVS systems.

There is a need for a follow-up survey to examine the impact of the pandemic and the various features of national responses that were implemented at country level, as well as the lessons learned from these experiences. In broad terms, such a follow-up survey should largely focus on the impact of the pandemic on registration rates – especially for births and deaths – aspects of vital statistics operations, and the actions/interventions that have been implemented or are being planned to strengthen vital statistics operations. Of critical importance, the follow-up survey should gather information on experiences and lessons learned in regard to the digitisation of services, maintenance of privacy and data security, and data management.

It would also be useful for the follow-up survey to explore the prospects for countries to undertake assessments and estimation of excess mortality from COVID-19 in their national settings; this would be of considerable value to improve global understanding of the impact of the COVID-19 pandemic. Finally, the survey should also collect information about national activities and experiences in strengthening medical certification of COVID-19 deaths, and of compilation and analysis of cause-specific mortality statistics.

A complete list of potential themes and topics for inclusion in the follow-up survey to assess the impact of the COVID-19 pandemic on CRVS operations is provided in Appendix 2.

Conclusions

The COVID-19 pandemic has had a significant impact on CRVS operations in many countries. However, the importance of maintaining CRVS systems was clearly understood by the international community even in the very early stages of the pandemic, resulting in very comprehensive and timely guidance provided to countries by the UN LIA TF. These guidelines were followed by a series of webinars organised in different regions, which enabled countries to understand the importance of CRVS systems, and equipped them with the relevant technical guidance on actions and interventions to maintain CRVS operations. These actions have resulted in enhanced attention to the functioning of CRVS systems in most countries, which has resulted in improved compilation and submission of COVID-19 mortality statistics in many countries.

However, the overall impact of the pandemic across 2020 remains to be known. Over the course of the year, there have been different phases of movement restrictions and relaxation of restrictions that have varied both across and within countries. These variations could have had different degrees of impact across different locations, potentially hampering both civil registration services as well as vital statistics operations. On the other hand, there have been several positive factors, a few of which are listed below:

- modified and potentially more efficient staffing arrangements for civil registration;
- improved community awareness of CRVS activities and the need for active participation from members of the public;
- improved local intersectoral collaboration for vital event notification and registration;
- enhanced digitisation of CRVS operations for better data management; and
- increased attention to the availability and quality of mortality statistics to monitor the impact of the pandemic.

For these reasons, there is a need for a more detailed country survey to evaluate the impact of the pandemic on CRVS operations. It is anticipated that a follow-up survey conducted early in 2021 that specifically addresses these areas of impact would: 1- provide the necessary information to support

a better understanding of the impact of the pandemic on CRVS systems; and 2- identify the lessons learned to inform future interventions to strengthen national CRVS systems.

APPENDIX 1

Review of guidelines provided by UN and other international agencies regarding maintenance of CRVS operations during the COVID-19 pandemic

In anticipation of the impact of the COVID-19 pandemic on CRVS operations arising from restrictions to people's movement, several United Nations agencies and other international organisations currently supporting the development of national CRVS systems have issued guidelines and instructions for maintenance of CRVS operations. These include: (i) Maintaining civil registration and vital statistics during the COVID-19 pandemic⁴. Recommendations issued by the United Nations Legal Identity Agenda Task Force, with the support of, and contributions by, UNECA, UNESCAP and SPC. (2) Briefing note and key messages: Impact of COVID-19 on the operations of civil registration systems⁵. Prepared by the UN Economic Commission for Africa. (3). Guidance to UNDP Country Offices on the privacy, data protection and broader human rights dimensions of using digital technologies to combat Covid-19⁶. Guidance Note prepared by UNDP. (4) Revealing the toll of COVID-19: A technical package for rapid mortality surveillance and epidemic response⁷. Prepared by Vital Strategies. (5). Impact of COVID-19 on registered numbers of deaths: An example of excess deaths⁸. Prepared by the United Nations Legal Identity Agenda Task Force and the United Nations Statistics Division. (6). International guidelines for certification and classification (coding) of COVID-19 as cause of death: Based on ICD international statistical classification of diseases⁹. Prepared by the World Health Organization. These guidelines are summarily reviewed here, along with recommendations for additional areas for which guidance is required for strengthening national CRVS operations during the pandemic.

1. Maintaining civil registration and vital statistics during the COVID-19 pandemic.

In April 2020, the UN LIA TF in collaboration with SPC prepared guidelines that were disseminated to national agencies that included measures that could be undertaken to maintain civil registration. The recommendations provided by the UN LIA TF addressed key operational aspects for maintaining CRVS systems, including modifications to operations – staffing arrangements, electronic services, temporary registrations etc. – and additional local instructions to support these modifications, along with communication strategies to inform the public of these modifications. The findings from the UN LIA TF survey, as documented in this report, generally indicate that the recommendations for effective civil registration operations have been largely implemented in most countries. As noted in Table 4, increased intersectoral collaboration and optimisation of digital services have substantial long-term benefits for countries' CRVS systems, as these mechanisms and arrangements will continue beyond the period of the pandemic.

On the other hand, the UN LIA TF guidelines do not make any specific recommendations for strengthening the compilation, quality evaluation, and analysis of vital statistics, or any modifications

⁴<https://unstats.un.org/legal-identity-agenda/documents/COVID-19-Guidelines.pdf>

⁵<http://www.apai-crvs.org/sites/default/files/public/Registrar%20General%20Meeting%20on%20the%20Impact%20of%20COVID19%20on%20CRVS%20Systems%20in%20Africa-English.pdf>

⁶<https://unstats.un.org/legal-identity-agenda/documents/unlia-guidance-to-undpOffices.pdf>

⁷<https://www.vitalstrategies.org/wp-content/uploads/Vital-Strategies-Revealing-the-Toll-of-COVID-19.pdf>

⁸https://unstats.un.org/legal-identity-agenda/documents/Excess_deaths.pdf

⁹https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf

to CRVS systems that may be required to facilitate these processes. These aspects are particularly important in light of the need for timely and accurate mortality statistics to monitor the health impact of the pandemic at population levels. At another level, reports of increased community births, due to reduced access to health facilities, as reported in some countries, can also affect the quality of birth registration, particularly in regard to timeliness and completeness of registration.

2. Briefing note and key messages: Impact of COVID-19 on the operations of civil registration systems.

This document essentially presents the UN LIA TF guidelines most relevant to countries within the UNECA region.

3. Guidance to UNDP Country Offices on the privacy, data protection and broader human rights dimensions of using digital technologies to combat Covid-19.

The results of the survey analysed in this report regarding the effects of the COVID-19 pandemic on CRVS systems found that many countries were either already digitising their CRVS system and moving services online, or were planning to do so. This was considered one of the best ways to reduce transmission risk and to maintain services during lockdowns. This move to providing government services online raises some issues of privacy, consent and data protection, which are addressed in this UN Guidance Note. This document raises several issues that are applicable to the digital collection of data in online CRVS systems. Firstly, as the COVID-19 pandemic spread, adaptations and responses were developed rapidly, which limited the opportunity for public consultation and discussion, or even in-depth government scrutiny of the risks and benefits. Further, many countries currently lack legislative and institutional frameworks to guide privacy and data protection processes.

Given these concerns, a series of guiding principles are outlined in this Guidance Note to help governments protect citizens' privacy and data. The first point is that all moves towards digital data collection should be as participatory as possible and require the consent of those whose data is being collected. Those whose personal information is being collected should be aware of what is being collected from them, how it will be used, and who will be able to access it. The involvement of civil society, academia and the private sector in digital system design will also help make this more feasible, through participatory design. Where possible, all data that is collected should be anonymised, although this may not always be possible in the context of CRVS data. Given that data cannot always be anonymised, strict guidelines are needed regarding how data is stored and who can access it. These guidelines should strictly limit access to those in specific roles and for specific reasons. As mentioned previously, these guidelines should be understood by those from whom data is being collected. As well as general principles of privacy and consent, special effort should be made to protect vulnerable populations and to consider gender issues. Where population data may be sensitive based on mental health, gender identity, criminal activity and so on, specific interventions are needed to reduce access to identifiable data for those populations. In addition, the personal data collected through a digital system should be limited to only what is required for the purpose of CRVS data compilation. The data should be fit for purpose, relevant to that purpose, and restricted to what is necessary.

Finally, development of digital systems in many cases will involve working with third parties and the private sector to access expertise in online systems. It is essential that contracts with external partners stipulate data protection and privacy provisions.

4. Revealing the toll of COVID-19: A technical package for rapid mortality surveillance and epidemic response.

This document provides a package of materials for implementing a rapid survey for mortality measurement at community level during the COVID-19 pandemic. It includes a simple questionnaire to enquire about death events in the community, and whether the death had been registered with the local CRVS system. Data from this surveillance mechanism could be used to measure mortality levels in the study population, and also to evaluate the impact of COVID-19 on CRVS operations.

5. Impact of COVID-19 on registered numbers of deaths: An example of excess deaths.

This document presents an example of estimating the likely mortality impact of the COVID-19 pandemic at the national level, in terms of measuring the excess number of deaths that had occurred within the population during a defined time period. This calculation can be used in countries where the CRVS system has been deemed an essential service, and has been able to operate reasonably well, and where efforts are now being made to assess the impact of COVID-19 on overall mortality. This calculation is based on an assumption that the COVID-19 pandemic has caused excess deaths during 2020 when compared to previous years. These excess deaths could be either directly caused by COVID-19, or be associated with other disruptions during the pandemic. This paper is based on the experience of excess deaths in Serbia. One important observation was that it appeared that there was a much larger proportion of excess deaths in the country's biggest cities compared to more rural areas. This highlighted a larger problem, in that deaths are often registered at the place of occurrence rather than place of usual residence. As most deaths happened in the major hospitals in the big cities, this led to the skewed regional distribution of excess deaths. A true assessment of excess deaths, and changes in birth numbers, requires tabulating both births and deaths by the usual place of residence of the mother and the deceased respectively.

6. International guidelines for certification and classification (coding) of COVID-19 as cause of death: Based on ICD international statistical classification of diseases.

The WHO has released specific guidance in regard to the rules and practices for certifying SARS-CoV-2 as an underlying or multiple cause of death on the medical certificate of cause of death for deceased cases of SARS CoV-2 infection. The materials include detailed examples of different case scenarios where COVID-19 is involved in the pathophysiological events that led to the death, and the manner in which COVID-19 is to be listed on the medical certificate in each scenario. The guidelines also include newly assigned international classification of diseases (ICD) codes for confirmed or suspected COVID diagnoses, which depend on the availability of confirmatory laboratory evidence for the diagnosis. Implementation of these guidelines at the national level will enhance the utility of mortality statistics from CRVS systems to monitor the pandemic, and guide appropriate clinical and public health responses for disease control.

APPENDIX 2

Themes and topics for a follow-up survey to evaluate the impact of the COVID-19 pandemic on national CRVS operations

1. Long-term impact on civil registration operations during March to December 2020

- Any continued closures or partial reductions in operations
- Effects on staffing/budget for CRVS operations
- Any long-term/semi-permanent changes to registration services
- Impact in terms of reduced/increased demand for CRVS services

2. Effect on registration services

- Temporary registration/outsourcing/decentralisation of registration
- Any changes to interactions between registration system and other government services
- Any backlogs of registrations that still need to be cleared and timeframe for clearance
- Any special provisions for delayed registrations (fee waivers, support documentation, etc.)

3. Revised CRVS operations in regard to technological/digitisation of services

- Any new/improved digital services made available in 2020
- Any new rules/legislation required to implement these changes
- Any specific provisions of follow-up for physical data verification/validation of vital events and documentation that were collected through telecommunication/electronic services
- Details of consent/privacy/data security considerations that have been explored in moving services online

4. Effects/impact on ascertainment of causes of death

- Any changes to interaction with health sector in terms of death notifications, and cause of death ascertainment
- Any special rules created related to registering COVID-19 as cause of death
- Any specific training programmes on medical certification of COVID-19 deaths, or use of verbal autopsy for determining COVID-19 deaths
- Any change in the proportion of deaths registered with a valid cause during 2020

5. Impact on data management and compilation of vital statistics

- Change to normal roles and functions in the data management and compilation process
- Impact on timeliness of vital statistics
- Any changes in terms of completeness of registration data or any other data quality indicators
- If/how the completeness of data collection impacted on the compilation of vital statistics
- Details of any modifications in terms of involvement of other sectors to improve vital statistics, or better collaboration or cooperation between different CRVS agencies

6. Impact on data quality evaluation and analysis of vital statistics at the local/national level

- Change to any regular routine data quality evaluation processes in different regions of the country

- Any variations in data quality across the country, and reasons for variations
- Availability of vital statistics to measure COVID-19 mortality rates and excess mortality rates for 2020
- If none, any plans to enable compilation of vital statistics for measuring COVID-19 mortality rates and excess mortality rates, at least in some population clusters or sample areas (e.g. towns/cities/districts)

7. Impact on submission of vital statistics to international agencies for monitoring the progress and response to the COVID-19 pandemic

- Details of vital statistics submitted to the WHO or other international agencies during 2020
- Any specific issues arising from the COVID-19 pandemic that affected your country's ability or capacity to submit these data
- Timeframe for returning to the normal compilation of data, if disrupted by COVID

