Building Resilient CRVS Systems:
Lessons from the COVID-19 Pandemic and Other Emergencies

by Carmen Sant Fruchtman, Anna Socha, Laura Monzón Llamas, Carla AbouZahr, Irina Dincu, and Daniel Cobos Muñoz

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INTRODUCTION

The COVID-19 pandemic has underscored the dire importance of a reliable civil registration system for producing vital statistics and informing health decision-making processes.[1] During emergencies, such as the COVID-19 pandemic, civil registration and vital statistics (CRVS) systems are essential for producing timely and complete mortality and calculating excess mortality due to all causes. Decision-makers need mortality data when deciding how, when, where, and for whom to implement public health measures.[2] Mortality statistics are needed in a timely manner for outbreak control and management,[3] especially in a rapidly evolving pandemic scenario. Additionally, fertility, mortality, and overall population data coming from CRVS systems serve other purposes before and during health emergencies, such as calculating the number of vaccine doses needed, estimating emergency housing needs, and budget planning for social welfare payments.[4]

Many countries across the globe do not have adequately performing CRVS systems to deal with physical, economic, social, and environmental shocks. In fact, even countries with mature CRVS systems have struggled to generate timely and complete data needed to track mortality associated with the COVID-19 pandemic.[5] The lack of capacity and need for functional CRVS systems during the pandemic have initiated a global conversation on the critical nature of CRVS. Outdated technologies, rigid legal environments, and cumbersome procedures render many CRVS systems poorly positioned to adapt and respond to emerging needs.[6]

The performance of CRVS systems was worsened during the widespread lockdowns and restrictions on movement imposed by governments in an effort to slow COVID-19 transmission. On 9 April 2020, the United Nations Legal Identity Agenda Task Force released recommendations urging governments to deem civil registration

1   Setel, P. et al. 2020. who.int/bulletin/volumes/98/6/20-263194.pdf

2   Setel, P. 2020.
    statnews.com/2020/08/03/measuring-excess-mortality-gives-clearer-picture-pandemics-true-burden/

3   World Health Organization (WHO). 2018. apps.who.int/iris/handle/10665/272442

4   The Pacific Community. n.d.

5   Aron, J. and Muellbauer, J. 2020. ourworldindata.org/covid-excess-mortality

6   AbouZahr, C. et al. 2019. ncbi.nlm.nih.gov/pmc/articles/PMC5872022/

an essential service and to therefore continue operations during the pandemic.[7] The same report called for the prioritization of birth, death, and cause-of-death registration if not all civil and vital registration services can be guaranteed.

Despite the good intentions of the UN Legal Identity Agenda (UNLIA) guidelines to prioritize birth and death registration, the authors want to emphasize the importance of all registrations — including marriage and divorce — in emergencies. All registrations provide important protections, especially for vulnerable populations. Marriage and divorce registration entitle women to essential social services and legal rights over property during and after marriage. The process of marriage registration also provides an important mechanism to ensure that marriages start with free and full consent, and that the minimum age of marriage is being upheld, both of which have greater relevance during emergencies.[8]

Despite the UNLIA's guidelines for COVID-19, some countries, such as India or the United Kingdom, still did not designate civil registration as an essential service. This led to a decline in service provision, closure of CRVS offices, and a discontinuation of CRVS registration activities.[9] [10] In addition, fear of infection and stay-at-home orders discouraged the public from visiting civil registration offices.[11]

At present, the world is facing uncertain times, but one thing is clear: the current emergency caused by COVID-19 will not be the last. In fact, several countries are already experiencing the health and social consequences of the climate crisis,[12] effects of mass migrations, risks of political instability, and civil conflict.[13] Well-performing CRVS systems must be at the core of country preparedness and response to future emergencies and chronic crises. Countries will need resilient CRVS systems to cope with the looming challenges of the 21st century and to meet the changing needs of a dynamic society.

Resilient CRVS systems will continue providing their essential services in the face of shocks and manage to recover and adapt to the new situation. Governments will be able to make evidence-based decisions and respond more effectively to everyday challenges and future crises. At the same time, individuals and families can continue to access their rights based on the proof of identity, civil status, and family relationships that CRVS systems provide.[14]

The complex nature of government systems, and their integration with other systems and individuals, make it almost impossible to predict which risks to CRVS systems may arise in the future. The shift towards resilient CRVS systems is based on a philosophical and methodological

7   United Nations Statistics Division. 2020.
     covid-19-response.unstatshub.org/statistical-programmes/maintaining-crvs/

8   Polavarapu, A. 2016.
     data2x.org/resource-center/gendered-dimensions-of-marriage-and-divorce-registration-laws-in-africa/

9   IANS. 2020. economictimes.indiatimes.com/news/politics-and-nation/what-constitutes-essential-services-and-
     how-govt-responds/what-can-you-do-during-a-shutdown-situation/slideshow/74772217.cms

10   AbouZahr, C. 2020. vitalstrategies.org/what-is-the-true-human-toll-of-covid-19-for-better-answers-to-this-
     critical-question-strengthen-civil-registration-systems/

11   Ibid.

12   United Nations. 2020. un.org/en/un75/climate-crisis-race-we-can-win

13   International Organization for Migration. 2020. iom.int/wmr/

14   Sumner, C. 2015. cpcnetwork.org/wp-content/uploads/2015/02/AIPJ-PUSKAPA-BASELINE-STUDY-ON-LEGAL-
     IDENTITY-Indonesia-2013.pdf

basis aiming to address systemic risk. Unlike traditional risk management strategies that aim to harden specific components of a system against specific threats, resilient CRVS systems should be ready to absorb any risk, recover, and adapt their operations to maintain and potentially improve services after the crisis.[15]

In this brief, we present a global framework for building more resilient CRVS systems that not only helps countries prepare for and respond to emergencies, but also makes CRVS systems more capable of dealing with everyday challenges. We argue that resilient CRVS systems should be at the centre of the preparedness and response to any disaster or emergency, with our Framework for Resilient CRVS Systems acting as a guide for governments for this and future pandemics.

Photo: Henitsoa Rafalia / World Bank

KEY MESSAGES

- Countries will need resilient CRVS systems to cope with the looming challenges of the 21st century and meet the changing needs of a dynamic society.

- Resilient CRVS systems continue providing their essential services in the face of disruptions and manage to recover and adapt to the new situation.

- COVID-19 has highlighted the importance of reliable and timely mortality statistics for policymaking. CRVS systems are mandated to provide these statistics, and record, register, and provide proof for every other vital event.

- CRVS systems are fundamental to fulfil the human rights of every person. The legal proof they provide gives access to health and social services, among others, which are mostly needed in times of crisis. This is especially important for neglected and marginalized populations.

- With the Framework for Resilient CRVS Systems, we propose a comprehensive approach to strengthen CRVS systems with a focus on averting catastrophic consequences prior to emergencies, responding effectively to crises, and ensuring a sustainable recovery.

- Finally, using the Sendai Framework for Disaster Risk Reduction, we propose a set of considerations to guide the redesign of mature and immature CRVS systems towards a resilient CRVS system. As COVID-19 has shown, having a good performing CRVS system does not necessarily lead to a more resilient CRVS system if not designed appropriately.

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15   Linkov, I. et al. 2019.

CRVS SYSTEMS ARE A SAFETY NET DURING EMERGENCIES

Estimation of excess mortality

The total number of deaths due to COVID-19, which reached 1,443,694[16] globally as of 28 November 2020, is underestimated due to incomplete health and statistical systems.[17][18][19] COVID-19 deaths cannot be compared across countries due to differences in definitions.[20] Some countries are reporting only deaths in people who had previously tested positive for COVID-19, meanwhile others include all deaths where COVID-19 symptoms were experienced.[21] Further, some countries count only deaths occurring in healthcare facilities, excluding those dying in care homes or at home.[22] WHO's guidance was released on 20 April 2020 and defined a COVID-19 death as "a death resulting from a clinically compatible illness, in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death."[23]

The challenges and uncertainties involved in accurately attributing cause of death associated with COVID-19 have led analysts to focus on tracking excess mortality during the pandemic. Excess deaths provide an overview of COVID-19 deaths, and offer a holistic picture of the pandemic's indirect effects by comparing the number of deaths in the current period with previous years.[24] Because civil registration is, in principle, continuous and universal, it can provide time trends in total mortality, including differentials by age, sex, or residence. In most European countries, the European Mortality Monitoring Project (EuroMOMO), which monitors mortality and excess deaths as a result of public health risks, is providing a weekly summary of excess mortality and is being used as a key tool for policymakers.[25][26] The great challenge lies in bringing immature CRVS systems to a level of registration completeness in which excess mortality can be estimated accurately and for all population groups.[27][28] When CRVS systems are incomplete, women, children, and minorities are less likely to be included in vital statistics, leading to their exclusion from policy planning and leaving their needs unaddressed.[29][30] This is especially concerning for public health, as understanding who dies due to which cause is a cornerstone for evidence-based policymaking.

16   Johns Hopkins University & Medicine. 2020. **coronavirus.jhu.edu/map.html**

17   Kiang, M. 2020. **acpjournals.org/doi/full/10.7326/M20-310**

18   Ghislandi, S. et al. 2020.

19   Giles, C. 2020.

20   World Health Organization (WHO). 2020a. **who.int/publications/i/item/WHO-2019-nCoV-Sci-Brief-Mortality-2020.1**

21   Our World in Data. 2020. **ourworldindata.org/covid-deaths#deaths-from-covid-19-background**

22   Cobos Muñoz, D. and de Savigny, D. 2018. **crvsgateway.info/file/16907/1785**

23   World Health Organization (WHO). 2020b.
      paho.org/en/documents/international-guidelines-certification-and-classification-coding-covid-19-cause-death

24   Leon, D. A. et al. 2020.

25   Fouillet, A. et al. 2020.

26   EuroMOMO. 2020. **euromomo.eu/**

27   Ghislandi, S. et al. 2020.

28   Adjiwanou, V. et al. 2020. **doi.org/10.31235/osf.io/4bu3q**

29   Harbers, I. 2020.

30   Cobos Muñoz, D. 2020. **crvssystems.ca/sites/default/files/assets/files/CRVS_Gender_3.3_COD_e_WEB.pdf**

A relatively small number of countries were ready to leverage their well-functioning CRVS systems and produce information on the dimensions and trajectory of the COVID-19 pandemic. They were able to look at excess mortality and causes of death across the whole population and disaggregate the data by age, sex, ethnicity, geography, and socioeconomic status.[31] For example, in South America, countries such as Costa Rica and Brazil quickly adapted their civil registration systems to maintain accurate statistics and respond to emerging needs. Costa Rica introduced an online notification system for births and deaths directly from hospitals.[32]

New Zealand, which has civil registration data available online, used death notifications to track COVID-19 mortality on a daily basis, instead of weekly. New Zealand's response to the COVID-19 pandemic has received global recognition and applause for their ability to eliminate the disease from the population. A key determinant of their success was their ability to act quickly and implement a high degree of public health measures swiftly, which required good data on the progression of COVID-19 in their population. Mortality data is disseminated within hours, allowing their COVID-19 response team to make quick decisions.[33] Figure 1 below illustrates New Zealand's online COVID-19 cases and mortalities by district health board and in managed isolation and quarantine facilities.[34]

Figure 1: New Zealand's online COVID-19 case and mortality data as of 9 November 2020.[35]

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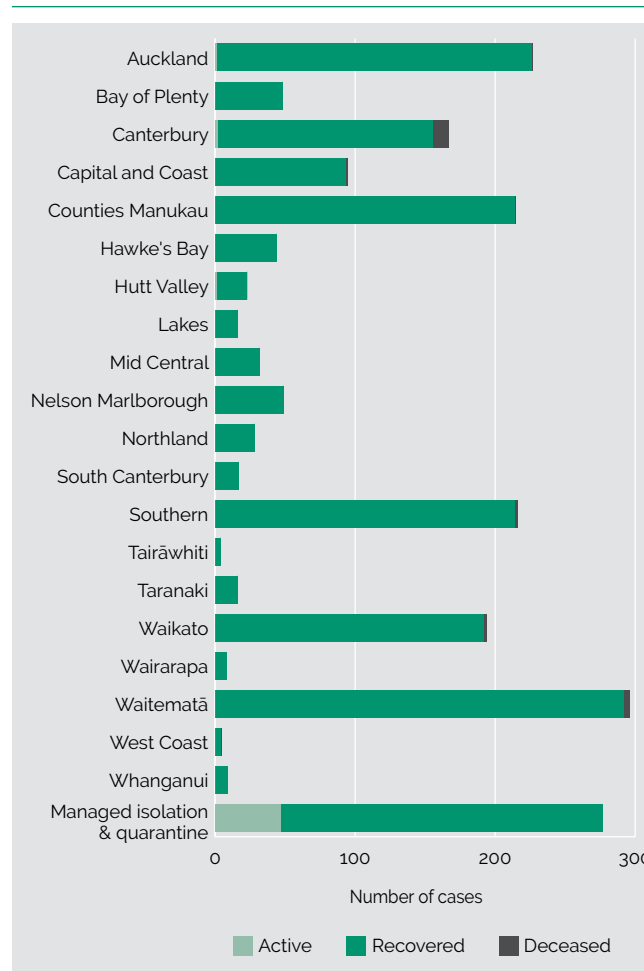
31   Ibid.

32   UN Legal Identity Agenda. 2020. **unstats.un.org/legal-identity-agenda/COVID-19/**

33   AbouZahr, C. 2020.

34   Ministry of Health New Zealand. 2020. **health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-current-cases**

35   Ibid.

Access to health and social services

CRVS systems are necessary to provide legal documentation about the occurrence of vital events in the course of a person's life pertaining to identity, civil status, and family relationships.[36][37] The absence of birth registration can reduce access to education or health services.[38][39] For family members of a deceased person, a death certificate can be essential to access pension and insurance benefits, claim inheritance, permit remarriage, and avoid identity fraud by closing the legal identity of the deceased.[40][41] These documents are even more important during or after a crisis as families may need to access loans or insurance payments, or ensure children are reunited with their families.[42]

CRVS systems are especially beneficial for vulnerable populations and neglected communities, as they provide certifications that allow all people living in a defined territory or country to access legal documents.[43] When people need or are forced to migrate due to a crisis, proof of legal identity becomes crucial for them and their children.[44][45] This documentation entitles them to fundamental rights and support in receiving countries. However, these population groups experience barriers to registration as a consequence of the interplay between economic, social, and structural factors such as ethnicity, gender, or poverty,[46][47][48][49] and the effects of not having legal documents are carried across generations.[50][51] For example, when a woman who loses her husband in a crisis does not get his death certificate, her children may not be entitled to their inheritance and she cannot remarry.[52] Evidence has shown that children born during unstable times who do not receive legal documents are particularly vulnerable to human trafficking or child marriage,[53] as they cannot prove their age or the legal link to their families.[54]

The COVID-19 crisis has shown us that no one is safe until we all are. A COVID-19 outbreak among undocumented migrants in Catalonia, Spain and another among the migrant population in Singapore were the drivers of the second wave

36   AbouZahr, C. et al. 2019.

37   United Nations Statistics Division. 2002.

38   Fagernäs, S. 2014. sciencedirect.com/science/article/abs/pii/S0014498313000466

39   Fagernäs, S. and Odame, J. 2013.

40   The Loomba Foundation. 2016. theloombafoundation.org/our-work/research/world-widows-report

41   Gautam Mitra, R. 2019. crvssystems.ca/sites/default/files/inline-files/CRVS_Gender_2.3_ID_e.pdf

42   The Pacific Community. n.d.

43   Chereni, A. 2016.

44   Ball, J. et al. 2017.

45   Seo, B. K. 2017.

46   Chereni, A. 2016.

47   Apland, K. et al. 2014.

48   Sumner, C. and Kusumaningrum, S. 2014. cpcnetwork.org/wp-content/uploads/2015/02/AIPJ-PUSKAPA-BASELINE-STUDY-ON-LEGAL-IDENTITY-Indonesia-2013.pdf

49   Ordóñez Bustamante, D. and Bracamonte Bardález, P. 2006.

50   Norwegian Refugee Council. 2015. hrp.law.harvard.edu/wp-content/uploads/2015/11/Registering-rights-report-NRC-IHRC-October20151.pdf

51   Norwegian Refugee Council. 2016.

52   Norwegian Refugee Council. 2015.

53   Tolu, L. B. and Feyissa, G. T. 2020.

54   Hanmer, L. and Elefante, M. 2016. researchsquare.com/article/rs-25326/v1

in both countries.[55] Providing access to legal documents must therefore be a priority to leave no one behind. The accompanying paper in this series, Where There Is No CRVS: Counting and Registering Deaths in Conflict, Emergencies, and Fragile Settings,[56] further describes the importance and human toll that dysfunctional CRVS systems can have on migrants and societies.

CRVS systems also play an essential role in other state-run functions, such as elections. Birth and death registration provide the basic information required to establish a population register and associated registers such as electoral rolls, which are pivotal to conducting fair and transparent elections.[57] If a CRVS system and associated archives are damaged or destroyed during a crisis, decision-makers often turn to ad hoc methods to recreate an electoral roll for new elections. However, such ad hoc voter registration exercises are inefficient, inaccurate (e.g., risk of double registrations), and of doubtful accountability and sustainability (e.g., Afghanistan, Bosnia-Herzegovina, Democratic Republic of the Congo, or Kosovo).[58]

FRAMEWORK FOR RESILIENT CRVS SYSTEMS

Governments and societies are built on complex, adaptive systems that interact with and depend on each other. History shows that the expansive ecosystem in which we live is greater than the sum of its component sub-systems.[59] For instance, the shock in the financial system in 2008 and the resulting economic crisis affected the performance of health systems,[60] and increased health inequities throughout Europe.[61] As a consequence of this interconnectedness, complex systems face risks that are vast and difficult to identify in advance. The concept of resilience allows us to understand and strengthen how system components affect one another,[62] in contrast to traditional risk management approaches that develop strategies to understand the impact of specific risks on components of a system, but fail to understand the cascading effects across systems.

CRVS systems should be able to absorb and adapt to external shocks and emergencies to maintain essential services. Resilient CRVS systems can cope with and become strengthened by emergencies, as opposed to being overwhelmed or destroyed during emergencies. For the purposes of this brief, we describe resilience as "the capacity of a system to absorb disturbance and reorganize while undergoing change to still retain essentially the same function, structure, identity, and feedback."[63]

This brief presents the Framework for Resilient CRVS Systems, which aims to provide a common ground for global, national, and local CRVS communities to ensure that CRVS systems are ready to absorb, respond, and adapt to external shocks and the changing needs of societies. To develop this Framework, the authors conducted a literature review of frameworks and guidance for strengthening CRVS systems and developing

55   Boyle, P. 2020.

56   AbouZahr, C. et al. 2021.

57   Ace Project. 2006. **aceproject.org/electoral-advice/archive/questions/replies/699408087**

58   Ibid.

59   Senge, P. and Asay, D. 1988.

60   Thomson, S. et al. 2015. **euro.who.int/__data/assets/pdf_file/0008/289610/Economic-Crisis-Health-Systems-Health-Europe-Impact-implications-policy.pdf**

61   Maynou Pujolràs, L. and Sáez Zafra, M. 2016.

62   Linkov, I. et al. 2019.

63   Walker, B. et al. 2004. **ecologyandsociety.org/vol9/iss2/art5/**

resilient health systems. Specifically, the Framework for Resilient CRVS Systems builds upon efforts in the area of CRVS and emergencies such as the Handbook on Civil Registration and Vital Statistics Systems,[64] the Rapid Assessment of National Civil Registration and Vital Statistics Systems,[65] the Birth Registration in Emergencies (BRiE) toolkit,[66] Pacific Civil Registrars Network documentation,[67] UN guidelines for COVID-19,[68] and research studies on CRVS in various contexts.[69] However, none of the documents reviewed provided an overarching framework

for resilient CRVS systems, which motivated the design of the Framework for Resilient CRVS Systems.

The Framework provides seven core competencies essential for resilient CRVS systems (Figure 2). It takes a holistic and systems perspective to integrating resilience across all core functions of CRVS systems. We also recognize that CRVS systems are complex, adaptive systems influenced by context, the history of the system, feedback loops that occur within and across systems, and the politics surrounding it.

Figure 2: Framework for Resilient CRVS Systems.
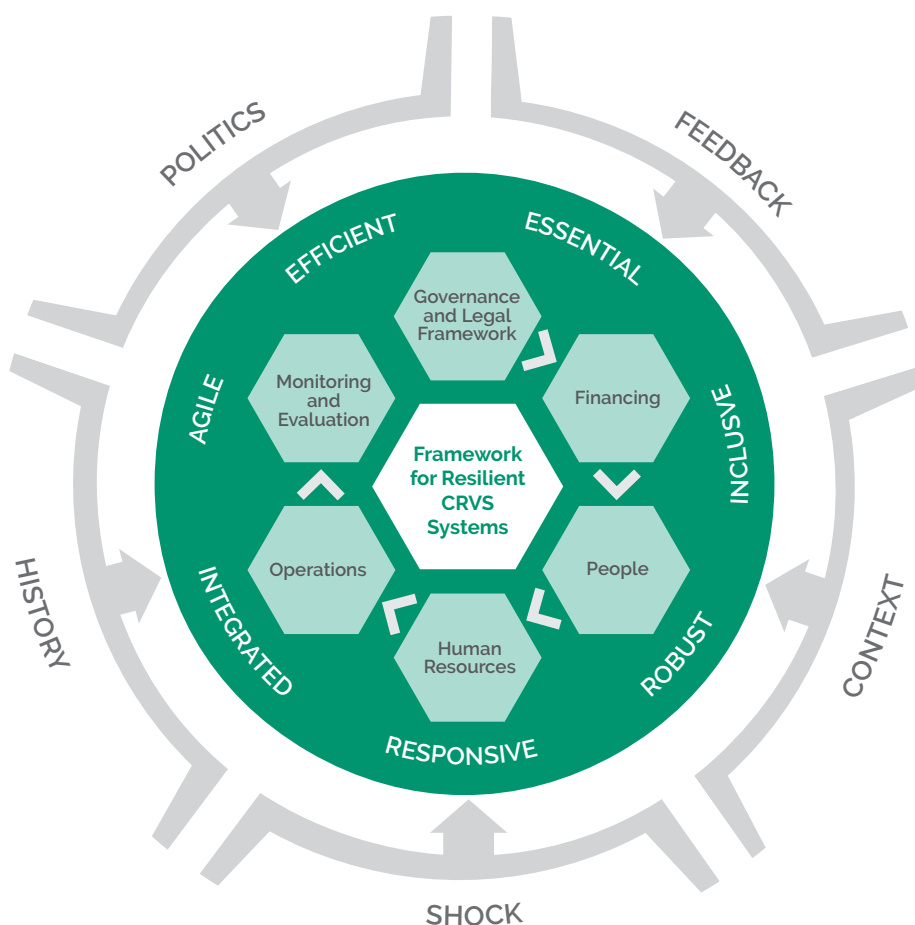
64   United Nations. 2018.
      unstats.un.org/unsd/demographic-social/Standards-and-Methods/files/Handbooks/crvs/crvs-mgt-E.pdf
65   World Health Organization (WHO). 2010. **apps.who.int/iris/handle/10665/70470**
66   Plan International. 2018. **brietoolkit.com/**
67   Pacific Civil Registrars Network. 2017.
68   United Nations Statistics Division. 2020.
69   Rane, T. M. et al. 2020.

COMPETENCIES FOR RESILIENT CRVS SYSTEMS

We propose seven competencies for resilient CRVS systems. CRVS systems must be integrated, responsive, agile, efficient, essential, inclusive, and robust and to deal with health emergencies.

The competencies outlined in the Framework should be pursued in parallel with a systems approach because the achievement of one competency is largely based upon the achievement of the others, as described below. They are meant to be considered together and are not mutually exclusive.

Photo : Henitsoa Rafalia / Banque mondiale

INTEGRATED

A functioning CRVS system requires high levels of integration, coordination, and data sharing among government agencies at all administration levels, non-state actors, and across national borders. It is also essential for CRVS systems to be integrated within the community to ensure beneficiaries seek services.

The UN states that the interaction and coordination across government services is needed in emergency contexts.[70] Specifically, interaction between police and the justice department, health officials, home affairs, and other authorities is particularly important for civil registration discussions on issues such as issuance of documents, identity verification, and burial.[71][72] Reliable, accurate registration depends on various agencies and actors,

which necessitates an integrated system. For example, the health sector must ensure that civil registration authorities are notified of deaths occurring in facilities and aggregated mortality statistics are reported to the national statistics office.[73] The WHO recommends establishing a national coordinating committee involving key stakeholders, including a country's registrars, statistics office, and ministry of health.[74]

Multi-sectoral, whole-of-government approaches to CRVS functionalities bring indisputable benefits within emergencies and beyond, such as ensuring compatibility across systems, avoiding duplication of efforts, and preventing contradictory approaches.[75][76] The Economic Community of West African States (ECOWAS) has a single system that includes interventions related to civil status, electoral registration, management of national identity cards, and border management.[77]

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70   United Nations Statistics Division. 2020.

71   Ibid.

72   Rane, T. M. et al. 2020.

73   World Health Organization (WHO). 2014.

74   Ibid.

75   Cobos Muñoz, D. et al. 2020.

76   CRVS Knowledge Gateway. 2018.

77   UN Refugee Agency (UNHCR). 2015. refworld.org/docid/54f588b04.html

Integration across sectors also relates to ensuring the system is people centered. In a previous study, we found that when CRVS information systems are not integrated, families must assume the burden of registration. Lack of registration requires families to have more interactions with formal and informal sectors to register a vital event.[78] For example, CRVS officials should work with schools and healthcare facilities to help parents register for birth certificates.[79] This would also increase the demand for registration by beneficiaries if registration was required for social services.[80]

Integration in the existing system is also required to ensure longevity and sustainability of initiatives developed during crisis scenarios.[81] Rapid mortality surveillance systems,[82] often built ad hoc to track real-time mortality during emergencies, run the risk of being abandoned following the emergency. This is shown in Case study 1. Even short-term responses focusing on immediate needs must be pragmatic and consider long-term effects to build systems that are sustainable and integrated.[83] Efforts should be made during or, at the latest, after a crisis to scale up these ad hoc systems and integrate them into existing information systems. Further guidance on how to scale up digital health interventions can be found in the MAPS Toolkit.[84]

Case study 1: 117 call alert system in Sierra Leone

Despite the many challenges and difficulties a crisis poses, it also offers some opportunities. In the past, the Ebola crisis in West Africa created fertile ground for innovation and rapid development of tools. In Sierra Leone, the 117 call alert system was developed to notify authorities of Ebola deaths within hours of their occurrence. This system, which was developed in isolation, progressed to become part of the country's and districts' death notification system.[85] However, the integration, uptake, and use of the system declined after the Ebola pandemic ended, with death reporting falling from 100 percent in 2015 to only 12 percent in 2017.[86] This decline was caused by a lack of integration of the 117 system with the existing civil registration and disease surveillance systems, and a reduction in social mobilization.[87] [88] It is therefore essential to ensure that ad hoc surveillance systems are re-thought to ensure integration and interoperability with existing systems and infrastructure. COVID-19 is offering similar scenes in which countries are quickly digitizing their systems to have up-to-date real-time information. Many bureaucratic barriers that existed, especially across sectors, are now being overcome to improve the response to the pandemic.[89]

78   Cobos Muñoz, D. et al. 2019b. **crvsgateway.info/file/11077/3229**

79   United Nations Statistics Division. 2019.

80   Ibid.

81   de Savigny, D. et al. 2017.

82   Setel, P. et al. 2020.

83   Deneckere, M. 2015. **ecdpm.org/talking-points/civil-registration-vital-statistics-conflict-emergency/**

84   United Nations Foundation et al. 2015.
     apps.who.int/iris/bitstream/handle/10665/185238/9789241509510_eng.pdf?sequence=1

85   Alpren, C. et al. 2017.

86   Jalloh, M. F. et al. 2020. **journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0008624**

87   Ibid.

88   Alpren, C. et al. 2017.

89   Ibid.

Government agencies need to collaborate with non-state actors involved in emergency responses, such as the private sector, civil society organizations, and communities. Well meaning efforts to gather data among displaced populations in emergencies have previously led to flawed and even conflicting data, which can worsen the situation.[90] In Nairobi's Kibera refugee camps, the government, UN organizations, and NGOs collected population data in parallel and developed different estimates. This led to several challenges, including poor delivery of services to the population.[91] The United Nations Statistics Division recommends an inter-agency coordination committee (or committees) comprised of managerial and technical staff from different organizations be established for efficient planning, coordination, and action.[92] Institutional channels for coordination are needed at the country and regional levels. Data collection and storage should be standardized to ensure data is comparable and interoperable. Cross-country and regional agreements gain relevance in the case of migrants, refugees, and displaced populations to avoid statelessness and address the missing migrant crisis.[93] Further, data sharing becomes even more relevant in times of crisis as several non-state organizations may be involved in the response to the disaster.[94] Data protection and privacy must be a priority for integrating information systems. Governments and other organizations must have commitments and plans to ensure the confidentiality of CRVS data and information.[95]

RESPONSIVE

The many advantages of CRVS systems do not hold true if people do not seek registration services.

CRVS systems must be designed from a user point of view to respond to the needs and expectations of beneficiaries with particular attention to vulnerable groups and hard to reach populations. Effective CRVS systems require that community members are aware of the registration process, as well as the benefits of registration, to feel compelled to seek CRVS services. Putative advantages of registration have little meaning when people are struggling to earn a livelihood, find shelter, and ensure personal security, both in emergencies and in normal times.[96] Therefore, targeted and meaningful communication with communities is one step towards local integration and user-friendly design. However, it is essential to note that a well-informed population is only the first step to timely and accurate registration of vital and civil status events. The lack of vital events registration by the general public is usually dependent on existing social norms, lack of trust, negative attitudes, system barriers, and social and cultural beliefs.[97] Beliefs and social norms influence both service providers and service beneficiaries. Ultimately, local registrars must adopt a more dynamic and involved role to maintain good working relationships with the community, in addition to the main users of CRVS data and information.[98]

90   Macauslan, I. and Phelps, L. 2012.
      reliefweb.int/sites/reliefweb.int/files/resources/OGB%20EFSL%20Urban%20Evaluation.pdf

91   Desgroppes, A. and Taupin, S. 2011.

92   United Nations Statistics Division. 2014. unstats.un.org/unsd/demographic/standmeth/principles/M19Rev3en.pdf

93   Laczko, F. et al. 2017. missingmigrants.iom.int/fatal-journeys-volume-3-improving-data-missing-migrants-part-1

94   Ibid.

95   United Nations Statistics Division. 2019.

96   Rane, T. M. et al. 2020.

97   United Nations Statistics Division. 2019.

98   Ibid.

AGILE

CRVS systems should quickly adapt to changing situations, including emergencies, conflict, or chronic stress. This involves the ability to transform operations and flexibility in responding to internal or external situations.

In emergencies, CRVS systems must be agile to adapt from "business as usual" to meet new demands for the system. A common critique of CRVS systems is their lack of flexibility or agility.[99] Laws and policies are the cornerstone of CRVS operations in both stable and emergency contexts. For a CRVS system to be agile, adequate governance mechanisms are required to provide a flexible legal environment where changes can take place. The UN adopted the Sendai Framework for Disaster Risk Reduction to reduce disaster risk in 2014 and highlights the importance of governance as one of the key priorities in managing disaster risk.[100] For instance, flexible governance and operational plans allowed Fiji to act quickly when hit by cyclone Winston (see Case study 2). Using their flexible legal framework, Fiji's CRVS system coordinated activities across sectors to ensure all children were registered, including those who had lost their documentation due to the crisis. Coordination across sectors, including development partners and civil society, was quick and ensured the system remained efficient and agile, despite the major disaster.

Case study 2: Cyclone Winston in Fiji

Fiji experiences frequent disasters with varying impact across the country due to its location on a cyclone belt. In February 2016, Tropical Cyclone Winston, the strongest cyclone on record in the Southern Hemisphere, hit Fiji. In response, Fiji's registration agency quickly formed a data exchange agreement with the Ministry of Education by working through Permanent Secretaries. The agreement allowed the registration agency to access the Fiji education management information system (FEMIS). Students from around 200 schools were targeted for birth certificate replacement using information from FEMIS, with principals from the schools checking to ensure children received the correct certificates.[101] Their agility is based upon a well-integrated system that leveraged flexible governance and operational plans. In fact, upon being hit by Tropical Cyclone Winston, Fiji enacted its disaster plan, which involves close coordination under the guidance of disaster management controllers. The plan also involves NGOs, civil society, and development partners.

Agility is the result of CRVS system components working seamlessly and efficiently together under time pressure, which means flexible governance and operations are only part of the puzzle.

99   AbouZahr, C. et al. 2019.

100 United Nations Office for Disaster Risk Reduction. 2015.
     undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

101 Pacific Civil Registrars Network. 2017.

Good practice in preparing civil registration for emergencies includes involving children and communities in the design of civil registration interventions.[102] In this way, when a disaster hits, communities with CRVS officials will be prepared, educated, and empowered to act quickly and collaboratively. The BRiE toolkit recommends user-centered design for developing a strategy or plan to manage civil registration during and post-disaster, including how to effectively use civil registration data to aid disaster management operations.[103]

In the COVID-19 pandemic, the agility of CRVS systems was closely paired with the level of digitization of CRVS systems. Countries with online CRVS systems had the technical advantage to shift quickly and more seamlessly towards home-office schemes or remote registrations during lockdown.[104] Furthermore, the size of a country and degree of decentralization can play an important role in the timeliness of information in civil registration databases.[105] See Assessing disaster preparedness of CRVS systems – Key considerations (page 22), for guidance on ensuring the core functions of CRVS systems are prepared for a timely response in the event of an emergency.

EFFICIENT

CRVS systems must be well funded and make optimal use of resources.

Over the past decade, we have seen an increase in political support and funding commitments from countries and multilateral agencies to strengthen CRVS systems in low- and middle-income countries.[106] However, most CRVS systems across the globe are underfunded with resources based on historical budgets, and activities spread across different ministries and national agencies.[107][108] Given the limited availability of resources, CRVS systems need to optimize the use of funding.[109] This becomes especially important during an emergency with competing priorities for governments and usually an increase in demand for CRVS systems.[110] It is therefore crucial that CRVS systems make the best use of resources allocated to them.

Understanding the resource implications of CRVS operations is a necessary step towards more efficient systems. Often considered a costly service of the government,[111] there have only been a few attempts to estimate the cost of CRVS systems[112][113][114][115] and compare them with other systems to produce vital statistics.[116]

102 United Nations. 2018.

103 Plan International. 2018.

104 UN Legal Identity Agenda. 2020. unstats.un.org/legal-identity-agenda/COVID-19/

105 Peters, B. G. 2016. publications.iadb.org/publications/english/document/Civil-Registration-and-Vital-Statistics-as-a-Tool-to-Improve-Public-Management.pdf

106 AbouZahr, C. et al. 2018. ncbi.nlm.nih.gov/pmc/articles/PMC5872022/

107 Coboz Muñoz, D. et al. 2019.

108 Mills, S. and Amponsah, D. 2019. jhpn.biomedcentral.com/articles/10.1186/s41043-019-0184-2

109 AbouZahr, C. et al. 2019.

110 United Nations Statistics Division. 2020.

111 Bowles, J. 2018.

112 Koshy, T. et al. 2017.

113 Espey, J. 2019. crvssystems.ca/sites/default/files/inline-files/CRVS_Gender_1.4_CostBenefits_e_WEB.pdf

114 Coboz Muñoz, D. et al. 2019a.

115 Mills, S. and Amponsah, D. 2019a.

116 Jimenez-Soto, E. et al. 2014. journals.plos.org/plosone/article?id=10.1371/journal.pone.0106234

Resources allocated to CRVS systems are usually based on historical budgets and are spread across different ministries and agencies. Recent efforts to estimate the cost of CRVS operations are surfacing,[117][118] but this evidence is still scarce and difficult to generalize.

The majority of immature CRVS systems still use paper records for vital event registration.[119] Paper-based systems can be inefficient and time-consuming, requiring staff to physically retrieve birth registration records, issue a duplicate copy of a birth certificate, and share civil registration data with other relevant agencies using methods, such as postal services, that may be disrupted in emergencies or face physical barriers.[120] These systems tend to be passive, requiring families to visit a civil registration office several times to finalize the registration of a vital event.[121] This poses a high burden on the family and leads to many inefficiencies within the system.

Some countries have tried to address this by integrating information systems and strengthening vital event notifications from the health sector and community to CRVS systems.[122][123][124] This is a timely development that, if implemented and scaled, will allow CRVS systems to increase completeness and reduce the burden on families. Furthermore, local networks in Guatemala where public registrars work directly with communities have proven to be cost-effective and efficient, while reducing barriers experienced by certain community members (see Case study 3).

Case study 3: Reconstruction after Guatemala's civil war

Approximately 10 percent of Guatemala's civil registries were destroyed during the country's civil war (1960–1996). Following the conflict, the peace agreement explicitly called for the revitalization of civil registration mechanisms. The Ministry of the Interior prepared regulations for the registration of births, marriages, and deaths among members of uprooted population groups and to demobilize members of the Guatemalan National Revolutionary Unity, or URNG. Although this initiative was unable to resolve all problems encountered by displaced communities, it achieved a major success in providing identity documents and thereby granting access to public assistance and services. The second strategy was the establishment of local networks, which enabled public registrars to work directly with communities. This contributed to a cost-effective and efficient registration process and ensured accessibility for women and girls who were unable to travel to registration centres.[125]

117 Mursalin, S. M. and Ashraf, F. 2020.

118 Coboz Muñoz, D. et al. 2019a.

119 Mills, S. 2019.
     blogs.worldbank.org/health/building-national-civil-registration-systems-ensure-effective-service-delivery

120 Ibid.

121 Cobos Muñoz, D. et al. 2019b.

122 Adair, T. et al. 2020. bmcmedicine.biomedcentral.com/articles/10.1186/s12916-020-01524-x

123 Sanga, C. et al. 2020.

124 Cobos Muñoz, D. et al. 2018.

125 Internal Displacement Monitoring Centre (iDMC). 2008. refworld.org/pdfid/48a1ab812.pdf

Running efficient CRVS systems also requires a level of internal awareness of where to divert funds to and from during emergencies. Mechanisms must be in place to understand the functioning of the various parts of CRVS systems (i.e., core functions of CRVS systems), how they interact, and where different CRVS processes need to be improved. Consistent and stable feedback loops, through monitoring and evaluation, need to be institutionalized in the system to be aware of challenges that emerge. In times of crisis, new data sources and systems may arise to count deaths and births. These should always supplement but not substitute existing traditional methods.

Photo: Ousmane Traore (MAKAVELI) / World Bank

ESSENTIAL

Resilient CRVS systems are ultimately the result of a country's will and capacity to strengthen them.

Being essential means building a consensus among key stakeholders to ensure these systems are prioritized and recognized as structural for the country. Coordination, capacity development, and country ownership must be central to the design and operationalization of CRVS systems.[126]

Valuing a CRVS system requires various stakeholders, particularly decision-makers and policymakers, to be aware of the benefits of CRVS systems.[127] CRVS systems have been described as the cornerstone for inclusive development because they provide real-time data to guide planning for service and documentation that facilitates access to those services.[128] A complete CRVS system is fundamental to meeting the needs of vulnerable groups and hard-to-reach populations, including migrants, refugees, displaced persons, and returnees who usually remain untracked in a territory. It is crucial for countries to implement Article 34 of the 1951 Convention relating to the Status of Refugees and Article 32 of the 1954 Convention on the Status of Stateless Persons to ensure naturalization of these people.[129] [130]

If CRVS systems are not maintained during emergencies, they expose people to many vulnerabilities and create a backlog of registrations, depriving people of their right to access social services in times of great need.[131] The consequences of these disruptions may be prolonged across generations.[132] [133] Case study 4

126 CRVS Knowledge Gateway. 2018.

127 AbouZahr, C. et al. 2019.

128 Apland, K. et al. 2014.

129 UN Refugee Agency (UNHCR). 1951. **unhcr.org/3b66c2aa10**

130 UN Refugee Agency (UNHCR). 1954.
      unhcr.org/ibelong/wp-content/uploads/1954-Convention-relating-to-the-Status-of-Stateless-Persons_ENG.pdf

131 United Nations Statistics Division. 2020.

132 Norwegian Refugee Council. 2015.

133 Norwegian Refugee Council. 2016.

below provides examples of governments that prioritized CRVS systems and deemed them essential during COVID-19, which benefited communities and decision-makers during the pandemic.

Case study 4: Prioritizing CRVS systems during COVID-19

With the arrival of the COVID-19 pandemic, Ecuador quickly adjusted its CRVS system to adapt to emerging needs. Given movement restrictions and fear of infection, the country activated its online registration for deaths[134] on 3 April 2020. As a result, families were no longer required to visit registration offices in person to register a death.

Ecuador also increased the frequency of mortality reporting to weekly releases, instead of doing this on an annual basis. This represented a huge demand from the country's CRVS system, as 80 percent of its documentation is paper based.

Other Latin American countries also pivoted their CRVS systems to better understand and respond to the pandemic. Brazil and Colombia started counting and releasing weekly excess mortality disaggregated by region, sex, and age to inform policymaking.[135 136]

Political prioritization means devoting adequate resources towards CRVS systems, including during emergencies. This is extremely important to building a system that is inclusive and robust. To achieve this, contingency plans for potential emergencies should be included in CRVS financing plans. Furthermore, civil registration should be free of charge at all times, especially in times of crisis. The UN recommendation for CRVS during the COVID-19 pandemic is to suspend fees for registration.[137]

INCLUSIVE

An inclusive CRVS system is people-centered and provides services to meet the population's needs. During a crisis, marginalized groups such as children, women, and senior citizens are most likely to fall out of the system.

This builds on the UN's concept of universality of CRVS systems to include "all of the vital events occurring in every geographical area and in every population group of the country."[138] Systems should register vital events for every person in their territory, especially those who have been historically left out, such as women, displaced populations, or ethnic minorities. Additionally, vital statistics should be disaggregated by sex, age, ethnicity, or status to allow governments to take the specific interventions required to protect everyone.[139]

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134 El Comercio. 2020. **elcomercio.com/actualidad/registro-civil-certificado-defuncion-internet.html**

135 Minsalud GdEV. 2020. **minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/ED/VSP/estimacion-exceso-mortalidad-colombia-covid19.pdf**

136 Setel, P. 2020.

137 United Nations Statistics Division. 2020.

138 UN Legal Identity Agenda. 2020. **unstats.un.org/legal-identity-agenda/COVID-19/**

139 Singleton, A. et al. 2017.

CRVS systems need to be guided by non-discrimination and non-harm policies. The information they record must not be used to identify or discriminate population groups. Legislation should be in place to ensure registration can occur for everyone. Often, migrants see their identity questioned as they can't get registration in their parents' place of origin or in their country of birth.[140] When CRVS systems fail to include everyone, those with no documentation will lack access to aid relief and face a higher risk of exaggerated social vulnerabilities, such as poverty, homelessness, or human trafficking.[141]

Building people centered CRVS systems also means understanding the different needs and barriers people face when accessing CRVS services. Different population groups, especially those with reduced mobility, should be involved in the design of CRVS interventions to ensure their needs are addressed and the system is accessible, user-friendly, and practical.

One important way for CRVS systems to be inclusive is to incorporate a gender lens in their design. Globally, women and girls still face many cultural, financial, and legal barriers to experiencing the full benefits and protections of civil registration.[142] For example, women may have no means of transportation or family obligations that cannot be left unattended. To create a more inclusive and gender-responsive system, CRVS should be brought closer to women. For example, the Colombia Rural Vital program involves frontline health workers, trained community leaders, and mobile phones to use text messages

Photo: Dominic Chavez / World Bank

to report vital events to registration authorities (see Case study 5).[143]

However, understanding the barriers needs to be followed by comprehensive solutions grounded in the realities faced by those left behind. For example, effective communication for development strategies are important for translating plans and policies into real behaviour and social change. Communication for development strategies help to

- promote attitude change, for example, about the registration of death and divorce;

- reduce stigma;

- create demand for information and services; and

- improve skills and the sense of self-efficacy, for example, by teaching women why they should register divorces.[144]

140 Dash, S. crvs.gov.bd/assets/pdf/Keynote-paper-6.2_Sarat_Dash.pdf

141 Allan, K. and Mortensen, J. 2020.

142 Dincu, I. and Malambo, N. 2019. crvssystems.ca/sites/default/files/inline-files/CRVS_Gender_1.1_InvisibleVisible_e_WEB.pdf

143 Castaño, V. H. A. et al. 2019. paho.org/relacsis/index.php/es/docs/recursos/reuniones-relacsis/9-reunion-buenos-aires-argentina/posters-ix-reunion-relacsis/454-47-ix-rsis-ev-rural-vital-colombia/file

144 United Nations Statistics Division. 2019.

Case study 5: Implementing a strategy to improve completeness and quality of vital event registration in rural municipalities of Colombia

Although overall certification completeness is high in Colombia, there are disparities between urban and rural populations, particularly for death certification. Colombia's Ministry of Health and Social Protection led an initiative to increase the completeness and quality of vital events registration in rural municipalities in Colombia with a focus on ethnic minorities. The pilot study involved an active search in communities to register vital events such as births and deaths. Technologies such as text messaging and verbal autopsies were used to increase completeness. This pilot increased birth and death registration. The major effects were seen in the capturing of death registration of women.[145]

Research in Assam, a state in northeastern India, identified a lack of community awareness as a key barrier to birth and death registrations. Although India has had a legal framework and civil registration system in place for many years, the country still lacks systematic death registration. In Assam, only 13.7 percent of deaths were reported, and the percentage of medically certified deaths was only 0.9 percent of total registered deaths in 2013.[146] CRVS officials need to be aware of the challenges communities face in accessing registration and work to fix them.

Moreover, there are a number of benefits of CRVS officials working with communities, such as increasing credibility and trust among authorities,[147] finding innovative solutions to reach remote and rural areas, and pairing CRVS education with health promotion activities.[148] For example, CRVS community workshops can be paired with stigma reduction and education so all deaths, including those from stigmatized diseases, are registered.[149] CRVS can play an important role in connecting the government with citizens, as it is one of the few direct transactions between the government and the public.[150]

145 Castaño, V. H. A. et al. 2019.

146 Puram, R. K. 2013. censusindia.gov.in/2011-Documents/mccd_Report1/Mccd_2013.pdf

147 Lopez, A. D. et al. 2013. who.int/healthinfo/CRVS_ResourceKit_2012.pdf

148 Rane, T. M. et al. 2020. sciencedirect.com/science/article/pii/S2213398419300843?casa_token=TTXibd-VLGsAAAAA:_ljRue9l1GwVns1Ex4tr6ttuqKbpl1-Wt6c9t4dcBlcakiYiCDYR4MPHlWxPV_fSeRvC_eT0Exc

149 Ibid.

150 Norwegian Refugee Council. 2015.

ROBUST

A robust CRVS system has the capacity to absorb and recover from shocks and stress, without major negative consequences.[151] **During a disaster, CRVS systems need to be robust enough to continue functioning, and expand their operations to accommodate for greater needs**.[152]

CRVS systems should have a reserve capacity with the necessary and critical resources to be directed towards addressing challenges that emerge during crises. The UN recommendations for CRVS during the COVID-19 pandemic recognize the potential increase in the volume of registrations, which may require restructuring a CRVS system's human resources to perform other functions in the civil registry.[153] CRVS systems therefore need to have emergency preparedness and response strategies in place to ensure the continuity of services. These should address how human resources might be reorganized in the event of an emergency, including delegation protocols for situations in which staff might be affected by an emergency.[154]

The system should be robust enough to maintain and continue all core functions. For example, under COVID-19, CRVS systems may need to expand eligibility regarding who can notify civil registrars of births and deaths, particularly outside of health facilities.[155] Another important element to ensure a robust CRVS system is having clear and secure backup strategies to protect a system's central registers and data repositories.

Some countries have established a decentralized model that locates repositories in different parts of a country to ensure that in the event of a natural disaster, not all sites are affected.[156]

A robust and functional CRVS system can help policymakers respond to a crisis, including achieving the goal of safe migration by reducing fraud and improving tracking and verification processes.[157]

REDESIGNING A RESILIENT CRVS SYSTEM

The competencies described previously in this document, can only be achieved through the six core functions of CRVS systems:

- Governance and legal framework;

- Human resources;

- Operations;

- Equity;

- Financing; and

- Monitoring and evaluation (M&E).

The core functions described in the box below are the building blocks of CRVS systems and the essential elements for a CRVS system to be functional.

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151 Kruk, M. E. et al. 2017. bmj.com/content/357/bmj.j2323

152 Pacific Civil Registrars Network. 2017.

153 United Nations Statistics Division. 2020.

154 Ibid.

155 bradford.gov.uk/browse-all-news/press-releases/covid-19-changes-to-death-and-still-birth-registration/

156 Pacific Civil Registrars Network. 2017.

157 Castaño, V. H. A. et al. 2019.

Core functions of resilient CRVS systems (CRVS maturity model)

Governance and legal framework: CRVS systems require a legal environment that complies with international standards and functioning governance bodies responsible for CRVS. It is important that these exist and are disaster responsive. This requires a clear delineation of roles and responsibilities among responsible agencies.

As part of the legal framework, CRVS systems should be protected from political interference and manipulation, including the use of registration records to identify particular ethnic groups.

The community and affected populations should be included in decision-making at all stages of design, planning, implementation, and monitoring of CRVS systems to ensure a people- and user-centered design.

Operations: CRVS systems need effective, efficient business processes with appropriate physical and ICT infrastructure that is integrated with other information systems. Building resilient civil registration systems that can operate efficiently before and during emergencies requires

- investing in infrastructure, including physical registration facilities and IT infrastructure;

- establishing appropriate organizational, management, and coordination frameworks; and

- building knowledge and awareness among the public and civil registration personnel.

Monitoring and evaluation (M&E): CRVS systems need a process for monitoring and supervising their operations, and evaluating the achievement of CRVS goals and objectives. Once bottlenecks and barriers are identified, they must be followed by appropriate actions and solutions.

Figure 3: Dimensions in the maturity model for CRVS systems.

Functioning CRVS system

Governance and legal framework

Financing

Operations

Human resources

Monitoring and evaluation
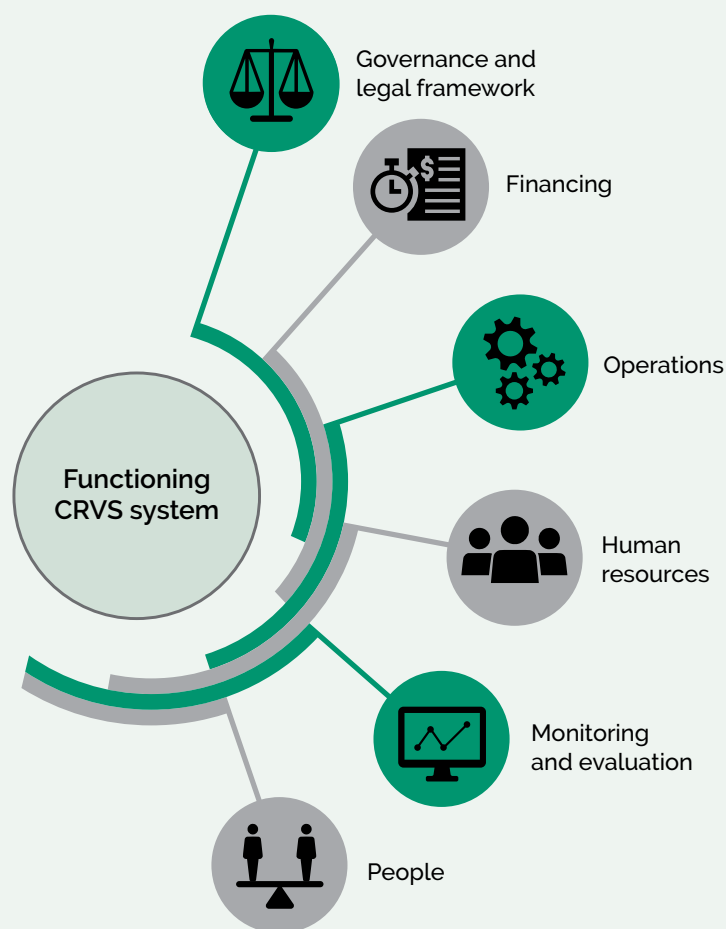
People

People: CRVS systems need to be equitable, universal, and human-centred. This means they should reach everyone in a country, including discriminated groups, women and children, and rural communities. Vital statistics should reflect and be disaggregated based on relevant socio-demographic factors, and the system should respond to the changing needs of communities and beneficiaries. The community should be active in all stages of design, planning, implementation, and monitoring of CRVS functions.

Financing: CRVS systems need to be financially sustainable and have enough resources to fulfil their objectives before, during, and after crises. If sustainably financed, a CRVS system can be resilient, efficient, and absorb shocks caused by emergencies. Preparedness for emergencies has a recurrent cost which should be fully considered and funded. Financial mechanisms should also include contingency funding for response and recovery.

Human resources: Human resources and adequately trained personnel are needed for an agile and robust CRVS system. The system should provide inclusive job opportunities that require representation of women, youth, ethnic minorities, and marginalized groups across all levels of management.

We propose a set of considerations to help redesign mature and immature CRVS systems towards a more resilient CRVS system using the Sendai Framework for Disaster Risk Reduction 2015–2030.[158] The Sendai Framework calls for "a mechanism of case registry and a database of mortality caused by disaster to improve the prevention of morbidity and mortality."[159] We argue that the suggested steps should be considered by mature and immature CRVS systems. As COVID-19 has shown, high coverage of a CRVS system does not necessarily lead to a more resilient CRVS system if the system was not designed appropriately. The elements for consideration described below build on previous efforts in the area of CRVS and emergencies, such as the BRiE toolkit,[160] Pacific Civil Registrars Network documentation,[161] UN guidelines for COVID-19,[162] and research studies on CRVS in various contexts.[163]

Note: The items below are not intended to be a fixed list of steps to follow, but rather key considerations for countries to bear in mind when improving the resilience of their CRVS systems. The authors do not aim to provide a complete, comprehensive list of considerations, but instead encourage CRVS practitioners to build on the considerations below and adapt them to their context.

158 United Nations Office for Disaster Risk Reduction. 2015.

159 Ibid.

160 Plan International. 2018.

161 Pacific Civil Registrars Network. 2017.

162 United Nations Statistics Division. 2020.

163 Rane, T. M. et al. 2020.

Pre-disaster: Prevention and preparedness for resilient CRVS systems

To prepare for an emergency, it's important to assess a CRVS system's disaster preparedness. The box below provides a list of considerations for each of the core functions of CRVS systems, with examples. The list is largely built upon the Handbook on Civil Registration and Vital Statistics Systems[164] and the Pacific Civil Registrars Network Report of the Disaster Preparation and Response workshop.[165]

Assessing disaster preparedness of CRVS systems – Key considerations

Governance and legal framework

- Consider CRVS services as part of national disaster planning, which includes developing a disaster preparedness strategy for CRVS systems. This requires a clear delineation of roles and responsibilities among responsible agencies.

- Establish a multi-sectoral coordination mechanism for CRVS, including disaster management authorities. Governments must work closely with disaster risk management line ministries, civil society, and humanitarian actors, including child protection alliances with United Nations agencies and non-governmental organizations.

- As part of the legal framework, protect CRVS systems from political interference and manipulation, including the use of registration records to identify particular ethnic groups. In some contexts, it is important to consider housing CRVS systems in an independent and trusted body.

- Advocate legal reform that supports the proper functioning of national CRVS institutions. To aid this process, the Bloomberg Philanthropies Data for Health initiative has developed a tool that can be used to review a country's legal framework for CRVS.[166]

- Decentralize civil registration down to the subdistrict level.

164 United Nations. 2018.

165 Pacific Civil Registrars Network. 2017.

166 Schwid, A. et al. 2017. **advocacyincubator.org/wp-content/uploads/2020/12/CRVSID-Legal-and-Regulatory-Review-Toolkit.pdf**

Operations

- Ensure physical infrastructure, including buildings that house CRVS systems and access points, are ready for a disaster.
- Establish systems for issuing vital event notifications during emergencies.
- Ensure data protection by backing up all data in a way that can be accessed during an emergency. This should include both the frequency with which data is backed up and the availability of off-site backup/multiple locations. For paper-based systems, this may involve building or improving a backup site for CRVS records.
- Allow virtual and mobile access to the database. This will assist with replacing registry services at damaged locations and reaching out to displaced or affected communities. Additionally, reduce the risk of duplicate registrations that may be created while off-line or during mobile data registration.
- Promote the centralization of record keeping. This tends to improve the accuracy of reporting; it reduces double counting and provides a single place where all people involved in collecting data can record, clarify, and compare vital events.
- Integrate civil registration with primary healthcare services.

Monitoring and evaluation (M&E)

- Conduct periodic audits of birth and death certificates.
- Establish inclusive and accessible feedback loops to ensure the quality and accuracy of the system.
- Evaluate the functioning of all core functions of CRVS systems and define best practices. Develop simple tools for emergency registration and mortality surveillance implementation and analysis.

People

- Involve children and communities in the design of civil registration interventions.
- Build principles of equity into the design of CRVS systems, as disasters disproportionality affect marginalized groups.
- Build on existing systems to make them accessible to affected populations.
- Assess the needs and barriers experienced by the population, with particular consideration for those who are frequently left behind or marginalized. Address barriers to CRVS services described by the population and prepare to address common barriers faced during emergencies, such as physical and financial barriers to CRVS services.
- Raise community awareness of CRVS systems, including describing the ways to access these in the event of an emergency and explaining the tangible and meaningful benefits of registration.

Financing

- Remove fees associated with registration.
- Create contingency plans for potential emergencies, including the financial resources available for a health emergency.
- Ensure sufficient resources reach local authorities responsible for performing the day-to-day operations of CRVS systems.

Human resources

- Ensure there are enough staff with training and delegation authority to deliver services in the absence of staff who may be affected by the disaster themselves.
- Establish recurring educational sessions for service providers and build capacity to ensure there are enough staff to conduct essential functions (recording of births, deaths, and cause of death).

Response to an emergency

- **Conduct a rapid assessment of the disaster's impact on the system** while including key stakeholders and involving communities to identify the functionalities, resources, and main barriers to CRVS systems experienced since the emergency started. Map the processes to identify bottlenecks and design joint solutions using human-centred design. Although we call this assessment rapid considering that time is of the essence in emergencies, we also note the importance of this stage. It determines the effectiveness of all parallel and subsequent steps; thus, quality should not be undermined for the sake of time.

- **Establish and activate multi-sectoral and multi-stakeholder management structure(s) and disaster coordination mechanisms** for the response with clear delegation of roles and responsibilities. Ensure inclusion and coordination with appropriate partners, including civil society and communities. Employ a systems approach to design and implementation, and consider implications beyond the immediate response.

- **Maintain essential registration services**, namely birth, death, marriage, and cause of death registration.

- **Adapt services to remove potential barriers.** For example, remote registration could be considered if there are physical barriers to registration. Further, remove any fees for registration to facilitate access, including fee waiver for late registration.

- **Continuously assess and re-assess the internal functioning of CRVS systems, the external context, and the emergency situation.** Use pre-established disaster plans and protocols that ensure flexibility and inclusive feedback loops. Ensure that those affected by the disaster, namely marginalized population groups, participate in the evaluation and decision-making processes through consultations and various feedback mechanisms.

- **Communicate CRVS data** (disaggregated by sex and other relevant variables) in suitable and useable ways to targeted audiences, including decision-makers in various government cadres and the community. Other relevant actors who can improve the functioning of CRVS systems in emergencies are researchers, including both social scientists and epidemiologists/data experts, the media, civil society, international organizations, and the private sector. For example, civil society should be informed of CRVS data or challenges (and listened to), as they often have a strong role to play in pressuring decision-makers to uphold evidence and people's needs in times of crisis. Ultimately, CRVS data must be used and fed into appropriate decision-making structures. On the other side, communication is integral for maintaining trust and working effectively with local communities.

- **Prioritize staff wellbeing and protection** as the disaster could affect them personally. CRVS systems cannot function without appropriate human resources and well-compensated officials.

- **Ensure privacy and confidentiality** is maintained even with amended processes.

Recovery phase: Build back better

- **Leverage CRVS systems for state building and rebuilding, and peacebuilding.** CRVS can help restore fractured state-society relationships and foster the integration of marginalized social groups by providing formal identity that safeguards basic rights, including the right to vote and access services. These can serve as building blocks to support broader peacebuilding, state building, and trust building processes.

- **Assess the impacts of the disaster on CRVS systems** and use the opportunity to invest further in sustainable system improvements. After developing an understanding of the impacts of the disaster on the system, revise them to improve the overall functioning of the system for daily purposes and for preparedness for future disasters. Consider the sustainability of the initiatives and ensure that no parallel systems are developed during states of emergency.

CONCLUSION

The current COVID-19 pandemic is highlighting what has been clear for many for years: CRVS systems are fundamental to preparing and responding to a crisis. The data they provide can guide resource allocation and priority setting in times of crisis and can be used to predict new emergencies. These systems also provide essential documentation for people to fulfill civil and social rights, as they prevent statelessness and vulnerability structures. Legal documentation, already essential in stable times, becomes especially relevant during a crisis.

Photo: Henitsoa Rafalia / World Bank

Before we forget the failure of many CRVS systems during the COVID-19 outbreak, we need to consider how to make them more robust to crises and more agile in their response. With this brief, we aim to learn from other sectors and further develop an overarching framework for resilient CRVS systems. The Framework for Resilient CRVS Systems aims to open the ground for further discussion and work globally, regionally, nationally, and locally. The seven competencies we highlight in the Framework for Resilient CRVS Systems should support countries moving forward in the face of the challenges the 21st century poses for societies. However, crises can also be opportunities to build back better. Country experiences as varied as Guatemala, Ecuador, and Fiji demonstrate how resilience can be built after crises. We hope implementation of these ideas can energize policymakers and ultimately benefit families and communities in times of crisis and beyond.

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