CIVIL REGISTRATION AND VITAL STATISTICS

MID TERM EVALUATION STRATEGIC PLAN REPORT

June 2021

CIVIL REGISTRATION AND VITAL STATISTICS, MID TERM EVALUATION STRATEGIC PLAN REPORT

February 2022

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PREFACE

This report is produced based on data collected in June 2021 from various sources to showcase the progress made by Rwanda in improving the civil registration and vital statistics system and to assess the progress towards achieving the goals set under the Civil registration and vital statistics strategic plan initiated in 2017. It will therefore serve to inform related policies & decisions and guide strategic interventions that will improve the overall implementation of the National CRVS Strategic Plan.

The data and information used in this report were obtained from different legal instruments some of which have been amended to ensure smooth civil registration; reports and minutes of CRVS administrative bodies and collaborating institutions; data collected from systems that record CRVS related data such as the NPR, CRVS web based application and R-HMIS along with data collected from a purposive field visit done in 2 districts of the country.

The report compilation was mainly carried out by the CRVS consultant with collaboration of the different CRVS stakeholders who also reviewed the draft to provide added value to the report, the completion of this report is a joint effort from all the different organizations.
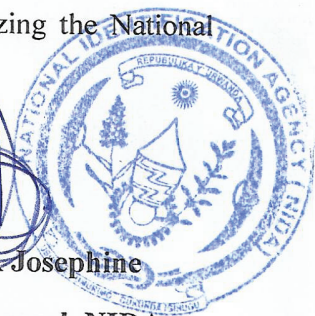
Great appreciation and acknowledgment is extended to all the CRVS stakeholder institutions for their continuous contribution towards strengthening, improving and modernizing the National CRVS system.

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Acronyms and Abbreviations

ANACONDA	Analysis of National Causes of Death for Action
CR	Civil Registrar
CRO	Civil Registration Officer
CRVS	Civil Registration and Vital Statistics
D4H	Data for Health
DHIS2	District Health Information Software 2
EICV	Enquête Intégrale sur les Conditions de Vie des ménages
HMIS	Health Management Information System
ICD-10	International Classification of Causes of Deaths, Version 10
IECMS	Integrated Electronic Case Management System
MCCoD	Medical Certification of Cause of Death
MIGEPROF	Ministère du genre et de la promotion de la famille (Ministry of Gender and Family Promotion)
MINALOC	Ministère de l'Administration Locale (Ministry of Local Government)
MINIJUST	Ministry of Justice
MoH	Ministry of Health
NCI-CRVS	National Centralized and Integrated Civil Registration and Vital Statistics System
NIDA	National Identification Agency
NISR	National Institute of Statistics of Rwanda
NSDS	National Strategy for Development of Statistics
RBC	Rwanda Biomedical Centre
RDHS	Rwanda Demographic and health survey
UNECA	United Nations Economic Commission for Africa
VS	Vital Statistics
VSR	Vital Statistics Report
WHO	World Health Organization

Introduction

CRVS systems are widely acknowledged to be central to good governance and to functional administrative systems. The Rwanda Demographic and Health Survey, 2014-2015, reported that only 56 percent of all children under the age of 5 years had their births registered with the civil registration authorities. Births (including on time, late and delayed) were registered.[1] According to this report, the proportion of deaths registered was estimated at around 30 percent during the survey period of RDHS 2014-15.

In response to the limitations of the CRVS system in the country, in 2016, through the National Institute of Statistics of Rwanda (NISR) and the National Identification Agency (NIDA) in collaboration with other CRVS stakeholders, the Government of Rwanda carried out a CRVS comprehensive assessment with a view to take stock of CRVS performance levels and practices and serve as a foundation to devise comprehensive and holistic strategies to ensure complete registration of births and deaths and ensure the attainment of an effective and efficient CRVS system. The assessment identified challenges that impeded the proper functioning of the CRVS system. These included among others: an unconducive policy and legislative environment; absence of a coherent CRVS organizational structure to trigger and drive change; and limited financial and human resources[2]. To address the challenges that existed and bring efficiency and effectiveness in the registration of civil events a CRVS Strategic Plan 2017/18-2021/22 was initiated, with the aim of achieving the complete civil registration of vital events, with a particular focus on births, deaths and causes of death.

Progress has been significant. According to the Rwanda National Vital Statistics Report, [3] 87% of total births were registered in 2019 within a year of occurrence. The registration of deaths was lower, with completeness of death registration estimated at 31%. Thus, the majority of deaths, 69%, are not registered and an important proportion (13%) of births remain unregistered. Moreover, reliable and timely information on the causes of deaths in the community is not yet widely available, and evidence-based public health decision-making is therefore compromised. In addition, although marriage registration is functional, the reporting framework remains inadequate. Divorce registration is extremely very low and needs to be taken into account in CRVS system improvement.The Rwanda Vision 2020 national development framework[4] developed at the end of the 1990s, identified people-centred

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[1] https://dhsprogram.com/pubs/pdf/FR316/FR316.pdf

[2] Rwanda Civil Registration and Vital Statistics Systems: Comprehensive Assessment Final Report Volume I November 2016

[3] Rwanda Vital Statistics Report 2019 published in May 2020/National Institute of statistics of Rwanda

[4] https://repositories.lib.utexas.edu/bitstream/handle/2152/5071/4164.pdf?sequence=1 accessed on May 22, 2021

development and equitable access to resources and services as key priorities for Rwanda's future. In the two subsequent decades, Rwanda's development landscape has changed dramatically with major progress in social, health, economic, and personal development. The National Strategy for Transformation (NST1) will see the crossover from Vision 2020 towards Vision 2050. This strategy is expected to lay the foundation for decades of sustained growth and transformation.

Now is an opportune moment to review progress towards the goals and targets of the CRVS Strategic Plan, to identify and address needed improvement actions, and to reposition CRVS in line with the NST1 which is a multi-sectorial, overarching national priority for the period 2017-2024. The mid-term evaluation of the CRVS Strategic Plan will enable lessons learnt from implementation thus far to inform and modify CRVS improvement strategies in alignment with the NST1.

Objectives

The overall high-level aims of the mid-term review of the National CRVS Strategic Plan 2017/18-2021/22 is to:
- Review overall progress of CRVS improvement and identify challenges and lessons learnt;
- Examine the implications on the current CRVS strategy of recent developments in national legal instruments and identify any strategic modifications required; and
- Formulate recommendations to ensure that the implementation of the CRVS strategic plan contributes to the goals and objectives of the NST-1.

The specific objectives of the mid-term review (and associated evaluation criteria) are:
- To assess the extent to which targets set in the National CRVS Strategic Plan are being met across all its key components (Effectiveness);
- To identify challenges, lessons learnt; and formulate recommendations to improve the overall implementation of the National CRVS Strategic Plan (Efficiency, Impact);
- To assess whether identified CRVS priorities are aligned with the NST-1 and respond to the emerging needs (Coherence);
- To provide guidance for updating and aligning the National CRVS Strategic Plan with NST1 (Relevance, Sustainability)

Scope

The mid-term review had three major components:

I.   The first component consisted of a summative assessment of processes and results since the launch of the CRVS plan in 2017, with a focus on the extent to which the current plan is being rolled out by all partners as originally designed. It identified challenges and road blocks that may impede CRVS system effectiveness and efficiency. These include, for example, changes in the policy environment, cost considerations, capacity limitations, inadequate understanding of responsibilities, public attitudes, and unforeseen constraints. This component also assessed the extent to which the plan is meeting the expectations of target populations, including government departments with responsibilities in relation to key areas, notably the civil registration of births and deaths and the generation of vital statistics. It also critically assessed the extent to which the plan is reaching those directly involved in service provision (local registrars, health workers) as well as service users, notably individuals and families who require legal documentation.

II.   The second component of the evaluation involved a review and assessment of the new opportunities stemming from legislative and policy changes directly related to CRVS systems that have occurred since 2017/18.

III.   The third component of the evaluation was more formative in nature and designed to assess the extent to which CRVS implementation strategies should evolve in order to be aligned with the NST1. Such alignment offers multiple opportunities for strengthening the CRVS as part of broader development efforts. In particular, this component assessed the integration of CRVS as part of a system-wide approach to national legal, statistical, and development efforts and provide guidance for sustainable implementation.

Methodology

The Mid-term evaluation took into account various documents such as;

I.   Existing legal instruments and those which have been amended for smooth civil registration;

II.   Reports and Minutes of CRVS administrative bodies and collaborating institutions;

III.   Systems that record CRVS related data in various institutions;

From the theoretical analysis in a purposive field visit, 2 districts were selected:

I.   Urban District with the highest population and a high level of births;

II.   Rural District with more challenged civil registration issues such as refugee camps, borders.

Chapter I. Legal Identity and Rights for All

As envisioned in the Agenda for Sustainable Development goals, by 2030, nations should have provided legal identity for all, including birth and death registration. To abide by the provisions of these international goals, Rwanda embarked on a number of interventions in this respect. Considerable improvements have been made. Legal instruments have been amended and others initiated[5] and approved from scratch to enable the desired and improved vital events' registration processes. The National Centralized and Integrated Civil Registration and Vital Statistics (NCI-CRVS) system has been developed and deployed in all health facilities for birth and death registration at health facilities. This is a web-based system that has been developed to digitalize civil registration processes. Awareness-raising campaigns for behaviour change and for the increased uptake of CRVS services specifically for birth and death registration have been carried out for all layers of the Rwandan population. In addition, capacity building for system end-users (Civil Registrars and Civil Registration Officers) at all points of CR services have been carried out.

In the same vein, Marriage, Divorce, Annulment of Marriage modules that constitute phase two of CRVS project modules development have been completed and deployed at Sector offices for use after training of sector civil registrars and Civil registration officers on above mentioned modules. At the time of writing this report, the users had not yet started registering these three vital events in the NCI-CRVS system. The third and last phase of the CRVS digitization process constitutes of the development of Adoption, Guardianship, Legitimization and Recognition modules which is set to be done by the end of the fiscal year 2021/2022. To assess the efficiency, effectiveness, coherence and relevance of civil registration modernization in Rwanda, reference will be made to birth and death registration process improvements.

This process involved all stakeholders but more specifically those that were directly affected by the process. These included the National Identification Agency (NIDA) as the institution in charge of civil registration, the Ministry of Local Government (MINALOC) in charge not only

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[5] Law 32/2016 of 28/08/2016 governing persons and family amended on 2nd February 2020 to extend civil registrar rights to health facilities and cells to register births and deaths occurring in health facilities and communities respectively. Registration was formerly done at Sector office;

Ministerial order n° 001/07.01 of 27/07/2020 published in the National Gazette of 27th July 2020, which specifies the health facility staff who will be given the civil registrar responsibilities based on the type of the health facility.

Presidential order n° 092/01 of 21/09/2020 determines responsibilities of the executive secretary of cell. Its article number 2, especially in paragraph 4, states that this officer is a civil registrar with regards to birth and death occurred in place other than health facility for persons who have a known civil status, basing on information provided by the Head of the Village where the person was born or died. All these responsibilities were formerly carried out by Civil Registrar based at Sector office.

of regulatory framework and policies relating to CRVS, but also oversees civil registration service points in decentralized entities (Sectors, Cells, district hospitals and health centres), the National Institute of Statistics of Rwanda (NISR) in charge of consolidation, analysis and dissemination of Vital Statistics, the Ministry of Health (MoH) that plays an oversight and governance role over health facilities where about 95% of all total births occur and the Ministry of Justice (MINIJUST) that regulates divorces and avails divorce data.

1.1.Birth Registration

Whereas the Ministry of health reports that around 95% of children are born in health facilities, according to Rwanda Demographic and Health Survey, 2014-2015, only 56% of children under the age of 5 years had their births registered. This low rate of birth registration largely resulted from the process flow that was involved for a birth to be registered. The process required that after returning home following the discharge of mother and infant from the health facility, the declarant (father or mother) had to make another journey to the sector based civil registry office within 15 days from the date of birth to have the new born registered. This process required considerable time and resources which discouraged some parents to have their children registered. Other obstacles to birth registration included: limited understanding of the importance of timely birth registration and unsupportive public attitudes.

The DHS also reported that only 3 percent of children under age 5 possessed birth certificates. Children aged 2-4 were more likely to be registered than those younger than age 2 (60 percent and 50 percent, respectively). Children in the poorest households were less likely to be registered (43 percent) than children in households in the other wealth quintiles (53 to 66 percent).

According to the survey on people's perspectives on ID and Civil Registration in Rwanda conducted by ID4D in partnership with the National Identification Agency in 2020; for some population groups, including orphans, refugees and children with disabilities, especially those whose births occurred in the community; registration processes seemed to be particularly difficult due to lack of supportive documentation and difficulties in accessing registration offices.[6]

The modernization of CRVS system which specifically focused on birth registration, started with a legal review. Law n°. 32/2016 of 28/08/2016 governing persons and family was approved. This law was later on amended on 02/02/2020 to include a provision that every child

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[6] People's Perspectives on ID and Civil Registration in Rwanda 2020

born in a health facility is declared immediately after birth[7]. The review was guided by the desire to establish "one stop centres" for birth registration. In addition, Ministerial order n° 001/07.01 of 27/07/2020 determining the officer of the health facility with powers of civil registrar, his or her responsibilities and modalities for their performance was approved. The amendment of the laws and regulations was done to address the missing links in the regulatory framework as recommended by the CRVS strategic plan. These regulations give the responsibility to the parents to register their new-born babies and also requires the health facilities to register the child immediately after birth. This addresses the issue of long distances journeys that parents used to have to make and the associated costs they incurred before the laws and processes were reviewed.

To facilitate registration of birth in health facilities a civil registrar is positioned in each health facility. On 27th July 2020, the Ministerial Order was gazetted specifying the health facility staff who will be given civil registrar's responsibilities. Since then, it is a legal obligation to register every birth of a child immediately after birth, and the registration can currently be done at the civil registry offices at the Sector level or at Rwandan Embassies worldwide. There are no charges included even for late registration (those done after the 30 days deadline). The requirement for birth registration is a medical birth notification issued by the health facility where the child was born. In case the child was not born in a health facility, birth registration requires a birth notification issued by a competent authority in the child's place of birth indicating the names of the child's parents and date of birth and a birth declaration done in the presence of two witnesses aged at least 18 years or older. If for some reason the birth of a child is not registered within the 30 days, this is considered a late registration[8].

Since the launch of the NCI-CRVS system in health facilities on 10th august 2020, almost 612 health facilities (public and private) with maternity services are now actively involved in the registration of births.

1.1.1. Birth Registration at Health Facilities

The CRVS Strategic Plan 2017/2018 set a target for total on-time birth registration at 95% by 2020/2021. This would be achieved following the legal review and the review of CRVS business processes, followed by the modification of vital events registration business processes and the revision and improvement of standard operating procedures. In order to achieve this ambitious target, a number of activities were carried out including birth and death modules development (first phase), training of newly appointed 612 civil registrars based at the health

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[7] Article 9 of the law no 001/2020 of 02/02/2020 amending the law 32/2016 0f 28/08/2016 governing persons and family.(official gazette no 06 of 17/02/2020)
[8] People's Perspectives on ID and Civil Registration in Rwanda 2020

facilities, and social and behaviour change communication campaigns aimed at increasing the uptake of registration services at health facilities. Birth registration business processes prior to the implementation of the new processes and subsequently, with the new arrangements, are described below:

1.1.1. 1. Birth Registration Business Process Before Improvement

- Mother gives birth at health facility or in community
- Within 15 days from the date of birth, mother, father or both go to the sector with the new-born baby for declaration and registration by the Sector Civil registrar; If later than 15 days after birth, the parents must also produce two witnesses to the event.
- Sector Civil registration officer records the new born baby in the paper-based birth register and in the National Population Register
- Civil Registrar at the sector office registers and issues a birth record.

1.1.1.2. Birth Registration Process After Improvement

Births at healthcare facilities

- Midwife records the birth in the maternity register at a healthcare facility. The maternity register includes all the information items required by the civil registrar to permit the birth to be officially registered.
- Data manager records the birth in the National Centralized and Integrated CRVS System.
- Birth declarant goes to the civil registration officer of the healthcare facility to declare the birth.
- Civil registration officer registers the birth in the CRVS system: a unique National ID number (NIN) is generated for the registered birth. The CRVS system automatically pushes the details of the registered birth to the National Population Registry (NPR). NPR saves the record and automatically generates an application number linked to that NIN. Different stakeholders will use this NIN for various purposes.
- Once requested, the CRVS system generates the birth record and makes it available to Irembo (e-service portal).
- The parents request for a copy of the baby's birth certificate through Irembo using the NIN. However, the birth records are not yet issued through Irembo platform during the period of completion of this report.
- The CRVS web based system produces and makes vital statistics available to the National Institute of Statistics of Rwanda (NISR).

- The NCI-CRVS system integrated with HMIS system of Ministry of health and CRVS web-based system of NISR pull birth information.

1.1.2. Births in the Community

According to the Ministry of Health reports, around 5% of births occur in the community or in areas considered as such. Birth registration improvement considered these events. The process was designed as elaborated here below:

- The community health worker or village chief on a specifically designed form reports the birth to the Cell Executive Secretary (ES).
- The Cell ES notifies and registers the birth in the CRVS system, a unique NIN is generated for the registered birth, and the CRVS system automatically pushes the details of the registered birth to the NPR.
- The NPR saves the record and automatically generates an application number linked to that NIN. Different stakeholders will use this NIN for various purposes.
- Once requested, CRVS system generates the birth record and makes it available to Irembo.
- The parents request a copy of the baby's birth certificate through Irembo using the NIN.
- The CRVS system produces and makes vital statistics available to the National Institute of Statistics of Rwanda (NISR).

To date, the registration of births that occur in the community is being done in only two districts: Gasabo and Nyamagabe. In the remaining 28 Districts, births that occur in the community continue to be registered at sector offices on the basis of an in-person visit by the parents. This is because, due to COVID 19 prevention measures, it has not been possible to provide training to the newly appointed Civil Registrars at Cell level, who have been given the responsibility to register births that occur in community. The desired status is registration at Cell level, an administrative unit that is closest to the citizens. Once this state is reached, parents or birth declarants won't have to make journeys and related expenses to sector offices for registration of birth events having occurred in community.

1.1. 3. Births Abroad

Births that occur outside Rwanda are estimated to be below 1%. The law gives the ambassador the civil registrar responsibilities to registers births of Rwandans born abroad. The system is accessible by all civil registrars abroad and the process has been designed as follows:

- Birth declarant goes to a Rwandan embassy, high commission, or consulate.

- Civil registration officer at the embassy notifies the birth in CRVS system.
- Civil registrar at the embassy registers the birth in the CRVS system, a unique NIN is generated for the registered birth, and the CRVS system automatically pushes the details of the registered birth to NPR.
- NPR saves the record and automatically generates an application number linked to that NIN. Different stakeholders will use this NIN for various purposes.
- Once requested, the CRVS system generates the birth record and makes it available to Irembo.
- The baby's birth record (certificate) is requested through Irembo using NIN.
- The CRVS system produces and makes vital statistics available to the National Institute of Statistics of Rwanda (NISR).

1.1.4. Birth Registration Completeness

Birth registration completeness measures the number of registered births expressed as a percentage of the actual number of births. Complete birth registration system enables the calculation of levels of natality and fertility in a given territory in a given period, for example a year. Reliable birth data are essential for economic planning and decision making and statistics on numbers of live births are needed to calculate key indicators, including infant rates and maternal mortality ratios. In Rwanda, birth registration completeness can be measured using different approaches. Registered births could be expressed as a fraction of the total births estimated by projection of a recent census or Demographic Health Survey.

The trend of birth registration completeness from 2015 - 2022
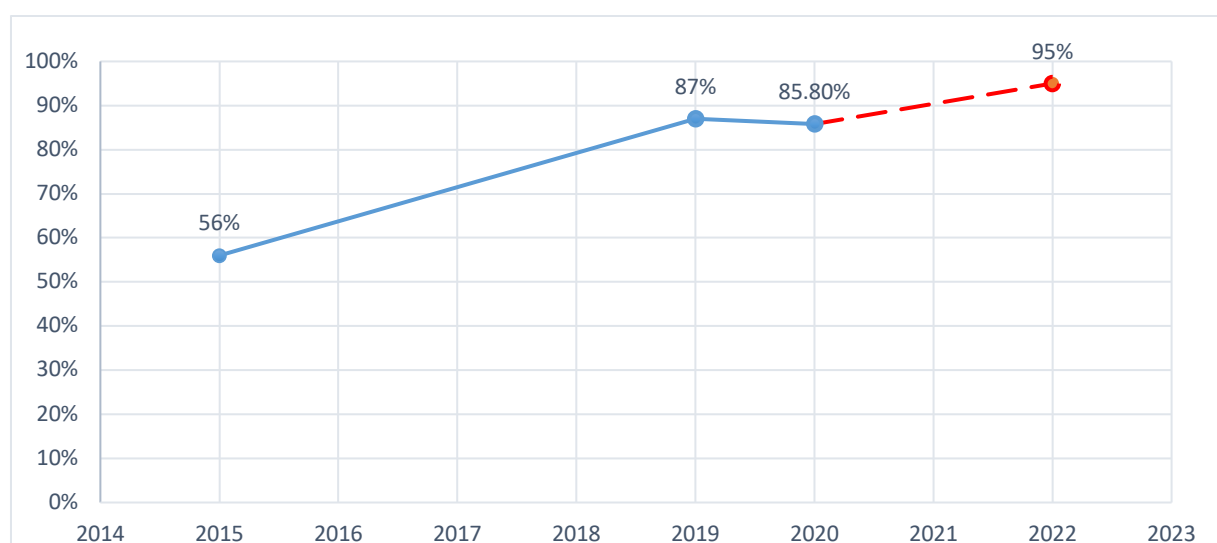
In this report, determination of the progress made from the date of deployment of the CRVS system at all Health Facilities on the May 1st, 2021 will be done using Health Information System (R-HMIS).

The improvement foreseen by the CRVS Strategic Plan of 2017/18-202021 set a target of 95% of all births to be registered by 2021/2022 from 56% as the baseline. By the end of 2020, birth registration completeness rate within the year of occurrence had reached 85.8%[9] from 87% in 2019. This slight decrease in birth registration is attributed to stringent COVID 19 preventive measures that were put in place between 2019 and 2020.

$$\text{Birth registration completeness rate} = \frac{\text{Number of registered live births}}{\text{Actual number of live births}} \text{x}100$$

In consideration of the challenges related to non-registration of births that occur in the community at Cell level due to the fact that the system is deployed in cells of only 2 Districts, one realizes that with 85.8% and 87% measure of birth registration completeness from Rwanda Vital Statistics Report 2020 and 2019 respectively, there is hope so far, that the target birth registration rate of 95% will be reached in the near future.

1.1.5. Challenges Affecting Birth Registration

The outbreak of COVID 19 and the consequent lockdowns at different time points in 2020 hindered the smooth running of CRVS system deployment plan. The outbreak came in at a critical time where the system development had been completed but users at Health Facilities and Cell level had not yet been trained. This paralysed the rollout process of birth and death registration operations at different points of service.

Confusion on roles related to the changes in laws and regulations and redistribution of Civil registration responsibilities caused some delays in registration. The assignment of birth registration responsibilities to civil registrars based at health facilities and cell offices created a transition where, the newly appointed registrars hesitated to own the responsibilities. Total process change took some time to be adopted as initially, registration took place at Sector offices done by a civil registrar based at the sector office. Delays in embracing the change caused gaps in registration of new births during system deployment period.

1.2. Death Registration

Death records are of particular importance in public health for identifying the magnitude and distribution of major disease problems. Data from these records can be used for epidemiological studies. Cause of death information is essential for medical research and

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[9] Rwanda Vital Statistics Report 2020

understanding disease burden at national level. Death records provide legal evidence relevant to claims to inheritance, property, insurance benefits and the legal right of a spouse to remarry. In Rwanda, less than 40 percent of deaths occur at health facilities[10].

Information on the number of deaths and their causes is invaluable in evaluating and tracking progress towards the national, regional and international goals. The information on the mortality levels, trends and differentials is important for the identification of emerging diseases and conditions, formulation of evidence-based health policies and tracking of the population health status. Mortality data are generated from the civil registration systems that permit the production of mortality statistics continuously and contribute to the understanding of the burden of diseases at national and sub national levels.

1.2.1. Mortality Data Sources

Official reports indicate a death registration completeness level of below 30% all over the country with a target of reaching 90% in 2022. In addition, not all those deaths that occur at health facilities are recorded with their respective causes. This is largely attributed to limited knowledge and capacity to record deaths data by medical personnel. The low registration rate has been aggravated by the fact that around 70% of the deaths that occur in the community have always gone unregistered with no information about the causes of these deaths.

Priority area no.3 of the NST1 is enhancing demographic dividend through ensuring access to quality Health for all. Under this area key strategic intervention no. 58 states that the country shall "strengthen disease prevention awareness and reduce Communicable and Non-Communicable Diseases (NCDs)." To achieve these national and international goals, death registration including cause of death registration should be strengthened.

To improve this situation and to achieve national and international priorities and goals with regards to deaths and causes of death registration, the GoR through the Ministry of Health and Rwanda Biomedical Centre in partnership with stakeholders has undertaken a number of activities including the deployment of NCI-CRVS System at all Health facilities both public and private, for the registration of deaths and causes of death determined through the medical certification of cause of death and using the ICD-10 statistical coding system.

The Government of Rwanda in partnership with key stakeholders developed a Core Curriculum of Bachelor of Medicine and Bachelor of Surgery embedded with medical certification of causes of death course to be taught in all medical schools in Rwanda.

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[10] CRVS Strategic Plan 2017/18-2020/2021

The Ministry of health in partnership with stakeholders developed MCCOD eLearning course as a mandatory requirement for Continuous professional development (CPD) credits for licensure to all practicing medical doctors in Rwanda. More than 2,000 medical doctors have since been trained on MCCOD on both face to face and online platforms. In addition to this, there is quarterly monitoring of quality of causes of death data entered into the system and analysed using an automated tool, ANACONDA.

However, in Rwanda, the majority of deaths occur in the community where there is no doctor available to complete the medical certificate of cause of death. In response, the Rwanda Biomedical Centre in collaboration with CRVS stakeholders is in the process of implementing Verbal Autopsy (VA) program as the most practical option for diagnosing cause of death (COD) for deaths that occur outside health facilities, in the community. VA is a method for collecting information from the family about the signs and symptoms of illnesses/events that the deceased suffered prior to death, and interpreting the interview data to diagnose the most probable cause of death, usually using an automated algorithm.

The government of Rwanda piloted VA in 107 Administrative cells from July 2017 to December 2019. The Home-Based Care Practitioners (HBCPs) program collected more than 2,600 VAs using SmartVA questionnaire and Open Data Kit (ODK) which is an open-source set of tools that support survey creation, data collection, management and the application of automated methods to determine cause-specific mortality fractions for the community.

The new law mandates 2,148 Cell Executive Secretaries now designated as Civil registrars to also conduct VA interviews for deaths occurring in the community using tablets in which a customized and translated WHO VA questionnaire is installed with internet bundles. These interventions will both increase the number of deaths in the community that are officially registered and also, through the use of VA, generate statistics on cause of death distributions at national level.

1.2.2. Death Registration at Health Facilities

The CRVS Strategic Plan of 2017/18-2021/22 set death registration target at 90% by 2022. Like birth registration, death registration used to take place at Sector office. Registration required a long process involving a Sector civil registrar to register all deaths including those that occurred at Health Facilities.

The strategic actions to improve death registration recommended that deaths should be registered where they occurred. The achievement of this practice however necessitated change in the legal and business processes for the registration of deaths.

1.2.2.1. Death Registration Business Process at Health Facility Before Improvement

- Death occurs;
- Authorized Health Facility Staff records death in electronic R-HMIS register which records deaths and is maintained at the health facility;
- Data manager records death in R-HMIS and in CRVS web application system;
- Death declarant (next of kin or anyone who witnessed the death) declares death to the Civil Registrar at Sector level;
- CRO records death in the paper-based system, CRVS web application system and National Population Registry "NPR";
- Civil Registrar issues death certificate to the declarant;
- Production of vital statistics

1.2.2.1. Death Registration Business Process at Health Facility After Improvement

- The doctor completes MCCOD and death notification form;
- The health facility data manager records or notifies the death within in the NCI-CRVS system;
- The declarant declares death to the civil registrar at the same healthcare facility;
- The civil registrar registers the death in the NCI-CRVS system, a unique NIN is generated for the registered death, and the CRVS system automatically pushes the deceased's details, along with their NIN and application number, to NPR. NPR updates the deceased's profile (vital status);
- Once the death record (certificate) is requested, the CRVS system generates it and makes it available to Irembo;
- The death record (certificate) is requested through Irembo using the NIN;
- The CRVS web based system produces and makes vital statistics available to the NISR for the compilation of data for analysis and dissemination of death statistics in the annual Statistical Report.

1.2.3. Death Registration at Community Level

1.2.3.1. Death Registration Business Process in The Community Before Improvement

- Death occurs;
- Community Health Worker reports death (for children under five years only), to the Health Facility;
- Data manager records death in CRVS web application system;
- Death declarant declares death to Civil Registrar at Sector level;

- CRO registers death in the Paper based system, CRVS web application system and National Population Registry system "NPR";
- Civil Registrar issues death certificate to the declarant;
- Production of vital statistics.

1.2.3.2. Death Registration Business Process in The Community After Improvement

- The village chief notifies the death to the Cell ES, and the family of the deceased declares the death to the Cell ES as Civil registrar;
- The Cell ES notifies and registers the death in the CRVS system, a unique NIN is generated, and the CRVS system automatically pushes the deceased's details along with their NIN and application number to NPR. NPR updates the deceased's profile (vital status);
- Once the death certificate is requested, the CRVS system generates it and makes it available to Irembo;
- The next of kin request a copy of the death certificate through Irembo using the NIN;
- The CRVS system produces and makes vital statistics available to the respective stakeholders.

In addition, the civil registrars at cell level have been mandated to conduct verbal autopsy to determine probable cause of deaths as described above. CRs will be trained in the use of tablets and conducting interviews with family members using the VA questionnaire. Results of the interviews will be analysed centrally at MoH and RBC using Open VA pipeline interoperable with automated HMIS system to generate probable causes of death for deaths that occurred in the community.

1.2.3.3. Death Registration Business Process Abroad Before Improvement

- Death occurs;
- Death declarant goes to the embassy/consulate to declare death to the Civil Registrar;
- Civil Registrar at embassy/consulate registers death in the death register;
- Civil Registrar issues death certificate.

1.2.3.4. Death Registration Business Process Abroad After Improvement

- The death declarant goes to the embassy, high commission, or consulate to declare the death;
- The civil registration officer at the embassy notifies the death in the CRVS;
- The civil registrar at the embassy registers the death in the CRVS system, a unique NIN is generated for the registered death, and the CRVS system automatically pushes

the deceased's details, along with their NIN and application number, to NPR. NPR updates the deceased's profile (vital status);

- Once the death record (certificate) is requested, the CRVS system generates it and makes it available to Irembo;
- The death record (certificate) is requested through Irembo using the NIN;
- The CRVS system produces and makes vital statistics available to the respective stakeholders.

The above changes were introduced in the hope that the registration rate would be driven from 30% in 2020 to the targeted 90% by 2022. It is however worth noting that over 60% of deaths occur in community implying that the changes introduced especially in community death registration could create a huge impact in overall deaths registration statistics.

1.2.4. Death Registration Completeness

By the end of 2020, death registration completeness was 29.9% at national level. The computation was based on the number of deaths registered (22,634 deaths) over the expected deaths from the projection of the recent Rwanda population and housing census that gives a total of 75,624 deaths in 2020[11].

It is not easy to talk about death registration completeness given that a huge number accounting to more than 60% of the event occurs in communities where, though everything is set and in order (legal review and NCI-CRVS system), registration itself has not yet started. Delays to start registration is attributed to the fact that the Cell Executive Secretaries who have been given responsibilities to register events occurring in community have been trained in only two districts among 30 districts, again unlike in hospitals, the system has not been deployed to all cells in the country due to the need to adhere to COVID-19 preventive measures and movement restrictions.

1.2.5. Challenges Affecting Death Registration

Death registration in Rwanda is affected by a number of factors:

Over 60% of deaths occur in the community[12]. Although the laws and regulations for the registration of deaths cover community deaths registration procedure where registrars have been appointed, administratively, registration has not started in 28 districts due to COVID-19 preventive measures. The Cell Executive Secretaries who have been vested with the registration responsibility have not all been trained. In addition, the registration system has not

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[11] Rwanda Vital Statistics Report 2020
[12] CRVS Strategic Plan 2017/18-2020/2021

yet been deployed to all Cells in Rwanda. The verbal autopsy is planned to be rolled out in the whole country using android tablets in which the 2016 WHO VA questionnaire will be used. Currently, there is a limited number of tablets to conduct VA in the whole country.

More work needs to be done on the operational level to have death registration and verbal autopsy figures in the community increase.

1.3. Registration of other Events

Regarding the remaining events, Marriage, Divorce and Annulment of marriage modules have been developed but deployment to points of service (Sector offices) and training of users has not been completed. The only source of marriage data is the CRVS web based application managed by the National Institute of Statistics of Rwanda. Data on legal marriages show that the number of marriages dropped from 48,526 in 2019 to 30,859 in 2020 hypothetically due to COVID-19 preventive measures where many forms of social gatherings, including marriage celebration ceremonies were often prohibited to reduce the spread of the pandemic.[13] No data can be accessed as of now regarding Divorce and Annulment of marriages. Guardianship, Legitimization, Adoption and Recognition modules which were planned to be developed in 2020/2021 were not developed due to shortage of budget. The budget for the development of these modules has been allocated in 2021/2022.

Among the key strategic interventions of the transformational governance pillar of NST1, the public sector should ensure that 100% Government services are delivered online by 2024 from 40% in 2017. A well integrated and interoperable CRVS system will play a vital role in achieving this objective. So far, the already developed modules of birth and death are integrated with R-HMIS, CRVS Web based application and the NPR. This interconnectivity will allow ease of service to citizens, contributing to the achievement of the NST1 goals related to service delivery and governance.

[13] Rwanda Vital Statistics Report 2020

Chapter II. Good Governance and Accountability

The CRVS Strategic Plan of 2017/18 to 2020/21 envisioned as a goal, the establishment of an integrated and modern CRVS system that enhances good governance and accountability for better service delivery by 2022. [14]To achieve this target, a CRVS organization and coordination structure had to be put in place from high-level administration to grass roots level. There are clear established terms of reference defining the scope of work and technical expertise required to join each established structure. This structure with responsibilities at each level could then drive the CRVS operations in the country for a better implementation of the desired changes.

Administrative Level	Coordination Committee and Proposed Frequency of The Meeting	Constitution Of the Committee and Ministerial Order Number and Date	Main Functions
National Level	High-level Coordination Committee on Civil Registration and Vital Statistics To meet once a year	Chair: Minister of Local Government Members: Minister of Health, Minister of Finance and Planning, Minister of Justice, Minister of Local government, Ministry of gender and family promotion Secretariat: DG NIDA	Provide oversight and policy guidance to the work of civil registration and vital statistics Review progress of work Review fund requirement and approve funding if necessary.

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[14] CRVS Strategic Plan 2017/18-2020/21

Administrative Level	Coordination Committee and Proposed Frequency of The Meeting	Constitution Of the Committee and Ministerial Order Number and Date	Main Functions
National Level	National CRVS Steering Committee To meet once every Quarter	Chair: Permanent Secretary of Local Government Members: PS Ministry of health, PS Ministry of justice, PS Ministry of gender and family promotion, DG/NIDA; Director General NISR, Director General /DGIE &DG/RBC, executive secretary of National children commission. Special invitees depending on the nature of the meeting: Relevant UN agencies, NGOs, Academic institutions, and other stakeholders Co-chair: PS MoH	Resource mobilization; Organize and conduct annual development partners meeting; Approve reports from CRVS Core Technical Team; Follow up of CRVS related activities; Prepare meeting agenda of CRVS High Level Coordination Committee Advise the CRVS High Level Coordination Committee; Ensure the implementation of High-Level Coordination Committee recommendations.
National level	CRVS Core Technical Team	Technicians from Minaloc; Minijust, MoH, Migeprof, NIDA, NISR, DGIE, RBC, NCC	Coordinate the implementation of all policies related to CRVS; Advise the CRVS steering committee on matters related to CRVS; Implementation of resolutions and recommendations from CRVS steering committee;

Administrative Level	Coordination Committee and Proposed Frequency of The Meeting	Constitution Of the Committee and Ministerial Order Number and Date	Main Functions
			Prepare and submit reports of activities of CRVS Technical team; Prepare meeting agenda of CRVS Steering committee and follow upon on CRVS related activities.
National Level	National Mortality Technical committee	Chair: Director General of Clinical and public health Services Technicians from: NIDA, WHO, NISR, CHUK, CHUB, RMH, UR, MINALOC Rwanda medical and dental council, Rwanda National Council of Nurses and Midwives, Rwanda Allied Health professionals' council, RBC, RBC/MCH, MoH, KFH, CEO/KFHR, Rwanda Forensic Laboratory	Promote and oversee the implementation of activities to ensure accurate and timely notification and registration of all deaths happening in health facility and in the community; Regularly review and amend as necessary the legal framework, institutional set up and business processes for the notification, registration and certification of deaths in order to identify the most effective and efficient strategy for notifying all deaths at facility and community level; Review and prepare SOPs, forms, requirements and guidelines needed for the notification and registration of deaths; Develop and monitor the implementation of strategies to enhance the quality of medical certification of COD by physicians in health facilities; Endorse VA as the best possible intervention to assign COD to deaths that have no medical certificate;

Administrative Level	Coordination Committee and Proposed Frequency of The Meeting	Constitution Of the Committee and Ministerial Order Number and Date	Main Functions
			Establish a Verbal Autopsy Task Force to guide the implementation of verbal autopsy for deaths where there is no medical certificate of COD; Review annual mortality reports and monitor the availability, completeness and quality of mortality statistics; Co-opt new members as required.
District level	District Level Coordination Committee To meet once every quarter	Chair: District Mayor Director of good governance, statistician, Director of Health at district, IT officer at district, Director Generals of hospitals, Head of Health centers in catchment area of district, Executive secretary of sectors.	Review status and progress of registration at the district and sector levels in terms of completeness of registration Discuss administrative and technical challenges in registration faced by the Civil Registrars in the health facilities and at sector levels Identify coordination bottlenecks at district level and propose definite action for their resolution Prepare quarterly report for the Technical Coordination Committee and identify issues and prepare action points for its consideration.

Source: CRVS Standard Operating Procedures for birth and death registration in Rwanda, January 2019

The process to improve operations towards CRVS digitization in Rwanda was catalyzed by active governance structure at all levels as had been foreseen in the CRVS strategic plan. The high level CRVS coordination committee composed of core Ministries having direct stake in CRVS including MINALOC, MoH, MINECOFIN, MIGEPROF, MINICT and MINIJUST, chaired by the MINALOC is responsible for oversight and policy guidance. This committee meets once in a year to deliberate on strategic interventions like amendment of laws and enactment of new ones that need cabinet approval.

In parallel, the CRVS steering committee composed of Permanent Secretaries of the above-mentioned ministries, Director Generals and Executive Secretaries of affiliated Institutions and Agencies, chaired by the Permanent Secretary of MINALOC meets twice a year and whenever necessary for its deliberations and resolutions arise. The major responsibilities of the steering committee have always been resource mobilization, approval of reports from CRVS Core Technical Team and follow up of CRVS related activities.

The CRVS Core Technical team is in charge of operations. It is composed of technicians from all stakeholder Ministries, Agencies and departments. The team meets every quarter and whenever there is need. Its major responsibilities include but are not limited to advising the CRVS steering committee on matters related to CRVS and implementing resolutions and recommendations from CRVS steering committee.

Alongside the CRVS Core technical team is the National Mortality Technical committee which is responsible for promotion and overseeing the implementation of activities to ensure accurate and timely notification and registration of all deaths happening in health facility and in the community and to develop and monitor the implementation of strategies to enhance the quality of medical certification of COD by physicians in health facilities among other responsibilities. The National Mortality Technical committee meets on a quarterly basis and as frequent as need arises.

On the District level, a District task team has been established. It is composed of the Director of good governance, statistician, Director of Health at district, District ICT officer, Civil registrar at hospital, Civil registrar at health centre and Civil registrar at sector. This team is in charge of the daily follow up of how CRVS activities are performed in the district.

All these teams from the national to the district level involve all CRVS stakeholders with clearly defined responsibilities.

Chapter III. Reliable statistics

For purposes of policy planning and informed decision making, vital statistics from a well functioning CRVS system must be produced and disseminated. On a strategic level, the CRVS Strategic Plan envisioned the production and dissemination of reliable vital statistics including causes of death according to international standards, promotion of the use of vital statistics as evidence in policy making and planning, strengthening the vital statistics system and alignment to continental and international development agenda needs.

In what has so far been done, all health facilities have adopted the use of ICD-10 & the international MCCOD form. The VA questionnaire to determine causes of death outside Health Facilities has been drafted by the National Mortality Technical committee and approved. COD in all Health Facilities has been adopted.

As an innovation in Vital Statistics area, the National Institute of Statistics of Rwanda publishes vital statistics report every year in order to showcase the progress made by the country in improving Civil Registration and vital statistics and how far it is from attaining the targets set under the CRVS Strategic plan.

The report is useful as a tool to inform related policies & decisions and guide strategic interventions. Reliable statistics which are reflecting the real figures of the country should be used to deliver the fundamental demographic and epidemiological measures that are needed in national planning across multiple sectors such as health, education and labour.

The CRVS system in Rwanda is now producing birth and death statistics on a regular basis, although death and marriage registration remain low.

NCI-CRVS system is set to give reliable statistics once deployed at all points of service and users trained on smooth application. Moreover, the health facilities are recording deaths with MCCoD but registration of death in community needs to be incorporated with Verbal Autopsy to establish the probable cause of death.

The 2019 and 2020 Vital Statistics reports published by NISR draw largely on the CRVS web-based system, an online platform initiated to ease the collection of civil registration data and facilitate the timely production of vital statistics reports. The CRVS web-based system-generated data were combined with data from NCI-CRVS system and the outputs were compared with survey-based data and data from administrative sources to pinpoint the level of reliability of the results obtained[15].

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[15] Vital statistics report 2020

Chapter IV. Positioning CRVS in the NST1

Vision 2020 a guiding paper which outlined a number of socio-economic transformation pillars and objectives was started in 2000 and ended in 2020. EDPRS2 and its associated Sector Strategic Plans (SSPs) and District Development Strategies (DDSs) ended in June 2018. A new 7 Year Government Plan was also required for the mandate of the new government to cover the period from 2017 to 2024.

The 13th National Umushyikirano Council in 2015 requested the development of a new 30-year Vision for the period up to 2050. This was followed by a draft Vision 2050 blueprint presented in 2016 at the Umushyikirano council. The blueprint outlines the ambitions to guide medium and long-term strategic planning in future decades.

The implementation instrument for the remainder of Vision 2020 and for the first four years of the journey under Vision 2050 is known as the National Strategy for Transformation (NST1). NST1 integrates far sighted, long-range global and regional commitments.[16]

Civil Registration and Vital Statistics System (CRVS) modernization and digitization falls in the key strategic intervention n°. 95 of ensuring that 100% Government services are delivered online by 2024 from 40% in 2017. The efforts to improve CRVS systems are in line with Objective 2 of the Social Transformation Pillar which is to ensure a Quality Healthy Population by Improving Maternal Mortality and Child Health through the reduction of maternal mortality ratio to 126/100,000 in 2024 from 210/100,000 (2013/14) and under five mortality rates to 35/1,000 in 2024 from 50/1000 (2013/14). Specific interventions will include maintaining high vaccination coverage and delivery at health facilities above 90%, strengthen disease prevention awareness and reduce Communicable and Non Communicable Diseases (NCDs) among others.

The sixth RDHS has shown that maternal mortality ratio has declined significantly to 203 deaths per 100,000 live births in 2019/20 down from 1,071 in 2,000 while under-five mortality dropped to 45 deaths per 1,000 in 2019/20 from 196 deaths per 1,000 in 2000.[17]. With the digitization of CRVS, birth and death registration including cause of deaths to inform policy will improve these health indicators even more.

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[16] National Strategy for Transformation 1 2017 – 2024: 2017
[17] Rwanda Demographic and Health Survey 2019/2020

Conclusion and Recommendations

Conclusion

CRVS improvement process is a journey. In Rwanda, a lot has been done but a lot more remains to be done. The process has involved many undertakings, from the CRVS comprehensive assessment to establish what is already in place, identify gaps and ascertain what needs to be done, legal review, to the development of the CRVS strategic plan, designing policy actions to bridge the gaps in the pursuit of the intended CRVS goals.

The new system for recording and registering births and deaths is already deployed to 612 Health Facilities including Health Posts, Health Centers, District Hospitals, Clinics, Private Hospitals, Referral and National Hospitals. Vital statistics are now accessible from the system and more modules on other vital events such as marriages and divorces, will be deployed in the near future.

Challenges were many. Some were expected and others weren't. The management of stakeholders' expectations and making sure that they all converge to one point- an integrated CRVS system- serving the citizens and providing the much needed data for legal, statistical and administrative purpose as a shared commitment. The outbreak of COVID 19 caused many problems and became a huge roadblock to many activities that could have perhaps taken the CRVS improvement agenda to another level. However, the need to track COVID-19 specific mortality on an ongoing basis has greatly benefited the CRVS system in general and deaths and cause of death registration in particular.

The pandemic further increased the need to use digital systems especially in notification of cases, a step that will be a basis for further improvements in CRVS.

What has so far been done can be attributed to the strong political will and government support – moral and financial-and collaboration with stakeholders and development partners.

Recommendations

The Midterm review and evaluation of CRVS strategic plan 2017/2018-2021/2022 has formulated recommendations as follows:

I. The legal review has led to several improvements but further actions are needed, including:
   a. The Prime Ministerial Order determining responsibilities of the Ministry of local government did not specify its mandate for Civil registration; this needs to be addressed;

b. Publication of the Ministerial order on late and delayed birth and death registration;

c. Reinforcement of the law governing cemeteries is planned but needs to be operationalised to improve deaths registration.

II. There is a need to fast-track the training of all users and deployment of the system up to the cell level for the registration of births and deaths occurring in the community;

III. Training of CROs and CRs at Sector offices and deploy Marriage, Divorce and Annulment of Marriage modules to the sector level;

IV. Fast-track the training of verbal autopsy interviewers for community deaths registration;

V. Integration of the NCI-CRVS system with Irembo platform should be done in a way that facilitate the collection of CR records by family members;

VI. Expedite electronic signature tools to all registration points to allow declarants to sign on the certificate as a legal requirement;

VII. Strengthen the CRVS District level committee. The district level committee should be chaired by the Mayor as the Head of CRs in the district and also the representatives of CR at Sector should be members of the team;

VIII. Work with staff involved in CRVS at community, health facility and administrative levels to ensure that they have the knowledge and support they need to fully operationalise the legal and administrative changes to improve the performance of the CRVS system;

IX. Improve awareness of registration process on new changes of the law to access registration services at all levels;

X. Create demand for births and deaths registration certificate;

XI. Organise community outreach to make families and communities aware of the importance of birth and death registration and certification;

XII. Conduct regular data quality assessments to improve the quality of births, deaths, and COD registration at all levels.