SNAPSHOT

OF CIVIL REGISTRATION AND VITAL STATISTICS SYSTEMS OF

KENYA

ECA

Program Information

About the Centre of Excellence for CRVS Systems

Housed at the International Development Research Centre (IDRC), the Centre of Excellence for Civil Registration and Vital Statistics (CRVS) Systems is a global knowledge and resource hub that actively supports national efforts to develop, strengthen, and scale CRVS systems. It collaborates with organizations and experts to broker access to information and expertise, including global standards, tools, research evidence, and relevant good practice.

The Centre of Excellence was established with funding from Global Affairs Canada and IDRC and contributes directly to the work of the Global Financing Facility, a key financing platform of the UN Secretary General's Global Strategy for Women's, Children's, and adolescents' health.

About the International Development Research Centre (IDRC)

Part of Canada's foreign affairs and development efforts, the IDRC invests in knowledge, innovation and solutions to improve the lives of people in the developing world. IDRC works with many stakeholders including civil society organizations, think tanks, regional organizations and government departments in the developing world to promote growth, reduce poverty, and drive large-scale positive change.

Contents

Introduction

The purpose of this report is to provide a brief introduction to the civil registration and vital statistics (CRVS) systems in Kenya.

The information was collected through a questionnaire completed by the Civil Registration Services in December 2018 and supplemented by a desk review of available documents. The report presents country background, selected indicators relevant for CRVS improvement processes, stakeholders' activities as well as resources available and needed to strengthen CRVS systems, coordination, among others.

Brief country profile

The Republic of Kenya is found in East Africa. It lies on the equator, with Ethiopia to the north, Somalia to the north-east, Uganda to the west, South Sudan to the north-west, the Indian Ocean to the south-east, and Tanzania to the south. The Great Rift Valley runs from the north to south through Kenya. The land area of Kenya is 581,313 square kilometres.[1]

- ◉ Capital city: Nairobi

- ◉ Official working languages: English and Kiswahili

- ◉ Ministry responsible for civil registration: Ministry of Interior and Coordination of National Government

- ◉ Civil registration agency: Civil Registration Services (CRS)

- ◉ National statistical office: Kenya National Bureau of Statistics (KNBS)

Kenya's counties
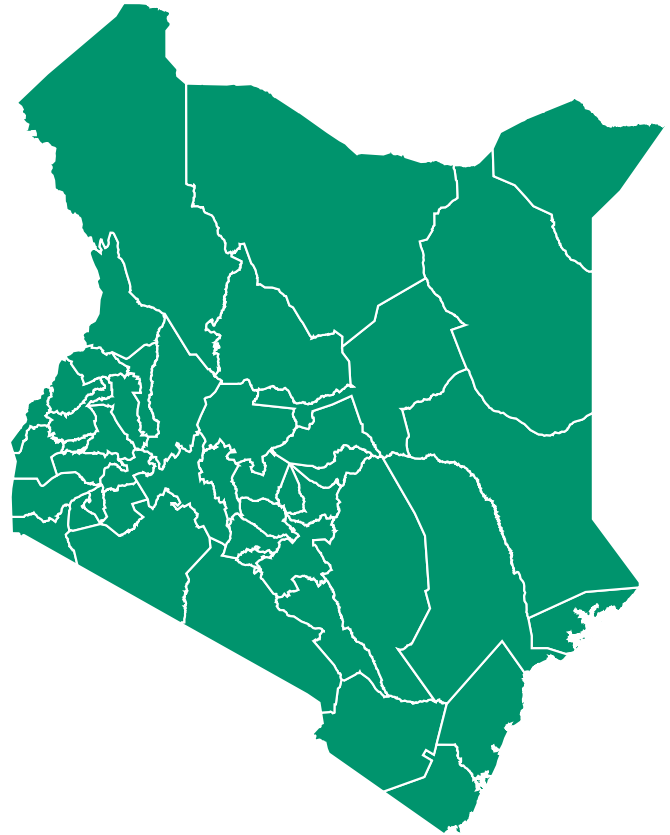
Disclaimer: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.

Kenya has 8 regions and 47 counties and 348 sub-counties.

The estimated total population in 2017 was about 51 million with an annual growth rate of 2.8 per cent per year. About 68 per cent of the population lives in rural areas (UN, 2018).[1]

CRVS dimensions

Births	
Completeness of birth registration[2]	64.1% (2016)[3]
Children under 5 years of age whose births were reported as registered	66.9% (2014)[4]
Births attended by skilled health personnel	61.8% (2014)[4]
Women aged 15-49 who received antenatal care from a skilled provider	95.5% (2014)[4]
DPT1 immunization coverage among 1-year-olds[5]	96% (2016)[6]
Crude birth rate (per 1,000 population)	31 (2016)[6]
Total fertility rate (live births per woman)	3.9 (2016)[6]
Adolescent fertility rate (per 1,000 girls aged 15-19 years)	81.8 (2016)[7]
Population under age 15	40.5% (2017)[8]
Deaths	
Completeness of death registration	41.9 (2016)[3]
Crude death rate (per 1,000 population)	6 (2016)[6]
Infant mortality rate (per 1,000 live births)	33.6 (2017)[9]
Under five mortality rate (per 1,000 live births)	45.6 (2017)[9]
Maternal mortality ratio (per 100,000 live births)	510 (2015)[10]
Marriages and divorces	
Marriage registration rate	Not available
Women aged 20-24 first married or in union before age 15	4 (2014)[6]
Women aged 20-24 first married or in union before age 18	23 (2014)[6]
Divorce registration rate	Not available
Vital statistics including causes of death data	
Compilation and dissemination of civil registration-based statistics	Available[3]
Medically certified causes of death	Available[11]

Civil registration system

Legislative framework

Registration of births and deaths was introduced in Kenya (then, the East African Protectorate) in 1904. In 1928, the Births and Deaths Registration Act (Cap 149 Laws of Kenya) was issued to provide compulsory notification and registration of births and deaths of Europeans, Americans and Indians throughout Kenya. For all other races, it accounted for the registration of deaths that occurred in municipalities only.

Compulsory registration in all areas and communities was extended in stages, beginning with Nairobi and Nyeri, on March 1, 1963, until the whole country was covered by September 1, 1971.[12] CAP149 was amended in 1972 to account for compulsory registration of all births and deaths occurring in Kenya irrespective of nationality, and for registration of births and deaths of Kenyan citizens occurring abroad. In 2012, a National Registration and Identification Bill was drafted and introduced for the first reading in the Senate in 2014.[13] The scope of the bill has now expanded into the Huduma Bill,2019, which seeks to harmonize and consolidate the law on registration of persons; provide efficient and accessible Government services through various integrated delivery platforms for the convenience of citizens; establish a National Integrated Identity Management System (NIIMS); assign unique personal identification numbers (Huduma namba) to persons in a national population database; and provide easy mechanisms for the registration of births, deaths and marriage, among others.

Management, organization and operations

The registration activities were reorganized under the Civil Registration Department (CRD) in 1989 with the responsibilities of registering all births and deaths occurring in Kenya.[14] It then became the Civil Registration Service (CRS) with expanded responsibilities in 2013. Marriage, divorce and annulments are under the Office of the Attorney General and State Department of Justice. Currently, there is no mechanism established to link registration and certification functions and the sharing of information between CRS, the Office of the Attorney General and State Department of Justice.

National CRVS systems coordination mechanisms

There are three levels of coordination committees and a working group at the national level: (i) CRS Departmental Management Committee, (ii) CRS Departmental Technical Committee, and (iii) CRVS Technical Working Group (TWG).

The TWG consists of representatives from the following ministries, departments and agencies: Department of Public Administration, Ministry of Health, Ministry of Education, University of Nairobi's Population Studies and Research Institute, Kenya National Bureau of Statistics, Children Services, Treasury and Planning, the National Council for Population and Development; Kenya Police Service. The following development partners are also represented: World Health Organization (WHO), United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF), the United Nations Refugee Agency, Measure Evaluation – PIMA Project (MEval-PIMA), CDC, Plan International, World Vision, and GOAL Kenya. CRS serves as the secretariat of the TWG. A bilateral memorandum of understanding with CRS provides the terms of reference for the workings of the TWG.

Administrative level registration centres

There is a total of 10,666 sub-locations manned by Assistant Chiefs and 10,465 health facilities, which serve as the registration centres in the country.

Accessibility of civil registration services

Most households are estimated to be 5 to 10 kms away from the Assistant Chiefs' offices and health facilities. The estimated time it would take most households to cover the distance on foot is between 1 to 4 hours[15]. A local civil registration office (CRO) in Kenya serves populations ranging in size from 100,000 to 1 million people, with an average size of 360,000 people. A CRO covers on average about 5,500 square kilometers.[16]

Registration of vital events

- Notification of the occurrence of births and deaths: The original notification slip is given to the informant for the subsequent application for legal registration and obtaining certificates, while the duplicate remains with the assistant chief or the health institution.

- Registration forms:
  - Form B1: birth registration form for births that occurred at home and in health facilities.
  - Form D1: death registration form filled by qualified medical personnel who certify the cause of death.
  - Form D2: death registration form filled by the assistant chief for a death in the community.
  - There are other forms also used for late registrations and applications for certificates.

- Forms are completed in duplicates with the same serial number. Original forms are stored in the CRO and duplicate forms are sent to be archived at the CRS in batches of 250 copies.

- There is no fee for registering births and deaths within the legally stipulated period of 6 months. A fee is charged for late registration and issuance of birth and death certificates as shown in Table 1.

Table 1: Direct costs associated with registration and certification of vital events

Vital event	Fee for Registration		Cost of registration in local currency	Remarks
	Yes	No		
Birth		X		A penalty of USD 1 (KES 100) is charged for late registration
Death		X		A penalty of USD 1 (KES 100) is charged for late Registration

	Fee for certificates		Cost of a certificate local currency	
	Yes	No		
Birth	X		Minimum – USD 0.50 (KES 50) Maximum – USD 1.30 (KES 130)	For amendmenmts, USD 1.30 (KES 130)
Death	X		Minimum – USD 0.50 (KES 50) Maximum – USD 1.30 (KES 130)	For amendmenmts, USD 1.30 (KES 130)

Note: 1 Kenyan shilling (KES) is about 0.0099 US dollars[17]

Backlog of unregistered births

There is a big backlog of late and delayed registrations of births and deaths for many reasons but mainly due to the lack of demand for the service and the lack of easy access to registration centres, especially in rural areas. On the other hand, there has been a recent increase in the demand for birth registration following the enactment of a policy requiring birth certificates for the registration of primary and secondary level examinations. Hence, over the next few years, the registration backlog for late births is likely to reduce significantly.[18] Nonetheless, the backlog of birth registration is expected to continue until accessibility in terms of distance to registration offices and cost associated with registration are made easy and affordable for all population groups, including rural areas.

There are millions of historical records on births and deaths, dating from around 1905, that are being stored in bound volumes in the local CRO (original forms) and at CRD headquarters (duplicate forms). From 2013 to 2017, the World Bank supported the scanning of the original documents and keying-in of digital information from individual records.[19] The digitization of historical births and deaths records has, as of January 2018, over 16 million birth records and about 600 thousand death records digitized. About 20 million records for both births and deaths are pending digitization.[20]

Interface with other sectors and operations

A birth certificate is required when applying for a national identification card. A national identification card is required for registration in the electoral roll. The systems are however not electronically linked.

In 2015, the Government of Kenya launched the Integrated Population Registration System (IPRS) to transform public service delivery by providing citizens access to various public services and information from One-Stop Shop citizen service centres, commonly known as Huduma Centres. One of the functions of these centers is to issue birth certificates when informants produce a birth notification document. This is processed through an integrated technology platform. Data from the civil registration system feed into the IPRS and links with other registration agencies to provide data on the identity of citizens and foreign nationals. Most of the counties are currently operating Huduma centers.[21]

In an effort to improve governance, the government appears to be keen in making investments towards more secure identification. A new generation of cards were released in 2015 and there are plans to introduce digital IDs from 2020.[22]

Vital statistics system

Vital statistics

The Kenya National Bureau of Statistics (KNBS) has the legal mandate under Schedule II of the Statistics Act[23] for the collection, compilation, analysis, publication and dissemination of "Vital occurrences and morbidity" and the co-ordination of the national statistical system. . Since 2013, the Civil Registration Service collects, compiles and disseminates vital statistics through its yearly vital statistics report.[24] The report presents tables, graphs and narratives on birth and death data collected from vital events registers by sex, place of occurrence and a few other background variables. It has also a chapter on causes of death. The 2017 issue is ready for dissemination but has not yet been made available to the public. Vital statistics compilation and dissemination in CRS is supported mainly by UNFPA. There was no budget allocated from the government treasury for the 2018/2019 fiscal year for the compilation of vital statistics from the CR system.

Vital statistics sourced from CRS has been disseminated through the Economic Survey and Statistical Abstracts published annually by KNBS.[21]

Causes of death

Causes of death information	Information collected	
	Yes	No
for deaths occurring in health facilities	X	
for natural deaths occurring in the communities		X
for non-natural deaths occurring in the communities		X

The Ministry of Health (MOH) currently compiles the Cause of death (CoD) statistics from its health institutions and maintains the database at national level. Causes of death are currently being compiled using ICD10. The Civil Registration Service also collects, compiles and disseminates causes of death data through its yearly vital statistics report. Causes of death information obtained from CRS is also compiled and disseminated by the KNBS through the annual Economic Survey Report and Annual Statistical Abstracts.

Deaths occurring in the communities are not routinely certified by qualified medical personnel. The MOH worked with CDC on a project in Homabay County from 2014 to 2017 to train local registration agents to administer paper-based verbal autopsies (VA). The VA tools, which use a computer algorithm to assign causes of death, were piloted in several villages in these past few years. However, the project was not scaled up due to a number of challenges, one being sustainability due to cost.

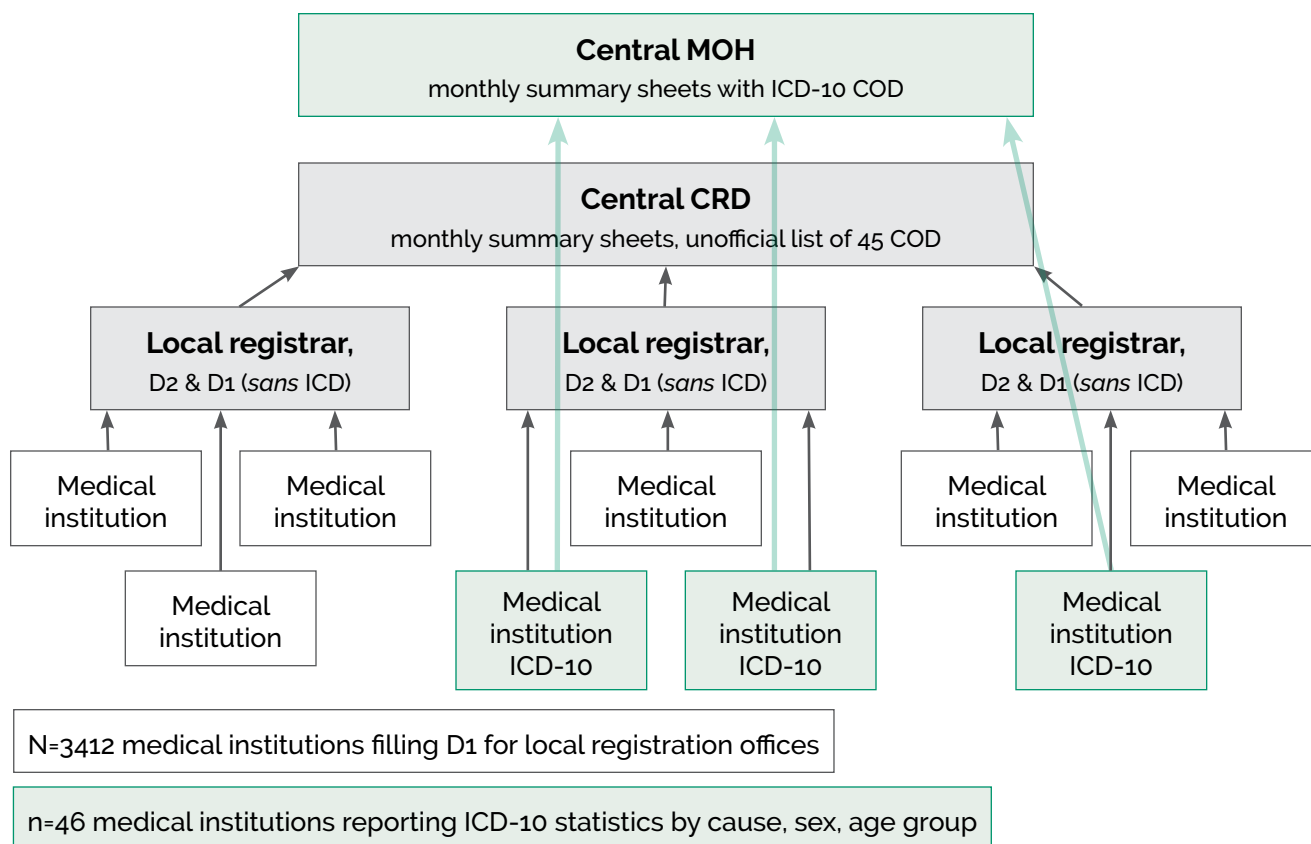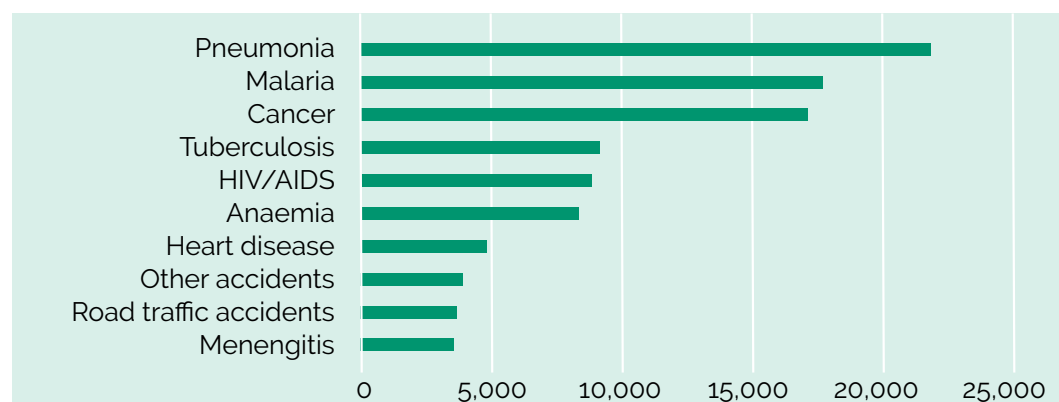### Figure 1. Flow of cause of death data to CRD and MOH, Kenya 2013

Source: CRD 2013, Baseline Systems Assessment Report

Figure 2: Kenya – Causes of Death, 2017

Source: Economic Survey 2018 Highlights. KNBS. April 2018.

Sample registration forms

- ◉ UNICEF Kenya website:
    - Birth register: **https://data.unicef. org/wp-content/uploads/2017/12/ birthRegFormKenya.pdf**
    - Application for a birth certificate: **https://data. unicef.org/wp-content/uploads/2017/12/ Kenya_Birth_ApplicationBirthCertificate_ Form-B4.pdf**
    - Birth certificate: **https://data.unicef. org/wp-content/uploads/2017/12/ birthCertificateKenya.jpg**
    - Marriage certificate: **https://data.unicef. org/wp-content/uploads/2017/12/ MarriageCertificateFormKenya.pdf**
    - Death register: **https://data.unicef. org/wp-content/uploads/2017/12/ deathRegFormKenya.pdf**
- ◉ Ministry of Interior and Coordination of National Government of Kenya
    - **http://www.interior.go.ke/index.php/ resource-center/category/16-civil- registration-forms**
    - GP139A – Application for Registration of a Late Death
    - Application for late registration of birth – G.P.138A
    - Application for registration of a late birth – G.P.138B
    - Late registration authority – death – Form no 6

Digitization

Modernization of the CRVS systems was looked at in terms of computerization of the systems, introduction of mobile phones for notifications and other purposes, and any other innovative approaches which countries shared.

Computerization

Computers used in	Yes	No	Remarks
Some local registration offices capture birth and death records electronically	X		The electronic system, Civil Registration and vital statistics System (CRVSS), is being rolled out. It will take some time until it is scaled up to the whole country because of huge resource implication.
Health facilities		X	
Other, please specify	X		Huduma Centres – see above.

CRS is currently modernizing its information system. A web-based electronic system to automate the Civil Registration and Vital Statistics System (CRVSS) has started. This system has been piloted in a number of counties. Simultaneously, the digitization of records is being undertaken. As the rollout of the system country-wide is proceeding to enhance service delivery, electronic media such as CDs and flash discs are used to transmit CR information from sub-counties to the CRS headquarters

Mobile technology application

Several countries are using mobile technologies in one or several stages of the civil registration processes. Several small-scale pilots have been tried in Kenya. For instance, from 2008-2012, the Finnish Government funded a research project where NOKIA provided smart phones to community-based organizations in which the birth registration form (B1) was programmed into it.

WHO, through the Monitoring of Vital Events with IT component (MoVE-IT) project, piloted the use of mobile phones with RapidSMS, where community health workers notified the occurrence of births and deaths in two districts (Naivasha and Gilgil) in 2013.[25] Although there were efforts to test use of mobile technology in the past, there is currently no such application in any CR process in Kenya.

Improvement initiatives and external support

Information was not available on external support for the improvement of vital statistics systems and civil registration related activities in the Ministry of Health.

Improvement plan and budget

Strategic plan

A 5-year costed strategic plan covering the period 2018 – 2022 was prepared in 2017.

The budget estimated for the whole 5-year period: USD 62.8 Million

Budgetary allocations and requirements

Government treasury allocation for the CR system for July 2018 to June 2019: USD 9.35 million.

To date, there is no commitment from development partners to fill in the budget gap in-kind or otherwise.

Monitoring and evaluation

There an institutionalized monitoring and evaluation framework for assessing the implementation of the CRVS plan, but it is not applied consistently.

Activities identified as high priorities

High priority areas	Estimated cost in US Dollars (USD)	Expected government allocations (USD)	Expected budget gaps (USD)
Digitization of historical records	500,000	Not available	Not available
Upgrade and rollout of CRVS System	700,000	Not available	Not available
Capacity building	2,500,000	Not available	Not available
Total	3,700,000		

Source: CRS

Support from development partners

The development partners that provided support to the civil registration and vital statistics systems improvement initiative are listed below.

Organizations	Kind of support
UNICEF	Improving legal and policy framework as well as comprehensive automation of CRVS business processes
World Bank and Global Financing Facility (GFF)	• Digitization and strategy for scaling up registration of community births through MCH strategy • Capacity of registration officials to monitor and supervise registration processes to improve data quality. • Improve the collection and coding of causes of death. • Pilot a mobile registration office for hard-to-reach areas with low registration coverage • Provide incentives to the civil registration department to improve coverage of birth registration
UNFPA	Compilation of vital statistics and capacity building
WHO	Strengthen health facilities capacities, including preparation for the notifications of births and deaths, particularly in rural areas
UNHCR	CRVS activities in refugee camps
Plan International	Strategic plan development and CRS automation
Center for Disease Control and Prevention (CDC)	Prevent and control diseases and improve reporting of occurrences

Source: Questionnaire completed by CRS

Proposals to improve coordination

National CRVS stakeholders

Coordination and collaboration among key stakeholders is a necessary condition for the improvement of CRVS systems in any country. CRS has provided the following recommendations to achieve better coordination among national key stakeholders at national level:

a. All stakeholders should collaborate to avoid duplication of roles;

b. CRS should spearhead all CRVS activities being undertaken by stakeholders in the country; and

c. There should be regular monitoring and evaluation of the activities being undertaken.

National institutes and development partners

Similarly, CRS has proposed the following to enhance the coordination between key national CRVS stakeholders and development partners at the national level:

a. There should be a proper consultation before implementation of any CRVS activity;

b. There is a need for the development and sharing of a comprehensive CRVS projects annual implementation matrix; and

c. There is a need for adherence to good governance principles in order to uphold the goodwill of users.

Resources

Websites

Most of the research works listed below are results of an Internet search.

- Pelowski, Mathew; Wamai, Richard G.; Wangombe, Joseph; Nyakundi, Hellen; Oduwo, Geofrey O.; Ngugi, Benjamin K. & Ogembo, Javier G. 2015. Why don't you register your child? A study of attitudes and factors affecting birth registration in Kenya, and policy suggestions. *The Journal of Development Studies*, 51(7), 881-904.

- Muchuru, Janet. 2019. eGovernance Academy. https://ega.ee/testimonial/janet-mucheru-director-of-civil-registration-services-ministry-of-interior-and-coordination-of-national-government-kenya/

- Kilobi, Judith Nafula. 2018. Country paper during the Second United Nations World Data Forum in Dubai 2018, titled: *A new era for Civil Registration and Vital Statistics systems: innovation and gender transformation to develop capacities, reduce inequities, and improve data for the SDGs*

- Jarabi, Ben. 2011. *Capacity Building and Improving Quality of Vital Statistics In Kenya.* Nairobi: University of Nairobi.

- Civil Registration Department and United Nations Children Fund. 2013. *Fast tracking civil registration and vital statistics system in Kenya: Comprehensive assessment report.* Nairobi, Kenya.

Additional materials

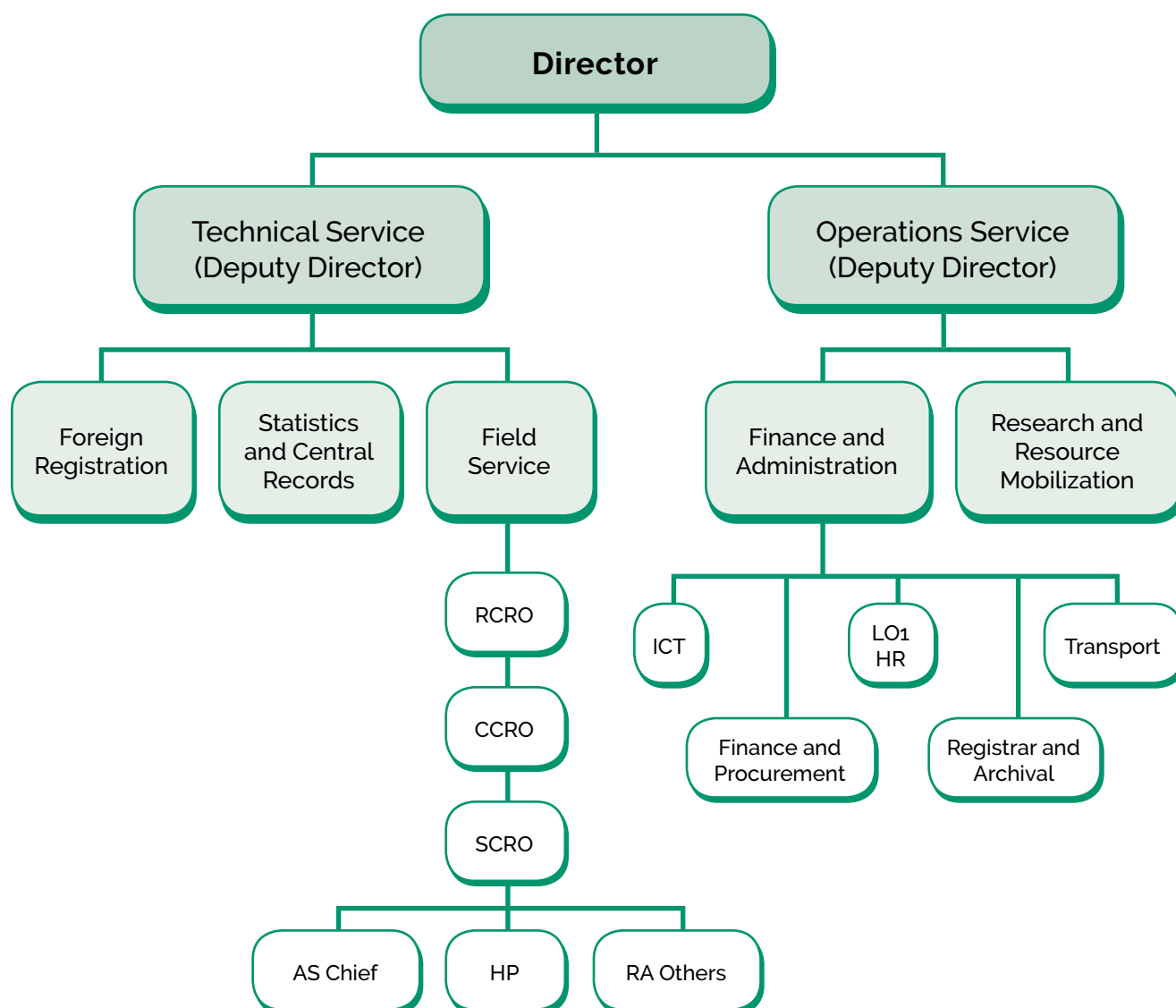Additional information may be found on the following websites:

- WHO: https://afro.who.int/countries/kenya

- UNICEF: https://data.unicef.org/resources/crvs/kenya/

- MEASURE Evaluation: https://www.measureevaluation.org/

- Plan International: https://www.planusa.org

Conclusion

Kenya is in its second 5-year strategic plan period, which started in 2018. The plan sets clear priorities for the development of a well-functioning civil registration and vital statistics system by taking stock of challenges not resolved in the first 5-year plan (2013-2017) and identifying new challenges and opportunities. Some of the major challenges are inadequate budget, distance to registration centres, requisite capacity and skill mix in registration, monitoring and evaluation, and compilation and dissemination of vital statistics. Marriage and divorce registrations are conducted by the Attorney General and State Department of Justice without apparent linkage with that of CRS and no provisions for the compilation and sharing of information for statistical purposes.

There are several initiatives that CRS has undertaken to strengthen its working arrangements with key stakeholders, such as MOH to increase the completeness of birth and death registration by strengthening the notification services provided by health facilities. To this effect, the MOH has issued directives in 2015 to all County Health Directors to screen all infants that visit maternal and child health (MCH) and outpatient clinics for evidence of birth registration and provide notifications for those not registered; expand local registration services; and improve the notification of events that occur in the community, among others. The collaborative work with MOH is expected to improve cause of death reporting through ICD-10 training and verbal autopsy. Clearing the backlog of unregistered events is progressing well with support from development partners. Discussions have started on the issuance of Unique Personal Identifiers (UPI) and when implemented it would facilitate linkages of several systems with the CRVS system. The Government of Kenya's bold initiative in technology and innovation creates a conducive environment for eCRVS systems in the future.

Annex: Organizational chart of the Civil Registration Service of Kenya, January 2019

```
                          ┌──────────────┐
                          │   Director   │
                          └──────┬───────┘
                 ┌───────────────┴────────────────┐
        ┌────────┴─────────┐            ┌──────────┴──────────┐
        │ Technical Service│            │ Operations Service  │
        │ (Deputy Director)│            │ (Deputy Director)   │
        └────────┬─────────┘            └──────────┬──────────┘
    ┌────────┬───┴────┐                   ┌────────┴──────────┐
┌───┴───┐┌───┴───┐┌───┴───┐         ┌─────┴──────┐   ┌────────┴────────┐
│Foreign ││Statist││ Field │         │Finance and │   │Research and     │
│Registr.││and    ││Service│         │Administrat.│   │Resource         │
│        ││Central││       │         │            │   │Mobilization     │
│        ││Records││       │         └────────────┘   └─────────────────┘
└────────┘└───────┘└───┬───┘
                    ┌──┴──┐
                    │RCRO │
                    └──┬──┘
                    ┌──┴──┐
                    │CCRO │
                    └──┬──┘
                    ┌──┴──┐
                    │SCRO │
                    └──┬──┘
            ┌──────────┼──────────┐
        ┌───┴───┐  ┌───┴──┐  ┌────┴────┐
        │AS Chief│ │  HP  │  │RA Others│
        └────────┘ └──────┘  └─────────┘
```

Finance and Administration branch: ICT, LO1 HR, Transport, Finance and Procurement, Registrar and Archival

Key

RCRO – Regional Civil Registration Coordinator

CCRO – County Civil Registration Coordinator

SCRO – Sub County Civil Registration

HP – Health Care Personnel

RA – Other Registration Agents (Imams, Pastors, Village Elders, Health Volunteers)

Endnotes

1   United Nations. 2018. *Demographic Yearbook – 2017*. https://unstats.un.org/unsd/demographic-social/products/dyb/dyb_2017/. ST/ESA/STAT/SER.R/47.

2   Birth or death registration completeness means the actual number of registered births or deaths divided by the estimated number of births or deaths in a particular country or area, in a specified time period usually a year. For further reading refer to ECA, ESCAP and Statistics Norway (2016).

3   Kenya National Bureau of Statistics. 2018. *Statistical Abstract.* https://www.knbs.or.ke/

4   Kenya National Bureau of Statistics, Ministry of Health, National AIDS Control Council (NACC), the National Council for Population and Development (NCPD), and Kenya Medical Research Institute (KEMRI). 2015. The 2014 *Kenya Demographic and Health Survey 2014.* https://dhsprogram.com/pubs/pdf/FR308/FR308.pdf

5   DPT1: Surviving infants who received the first dose of diphtheria, pertussis and tetanus (DPT) vaccine.

6   UNICEF. 2017. *The State of World's Children 2017.* https://www.unicef.org/sowc2017/

7   World Bank. 2018. *Adolescent fertility rate.* https://data.worldbank.org/indicator/sp.ado.tfrt

8   United Nations. 2017. *World Population Prospects.* Volume-II: Demographic Profile. Department of Economic and Social Affairs, Population Division. https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_Volume-II-Demographic-Profiles.pdf

9   United Nations Inter-Agency Group for Child Mortality Estimation (2018). UN IGME. *Total Under-5 Mortality Rate, Infant Mortality Rate and Neonatal mortality database 2018.* http://www.childmortality.org/

10 World health statistics 2016: monitoring health for the SDGs, sustainable development goals. https://www.who.int/gho/publications/world_health_statistics/2016/en/

11 Kenya National Bureau of Statistics. 2018. *Economic Survey 2018 Highlights.* https://www.knbs.or.ke/

12 Births And Deaths Registration Act Subsidiary Legislation, Towns, Districts And Areas In Which Registration Of Births And Deaths Is Declared To Be Compulsory Under Sections 9(2) And 15(2; Births And Deaths Registration Rules, 1966 births And Deaths (Late Registration) Rules, 1971. http://www.kenyalaw.org/lex/sublegview.xql?subleg=CAP.%20149

13 Measure Evaluation. 2017. *Civil Registration and Vital Statistics System – End-of-Project Assessment Report.* Accessed on March 24, 2019. https://www.measureevaluation.org/resources/publications/tr-17-220

14 Civil Registration Department. http://www.interior.go.ke/index.php/directorate-of-immigration-registration-of-persons

15 Estimate provided by Civil Registration Service of Kenya in 2018.

16 Civil Registration Department. 2014. *Annual Vital Statistics Report 2013*

17 Google. Accessed May 16, 2019. https://www.google.com/search?q=1+kenya+shilling+in+usd&rlz=1C1EJFC_enUS811US812&oq=1+kenyan+shilling+in+U&aqs=chrome.1.69i57j0l5.10226j1j7&sourceid=chrome&ie=UTF-8.

18 Daily Nation. *Birth papers a must for exam candidates.* https://www.nation.co.ke/news/1056-864812-ii5yblz/index.html. Accessed on March 19, 2019.

19 Civil Registration Department , USAID and MEASURE Evaluation PIMA (2013). *National Civil Registration and Vistal Statistics System: Baseline Systems Assessment Report.* Nairobi, Kenya. https://www.measureevaluation.org/pima/baseline-assessments/02crvsbaselineassessment_rev.pdf

20 CRS and UNICEF. 2018. *Productivity Improvement of Civil Registration Services Workshop Report: 6-9 June 2018*

21 Huduma Kenya. https://www.hudumakenya.go.ke/

22 Daily Nations. *Digital IDs with special features to be issued next year.* Feb 21, 2018. Accessed on March 12, 2019. https://www.nation.co.ke/news/Kenyans-get-digital-IDs-2019/1056-4313228-nmle6fz/index.html

23 Kenya National Bureau of Statistics. https://www.knbs.or.ke

24 Civil Registration Services. 2016. *Kenya vital statistics report 2015.* Nairobi, Kenya: Department of Civil Registration Services. Nairobi. Kenya.

25 WHO. *Registering births and deaths using mobile phones in Kenya*, project description, http://www.who.int/healthmetrics/news/registering_birth_death/en/index.html

CENTRE OF EXCELLENCE
for CRVS Systems

LE CENTRE D'EXCELLENCE
sur les systèmes ESEC

www.CRVSsystems.ca