



CRVS analyses and evaluations

Summary: The CRVS baseline evaluation framework

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Why is a CRVS system baseline evaluation important?

Deficiencies in birth and death registration around the world are causing a 'scandal of invisibility',¹ particularly among the poorest and most marginalised people. Deficiencies in birth and death registration are often caused by weak or inadequate civil registration and vital statistics (CRVS) systems.

CRVS improvement will require countries to form collaborative partnerships at multiple levels, and technical and implementation partners will play an important role in helping countries to improve the collection and use of their CRVS information.

The Bloomberg Philanthropies Data for Health (BD4H) Initiative has designed and implemented the **baseline evaluation framework** as an assessment tool. Technical partners and countries can use the tool at the start of their collaboration to understand the current CRVS system and data landscape, including strengths, weaknesses and limitations. A baseline evaluation report is a **concise technical reference document**, preferably completed before any technical interventions begin.

There are **three reasons** to conduct a baseline evaluation:

1. To obtain a comprehensive assessment of a CRVS system, including the quality of the data produced.
2. To help countries identify the most efficient and cost-effective areas for CRVS technical intervention.
3. To provide a starting point for measuring the impact of technical interventions over regular intervals. Summarising the CRVS situation at baseline allows progress of the interventions to be empirically seen.

Understanding the baseline evaluation framework

A CRVS system comprises the organisation and infrastructure for **compiling vital statistics**, as well as the human capacity to **effectively use** those statistics to guide health and social policy and development in a country. The baseline evaluation framework has four domains of inquiry that aim to explore both of these aspects of the system.

Quality, timeliness and detail of vital statistics available to government	Functioning of the CRVS system
Institutional capacity for CRVS production and use	Demand for CRVS

Domain 1: Quality, timeliness and detail of vital statistics available to government

Sub-domain 1.1: Birth, death and cause of death data available from the CRVS system

Objective: to identify the availability of birth, death and cause of death data for monitoring how well the CRVS system performs and produces vital statistics.

This first sub-domain documents the birth, death and cause of death (COD) data that are available and consolidated by government. This includes identifying:

- the data characteristics (for example, the number of events and other variables for analysis – sex, age, place of occurrence),
- how many years of data are available,
- the most recent year of available data, and
- where the data can be sourced.

¹ Setel et al. A scandal of invisibility: making everyone count by counting everyone. *Lancet* 2007; 370(9598):1569-1577.



Sub-domain 1.2: Other systems of continuous surveillance of birth and death data

Objective: to identify the availability of birth, death and cause of death data for monitoring how well the CRVS system performs and produces vital statistics.

Data on births, deaths and COD may also be accessible from other discrete surveillance sites, such as demographic surveillance sites and research settings. Because these sites are often located in multiple settings, they can provide complementary data to what is collected through the CRVS system.

Sub-domain 1.3: Data quality

Objective: to assess whether the data collected, aggregated and reported are accurate, reliable and complete.

This sub-domain assesses the quality of data collected and its potential to be 'fit for purpose' for policy and planning. The Vital Statistics Performance Index for Quality is a metric that assesses the quality and utility of mortality data, and is the recommended metric to analyse the overall quality of mortality data.²

Domain 2: Functioning of the CRVS system

Sub-domain 2.1: CRVS system structure, processes and governance

Objective: to systematically understand, analyse and optimise CRVS system processes and relationships

Enterprise Architecture is a method that uses process mapping and modelling to describe and analyse the business architecture of a system. A process map is a visual snapshot of the activities, stakeholders and requirements of a process from end to end. Process maps can capture complexity and meaningfully display the multiple interactions (or lack of them) among different stakeholders in the CRVS system.³ These help in assessing whether CRVS system goals and objectives are aligned with current country operations.

Sub-domain 2.2: Legal and regulatory framework for CRVS

Objective: to identify how a country's CRVS system is anchored in law, to help ensure its continuity, consistency, accuracy and comprehensiveness.

Making registration activities subject to the law, and establishing procedural rules and regulations, are essential for the efficient management, operation and maintenance of any CRVS system. Legislation helps to ensure the completeness of registration and improve the accuracy of information held in the civil record.

Sub-domain 2.3: Cause of death reporting and certification practices

Objective: to describe the processes and standards used in certifying health facility and community deaths.

Understanding the processes and standards around the medical certification of COD is one of the first steps in improving the quality of mortality statistics. Areas covered under this sub-domain include:

- Whether the International Form of Medical Certificate of Cause of Death (WHO 2016) is in use and, if not, what the major differences in the local certificate are.
- The average hours of training medical students, interns, and experienced physicians receive on certification.
- Whether deaths are coded and, if so, to what version of the International Classification of Diseases.
- Whether automated coding is used (for example, Iris).
- The extent to which verbal autopsy is used to determine COD in the community (that is, for deaths occurring outside of hospitals).

² Phillips DE, Lozano R, Naghavi M, et al. A composite metric for assessing data on mortality and causes of death: the vital statistics performance index. *Population Health Metrics* 2014; 12:14.

³ de Savigny D, Cobos Muñoz D. *Understanding CRVS systems: The importance of process mapping*. CRVS development series. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, the University of Melbourne; 2018.

Domain 3: Institutional capacity for CRVS production and use

Sub-domain 3.1: Previous assessments and activities

Objective: to identify other CRVS assessments, strategic action plans and other systems strengthening activities and projects that may have occurred in the past.

Most countries have already conducted an assessment or some planning. It is important to refer to the findings of previous assessments and strategic plans, especially for recent or continuing projects.

Sub-domain 3.2: Funding

Objective: to determine if a costed investment plan for CRVS systems scale up exists and identify funding gaps.

The funding gap is the amount of money that the government has not yet identified or committed to, which is likely to act as a barrier to implementation of the investment plan. This gap can also be an opportunity for strategic technical and partner investment.

Sub-domain 3.3: Oversight

Objective: to identify if there is a national CRVS committee.

It is important to identify if a national inter-agency CRVS committee or working group exists. If so, the assessment should also identify the committee's membership (that is, government departments, and external agencies or stakeholders), and how many times the committee has met in the past 12 months. The committee should be sufficiently high level, to ensure that decisions and activities can be implemented effectively.

Sub-domain 3.4: Civil registration functions

Objective: to compare current civil registration practices with international best-practice standards.

Current civil registration practices are compared with the 'Ten CRVS Milestones' framework developed to help policy-makers, managers and other CRVS stakeholders to understand CRVS systems as a whole and compare them with best practice.⁴

Sub-domain 3.5: Health sector functions

Objective: to compare current health sector practices with international best-practice standards.

This sub-domain is similar to Sub-domain 3.4 on registration practices, except it emphasises capturing information about the process for certifying, analysing and disseminating COD statistics.

Sub-domain 3.6: Statistical office functions

Objective: to compare current statistical office practices with international best-practice standards.

Before completing this sub-domain, it is important to identify the government agency that is responsible for producing vital statistics. This is usually the national statistics office, but local practices may vary. Key aspects to assess include the country's capacity to:

- Compile vital statistics according to global standards (such as those set by the United Nations).⁵
- Check raw data for accuracy and apply adjustment techniques.
- Analyse and interpret the data.
- Present and disseminate information for maximum use.

Domain 4: Demand for CRVS

Objective: to identify the incentives and initiatives that have occurred to improve community knowledge and demand for registration.

Community awareness of the importance of birth and death registration, and the ability to access registration services without barriers (for example, fees) are important for CRVS systems to function effectively and reliably. There are no sub-domains for this last component; instead, five specific indicators are assessed:

1. Incentives used in the past five years to encourage birth registration.
2. Incentives used in the past five years to encourage death registration.
3. Barriers to achieving complete registration of vital events.
4. National or local incentives to increase community knowledge about the importance of civil registration.
5. Recent training to increase knowledge and skills among the CRVS workforce.

⁴ Cobos Muñoz D, Abouzahr C, de Savigny D. The 'Ten CRVS Milestones' framework for understanding Civil Registration and Vital Statistics systems. *BMJ Global Health* 2018; 3:e000673.

⁵ United Nations Department of Economic and Social Affairs, Statistical Division. *Principles and recommendations for a vital statistics system*. Revision 3. New York, USA: UNSD; 2014.

Information sources

Sources that may be consulted as part of the baseline evaluation include:

- Interviews with CRVS personnel within key internal country organisations and departments (e.g. officials from Ministry of Health, National Statistics Office, etc.)
- Interviews with CRVS-related personnel within relevant external stakeholders (e.g. multilaterals, bilaterals, donor agencies, etc.)
- Domestic laws, regulations and policies on CRVS.
- Previous CRVS assessments (for example, rapid or comprehensive, or modified versions of these).
- In-country CRVS handbooks, manuals, work plans, meeting notes, agency or inter-agency CRVS agreements, conference reports and other relevant documentation.
- The Lancet series (from 2007 and 2015) that included high-level standardised morbidity and mortality measurements across countries.
- Site or field visits.
- Multidisciplinary literature review of peer-reviewed and grey literature, including from public health, medical, law, social science and anthropological databases.

Bringing it all together: the baseline evaluation report

The baseline evaluation report has two main parts: summary tables of key data and findings from the four domains of inquiry, and a complementary narrative.

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The narrative component is, in many respects, the most critical part of the report, because it describes overall CRVS system functioning. Importantly, the narrative explains what is happening in practice – that is, the difference between what ought to be occurring according to CRVS-related legislation, policy, standards and best practice; and what really is happening. This contextual information qualifies the reliability of the CRVS systems' data outputs.

Summary

In order for civil registration and vital statistics (CRVS) partners to provide effective and efficient technical support to countries, they will need to comprehensively understand a country's CRVS situation at baseline. The baseline evaluation framework applied by the Bloomberg Philanthropies Data for Health (BD4H) Initiative is an important tool that delivers a concise and up-to-date actionable evaluation of a CRVS system. The framework assesses four key domains of CRVS system performance:

1. Quality, timeliness and detail of vital statistics (births, deaths and cause of death) available to governments.
2. Functioning of the CRVS system.
3. Institutional capacity for CRVS production and use.
4. Demand for CRVS.

Undertaking the baseline evaluation is a key step to enable those working to strengthen CRVS systems to identify key areas for technical intervention to have impact. A baseline evaluation also provides a starting point to empirically measure the long-term effect of the CRVS technical interventions. Although specifically designed for the BD4H Initiative, principles of the baseline evaluation framework can be adapted to other CRVS improvement and measurement initiatives.