Progress report on covering every birth and death: improving civil registration and vital statistics in the WHO South-East Asia Region: 2021 update
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# Contents

Foreword .................................................................................................................................... v

Acronyms .................................................................................................................................. vii

The importance of civil registration of births and deaths ............................................................ 1

Growing demand for mortality data during the COVID-19 pandemic ........................................... 3

Progress made in CRVS systems from 2013–2019 ..................................................................... 6

Strategic support to development of country CRVS systems .................................................... 12

Conclusions and the way forward ............................................................................................ 19

Annex: Country CRVS Profiles .................................................................................................. 23

- Bangladesh .................................................................................................................. 25
- Bhutan ........................................................................................................................ 28
- DPR Korea ................................................................................................................... 30
- India ............................................................................................................................ 31
- Indonesia ..................................................................................................................... 35
- Maldives ...................................................................................................................... 37
- Myanmar ..................................................................................................................... 39
- Nepal .......................................................................................................................... 41
- Sri Lanka ..................................................................................................................... 43
- Thailand ..................................................................................................................... 45
- Timor-Leste .................................................................................................................. 47

References .................................................................................................................................. 49
Foreword

The civil registration of birth and death provides legal documentation of an individual’s identity, civil status, and family relations. It facilitates access to services, benefits, entitlements and protections that are central to health and well-being. The ongoing registration of vital events as and where they occur, in particular the certification of cause of death, also generates a continuous flow of vital statistics and disease burden that underpin policy-making across multiple sectors.

Weak civil registration and vital statistics (CRVS) systems leave many births and deaths unregistered and uncounted, leading to a “scandal of invisibility” with increased risks of poverty, vulnerability, statelessness, marginalization and exclusion from health, social, economic and political development. Low rates of civil registration are the result of many factors, such as inadequate civil registration laws and regulations, inaccessibility of registration offices, high direct and indirect costs, complex forms and procedures, and lack of awareness of the importance and benefits of civil registration. Social and cultural factors make it especially difficult for vulnerable groups, such as women and girls, the poor, migrants and stateless persons, to access civil registration.

Limited availability and poor quality of cause of death data stifles efforts towards achieving objectives of national health policies, strategies and plans. These data are also essential to monitor cause-specific mortality for targets listed under the United Nations’ Sustainable Development Goals as well as under the results monitoring framework of the WHO Thirteenth General Programme of Work 13 (GPW13). The cause specific mortality data will help prioritise interventions to address those disease conditions and modifiable risk factors that contribute most to the disease burden.

Several SEA countries acknowledge persistent systemic weaknesses in their CRVS systems, including incomplete or inaccurate official documentation of births and deaths, inadequacies in ascertainment of causes of death, and inefficient data management processes – resulting in poor quality fertility and mortality statistics. The COVID-19 pandemic has further exposed long-standing data gaps, especially in tracking mortality and causes of death.

The “WHO South-East Asia Regional strategy for strengthening the role of the health sector for improving civil registration and vital statistics 2015-2024” was designed to support countries in the region in developing and implementing coordinated and multisectoral CRVS improvement plans. This mid-point in the strategy is an opportune moment to assess progress and consider aspects that require further effort in order to attain complete birth and death registration and accurate ascertainment of causes of death. Almost all SEA countries have nominated CRVS focal points, established coordinating committees, conducted assessments and agreed on targets and reporting plans. However, intensified efforts are needed to deliver results in national CRVS improvements in birth and death and cause of death registration coverage and analysis and use of reliable vital statistics.

The health sector can play a key role in contributing to faster progress. This follows because health workers are in contact with people throughout the life course; they are often present at a birth, provide care during hospitalization and through community-based programmes, offer health support throughout childhood, adulthood and into old age and into old age.
therefore are well-placed to record the circumstances of a birth or a death. At the same time, CRVS systems are a cornerstone of a strong health system for the future. By providing governments with reliable and up-to-date fertility and mortality statistics, including causes of death, authorities and policymakers can effectively design, target and deliver stronger, evidence-based health programming.

This document provides an overview of CRVS strengthening progress in SEA countries over the past years. It draws on country reporting and on broader regional and global strategies developed within the international development system. The SEA Regional Office of WHO looks forward to working with all countries and partners to bring new energies to this joint endeavour and realize our shared vision of stronger civil registration systems that inform policies to yield better health outcomes for people around the region.

Dr Poonam Khetrapal Singh
Regional Director
WHO South-East Asia Region
## Acronyms

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<th>Acronym</th>
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<tr>
<td>9BCRS</td>
<td>Bhutan Civil Registration System</td>
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<td>BDRIS</td>
<td>Birth and Death Registration Information System (Bangladesh)</td>
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<td>BORA</td>
<td>Bureau of Registration and Administration (Thailand)</td>
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<td>BPM</td>
<td>Business Process Mapping (tool)</td>
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<td>CHW</td>
<td>Community health worker</td>
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<td>CRVS</td>
<td>Civil registration and vital statistics</td>
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<td>CRVS-SAR</td>
<td>CRVS System Analysis and Redesign (tool)</td>
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<td>DCRC</td>
<td>Department of Civil Registration and Census (Bhutan)</td>
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<td>DHIS-2</td>
<td>District Health Information Software-2</td>
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<td>DHS</td>
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<td>G2C project</td>
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<td>GDS</td>
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<td>GNM</td>
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<td>HISSL</td>
<td>Health Informatics Society of Sri Lanka</td>
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<td>HMIS</td>
<td>Health Management and Information System</td>
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<td>ICD</td>
<td>International Classification of Diseases</td>
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<td>MCCD</td>
<td>Medical certificate of cause of death</td>
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<td>MICS</td>
<td>Multiple Indicator Cluster Survey</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<td>ORG</td>
<td>Office of the Registrar General</td>
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<td>PIN</td>
<td>Personal identification number</td>
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<td>SDGs</td>
<td>Sustainable Development Goals</td>
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<td>Acronym</td>
<td>Full Form</td>
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<td>SEA Region</td>
<td>South-East Asia Region</td>
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<td>SIAK</td>
<td>Population Administration Information System (Indonesia)</td>
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<td>SMoL</td>
<td>Startup Mortality List</td>
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<td>SRS</td>
<td>Sample registration system</td>
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<td>Sample Vital Registration System (Bangladesh)</td>
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<td>UHC</td>
<td>Universal health coverage</td>
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<td>UIN</td>
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<td>UNDP</td>
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<td>United Nations Economic and Social Commission for Asia and the Pacific</td>
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<td>UNICEF</td>
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<td>United Nations Legal Identity Agenda</td>
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<td>Union Territory (India)</td>
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<td>Verbal autopsy</td>
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The importance of civil registration of births and deaths

The system of civil registration of births and deaths represents the legal recognition of a person’s existence, from the start of life until death, and implies an acknowledgement of the responsibilities of the state towards the individual. Yet in many countries of the world, including in the WHO South-East Asia (SEA) Region, civil registration systems function suboptimally, leaving many births and deaths unregistered and uncounted, thereby depriving people of evidence of identity – name, age, family relationships and civil status. Absence of civil registration is associated with increased risks of poverty, vulnerability, statelessness, marginalization and exclusion from health, social, economic and political development.

The official documentation of identity provided through birth registration enables individuals to make claims of nationality, exercise civil and political rights, access services such as health and education, and participate in modern societies. For children, particularly, documentary evidence of identity helps to protect them from exploitation and hardship. Ability to prove family relationship and status is likewise crucial to women’s empowerment and participation in all spheres of life.

UNICEF estimates that of all children under age 1 worldwide, roughly three in 10 (about 40 million) have not had their births registered (1). Many infants are not routinely registered at birth but are registered later; for example, when they approach school age, where a birth certificate is required for entry into school. This late registration means that infants and very young children remain invisible, and national and local authorities cannot adequately plan for the provision of services that very young children need, such as health and nutrition care and routine immunizations.

The proportion of deaths that go unregistered is generally higher than unregistered births. The World Health Organization (WHO) estimates that fewer than half of all deaths are formally reported, legally registered or officially counted, and the causes of these unregistered deaths are largely unknown. The proportion of unregistered deaths is highest in the younger age groups, especially in very young children. There is evidence in some settings that deaths in women are less likely to be registered than those in men (2). The legal documentation of the death of a family member is of particular importance to surviving family members. It provides evidence of changed civil status, of orphaned children, of eligibility of a surviving spouse to remarry, and enables surviving family members to claim nationality by descent and access possessions, benefits, and entitlements and inheritance.

In addition to the benefits to individuals and families, birth and death registration play a crucial role in the generation of vital statistics. Civil registration records provide the basic demographic data that are needed by governments to track the size, age and sex distribution, and growth rates of their populations. Such data are also needed to construct international development indicators such as birth rates, mortality rates and life expectancy, ideally with disaggregation by age, sex and administrative area. From the health sector perspective, one of the most crucial information to prioritize health interventions in the global, national and subnational context is the disease burden. The cause-specific age-wise mortality data will help prioritize interventions to address those disease conditions and modifiable risk factors that contribute most to the disease burden. The ability of
countries to monitor their progress towards the Sustainable Development Goals (SDGs) relies heavily on access to the disaggregated data on births, deaths and cause of death that only a civil registration and vital statistics (CRVS) system can provide. With 12 of the 17 SDGs requiring civil registration data for measuring progress, investments in civil registration systems are an important step in achieving the SDGs. Functioning CRVS systems can provide governments with reliable and up-to-date population and mortality statistics, including causes of death, which enables them to plan, deliver and track the efficacy of interventions to combat the spread of pandemic as well as to monitor health and social development programmes and to track progress towards national and international commitments such as the SDGs.

To accelerate progress towards strengthening CRVS systems, Member States in the WHO SEA Region adopted the “WHO South-East Asia Regional strategy for strengthening the role of the health sector for improving civil registration and vital statistics 2015–2024” (3). The regional CRVS strategy articulates common principles in CRVS development, key strategic objectives to be met, and a range of recommendations and key action areas to be addressed. The regional CRVS strategy focuses on health sector initiatives at the regional, national and local levels to support notification and universal civil registration of births and deaths and causes of deaths, and improve the generation of accurate, complete and timely vital statistics. Resolution SEA/RC67/R2 included a request for periodic progress updates to the Seventy-first, Seventy-fourth and Seventy-eighth sessions of the Regional Committee for South-East Asia in 2018, 2021 and 2025, respectively.

The SEA regional CRVS strategy, goals and indicators are aligned with the Regional Action Framework for CRVS in Asia and the Pacific 2015–2024 (4) developed through the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), which includes all countries in the WHO SEA Region. The Regional Office for South-East Asia, along with other UN agencies and development partners, had collaborated on the development of the UNESCAP CRVS Regional Action Framework. Several UN agencies, including UNICEF, UNESCAP, UNDP and UNHCR, are also focused on improving civil registration. WHO is leading the support from development partners in the Region to strengthen the generation and use of reliable mortality statistics.
Growing demand for mortality data during the COVID-19 pandemic

Since its emergence in late 2019, the SARS-CoV-2 virus has caused severe morbidity and premature mortality on an unprecedented scale and greatly amplified the need for reliable and timely data on deaths and their causes for improved local and national planning and monitoring. The daily count of the numbers of deaths, alongside numbers of confirmed cases and hospitalizations, is an important indicator of the pandemic’s evolution in countries, cities and administrative areas. Since the start of the pandemic to 4 July 2021, over 35 million positive cases have been reported in the WHO SEA Region, and some 496 000 deaths have been confirmed (5). Fig. 1 shows the cumulative total of COVID-19 deaths in 10 countries of the WHO SEA Region up to end April 2021. Whereas India had the largest absolute number of deaths, Nepal and Maldives have a higher death rate per 1 000 000 population, as shown in Fig. 2. It is probable that the reported figures underestimate total mortality due to incomplete registration of deaths. Many countries report deaths only among people who died in a health facility and tested positive for COVID-19. Lack of timely reliable data on mortality and cause of mortality is not allowing us to assess the impact of the pandemic on indirect mortality due to disruption of essential health services.

Fig. 1. Cumulative total reported COVID-19 deaths in 10 countries of the WHO SEA Region, March 2020 to 4 July 2021
Accurate, real-time monitoring of mortality during the pandemic has been a challenge for all countries. Daily death counts based solely on reporting of deaths of hospital patients identified as positive for COVID-19 often do not systematically include those who have died outside of a hospital (e.g. at home, in a social care institution or elsewhere). Reliance on hospital figures alone can lead to an underappreciation of the scale and direction of the pandemic. Many countries have recognized that a better, more complete, source of COVID-19 mortality data is a well-functioning CRVS system that captures all vital events within their borders, including detailed information on all registered deaths, by age, sex, date of occurrence, location and cause of death.

To respond to the demand for quickly available and complete data on mortality, some countries have ramped up their statistical reporting systems to quickly provide complete mortality data on a weekly basis, easily visualized in a series of maps and graphs, to periodically estimate “excess mortality”, i.e. the gap between the total number of people who died (from all causes) and the historically expected levels of mortality for the same place and time of year. The concept of excess deaths captures both the burden of deaths directly caused by the SARS-CoV-2 virus and indirect mortality resulting from disruptions in access to and use of health-care services as well as threats to livelihoods associated with lockdowns and job losses (6). Excess mortality can be monitored both nationally and at the subnational level (e.g. in cities), providing a greater degree of granularity than is available from the national level information alone.

Whereas high-income countries are able to publish excess mortality data from the CRVS system within 1 to 2 weeks, many low- and lower middle-income countries cannot produce data as quickly. In this case, a rapid mortality surveillance system may be established to monitor total deaths in a network of carefully selected sentinel sites that have a high probability of seeing cases and can report death and cause-of-death data on a regular basis. Rapid mortality surveillance can either leverage existing CRVS systems or be absorbed into them, to maximize the likelihood of long-term success and improve the notification and ultimate civil registration of deaths everywhere (7).
Unfortunately, the ability of country CRVS systems to respond quickly to the demand for timely data needs on mortality and causes of death has been adversely affected by the side-effects of the pandemic. Responses to the United Nations Legal Identity Agenda (UNLIA) questionnaire to countries on the status of CRVS during the COVID-19 emergency (8) identified challenges in ensuring continuity in service provision of vital events. Several countries, including four countries of the SEA Region – Bangladesh, Indonesia, Maldives and Sri Lanka – stressed that continuity in service provision has depended critically on the ability of registration officials to work remotely, on access to online services, and to simplification of registration processes, including greater flexibility with regard to the notification of births and deaths, particularly those that occur outside of health facilities (9). Lessons learnt during this challenging period may provide opportunities for countries to prioritize CRVS system strengthening. This might include strategies for more adaptable service provision while maintaining high standards of legal and statistical reliability. At the same time, interventions are needed to accelerate the production of statistics which are essential to guide the public health response to this pandemic and to those that will undoubtedly emerge in the future. These could include, for example, issuing weekly or monthly provisional data on mortality from all causes in order to identify trends that could signal an emerging health threat. This report on progress in CRVS system strengthening in the SEA Region can contribute to an acceleration in CRVS improvements in the Region.
Progress made in CRVS systems from 2013–2019

CRVS systems are available in all countries of the SEA Region and many countries have in recent years conducted assessments of CRVS functioning, developed improvement plans and established CRVS multisectoral coordination committees. However, there are persistent systemic weaknesses almost everywhere, such as incomplete or inaccurate official documentation of reported events, inadequacies in ascertainment of causes of death, and inefficient data management processes.

Birth registration

Fig. 3 shows the trends in percentage of births that are registered within one year of occurrence for selected countries of the SEA Region (10). Despite the increasing attention being paid to the importance of birth registration globally and in the Region, most countries have reported relatively modest progress, the exceptions being Bangladesh, Indonesia and Timor-Leste. Several countries, including most recently Indonesia, have reported birth registration completeness close to or over 100%. This is indicative of either inaccurate counting of registered births (for example, double counting or inclusion of delayed registrations), underestimation of total expected births, or a combination of both.

Fig. 3. Percentage of births in the territory and jurisdiction that are registered within one year of occurrence, 2013–2019*

*As reported to UNESCAP. Where completeness exceeds 100%, this is due to either double counting of registrations or underestimation of total births. Data for Bhutan are from the 2020 vital statistics report.
Possible data limitations may also account for the differences in birth registration completeness reported to UNESCAP as part of the mid-term review and data from recent household surveys. For example, Nepal’s mid-term report to UNESCAP stated birth registration completeness to be 23%, whereas the 2019 Multiple Indicator Cluster Survey (MICS) reported birth registration completeness for children under 1 year of age at 60%. Similarly, Bangladesh reported 28% birth registration completeness to the UNESCAP mid-term review compared with 40% (registered <1 year) reported by the 2019 MICS. Further work is needed to evaluate the quality of birth registration data and to assess the reliability of estimates of birth registration completeness derived from different sources.

### Death registration

Country reports to the UNESCAP CRVS mid-term report for 2020 identified a number of weaknesses in relation to the registration of deaths and the determination of causes of death in accordance with international standards. Reporting of death registration completeness is sporadic and based on calculation methods that are not always clearly described. Country reports of death registration completeness submitted to the UNESCAP mid-term report show considerable variability, with high levels of completeness (70% and over) reported in India, Maldives, Sri Lanka and Thailand, as shown in Fig. 4. Death registration completeness is 50% or lower in Myanmar, Timor-Leste and Bangladesh. No death registration completeness estimates are available for Indonesia. An important challenge in interpreting these figures is that countries do not always report numbers of deaths registered by date of occurrence separately from deaths registered by date of registration. This may lead to the inclusion of delayed death registrations in the reports for specific years, thus overestimating registration completeness.

**Fig. 4.** Percentage of deaths in the territory and jurisdiction that are registered within one year of occurrence 2013–2019*

*As reported to UNESCAP. Where completeness exceeds 100%, this is due to either double counting of registrations or underestimation of total deaths. Data for Bhutan quoted from the 2020 vital statistics report.
**Causes of death**

The determination of causes of death remains a challenge in many settings. Only Maldives, Sri Lanka and Thailand report that the health sector is able to record the cause of death for the majority of deaths according to international standards, using the WHO international form of the medical certificate of cause of death (MCCD) and statistical coding aligned with the International Classification of Diseases (ICD) (Fig. 5).

*Fig. 5.* Countries reporting on percentage of deaths recorded by the health sector with a medically certified cause of death and percentage of causes of death classified to ill-defined codes*

![Graph showing countries reporting on percentage of deaths recorded by the health sector with a medically certified cause of death and percentage of causes of death classified to ill-defined codes.](image)

As reported to UNESCAP

The arrival of the most recent update of the International Classification of Diseases – ICD-11 – and its associated statistical coding tool, is expected to greatly facilitate the generation of reliable statistics on causes of death that occur in health facilities where a doctor completes the MCCD. The ICD-11 is built with a data-driven API (application programming interface), which is e-health compatible and interoperable with DHIS-2 (District Health Information Software-2), allowing the new ICD-11 coding tool to be embedded into online or offline software (11).

In many countries of the SEA Region, most deaths occur in the community without a doctor being present to complete the MCCD. In such circumstances, WHO advises that verbal autopsy (VA) methods should be used to determine cause-of-death distributions in these communities, and thus provide statistical evidence for health policy and planning. Although VA is used in several countries of the SEA Region to generate information on causes of death, this is often in the context of sample surveys that are not linked to the CRVS system, as is the case in the sample registration systems (SRS) in Bangladesh, India and Indonesia.
In order to increase the registration and cause of death determination of community deaths, Bangladesh has developed an innovative approach whereby deaths in the community are first identified by community-based health workers, notified to the registrar for official registration, and subsequently a VA is administered (12). This strategy – the Kaliganj approach – is currently being scaled up to reach a nationally representative sample of all deaths across the country. The growing interest in integrating VA with CRVS systems has led WHO to simplify the questionnaire by reducing its length and improving the quality of the diagnostic algorithms used to translate the responses to the interview into an ICD-compatible cause of death. WHO has also updated the questionnaire to include questions on signs and symptoms of SARS-CoV-2 infection in order to improve the availability of mortality data during the COVID pandemic.

CRVS system-wide implementation steps

Achieving the ambitious goals that all people will benefit from universal and responsive CRVS systems requires a coordinated and multisectoral effort at the local, national and regional levels. The WHO regional CRVS strategy and the UNESCAP Regional Action Framework call on countries to undertake proactive implementation steps, including the establishment of multisectoral coordination mechanisms, assessments providing the baseline for developing national comprehensive strategies, national targets and the development of a national strategy with monitoring and reporting mechanisms. Most countries of the SEA Region have nominated CRVS focal points, established a CRVS coordinating committee, conducted CRVS assessments and agreed on targets and reporting plans. However, only half the countries in the SEA Region have developed and approved national CRVS strategies. Table 1 and Fig. 6 show an overview of the status of the implementation steps in nine countries of the SEA Region as reported in the UNESCAP CRVS Regional Action Framework mid-term report and to the WHO Regional Office for South-East Asia. The support of development partners for implementing these steps has been important.

The SEA regional CRVS strategy has a strong focus on improving death registration and ascertainment of causes of death. However, as shown in Table 1 and in Fig. 6, only a few countries of the SEA Region have introduced strategies for improving the availability and quality of mortality and cause-of-death data as a core component of CRVS. Recommended interventions include: the establishment of a mortality technical working group, generally reporting to the CRVS coordination committee; the improvement of cause of death ascertainment by way of the medical certification of cause of deaths in health facilities; the implementation of ICD standards for statistical coding of causes of death; the introduction of VA methods for deaths in the community; and the publication of a national mortality and cause of death statistical report. Five countries have established mortality technical working groups and introduced measures to improve the quality of medical certification of causes of death, such as training courses for certifying doctors and strategies to improve ICD coding. Only two countries have introduced VA methods for generating statistics on causes of death for deaths that occur in the community with no doctor being present to complete the MCCD. Four countries – Bhutan, India, Maldives and Thailand have produced national vital statistics reports including detailed information on causes of death.
Table 1. Completion of key CRVS implementation steps in countries of the WHO SEA Region, 2020

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Source: UNESCAP CRVS mid-term report 2020, WHO Regional Office for South-East Asia.
Fig. 6. Completion of key CRVS implementation steps in nine out of 10 countries of the SEA Region, 2019

Reducing inequalities in birth and death registration is an important element in both the UNESCAP and WHO CRVS strategies and is central to the achievement of the SDGs, on the principle “leave no-one behind”. However, only three countries are currently able to provide data on inequalities in terms of access to registration services and completeness of death registration. Systematic analyses of population groups currently missing from country birth and death registration are rare and often limited to academic studies of specific population groups. In Bangladesh, analyses of registration data, in the context of implementing the Kaliganj approach, found that deaths in infants were least likely to be registered and were thus often missing from the VA findings. There was also evidence of under-registration of female deaths. In response, the Government of Bangladesh has decided to conduct an inequalities assessment as part of its efforts to “leave no-one behind”. In Bhutan, the 2020 vital statistics report identified difficulties experienced by poor households in collecting the official documents from local authorities as the main reason why some births were not registered. For deaths, the subgroups most likely to be missing from the death registration system are infants and children under 8 years of age. This is because the rural life insurance can be claimed only for deaths from age 8 years and above. These findings have contributed to the growing interest in countries of the Region in identifying incentives and disincentives for birth and registration.

Annex I of this report provides further details about CRVS structures and processes for each country of the SEA Region, drawing mainly on country reports to UNESCAP and supplemented by additional country analyses commissioned by the Regional Office for South-East Asia in preparation of the SEA CRVS improvement plan (13).
Strategic support to development of country CRVS systems

The WHO Regional Office for South-East Asia has been providing technical support to countries for CRVS systems in line with the SEA regional strategy for strengthening the role of the health sector for improving CRVS, 2015–2024.

At the global level, WHO has developed a CRVS Strategic Implementation Plan 2021–2025 designed to empower Member States to more effectively mobilize their health sector to contribute to CRVS system strengthening efforts (14). The implementation plan calls for strong leadership in the health sector and draws on the normative function of WHO, focusing on empowering the health sector in Member States with the needed tools, knowledge and training. The aims are to improve coverage of the notification of births and deaths; improve certification practices of causes of death; more effectively exploit the advances in research and information technology to improve the diagnosis of home deaths; and build capacity to more effectively analyse and use mortality and cause-of-death data to support policy and for monitoring progress with national and international development goals.

Operationalizing health sector contributions to CRVS

In 2021, WHO and UNICEF jointly launched an operational guidance document detailing how health institutions and health workers can support health-related programme managers and civil registrars to strengthen CRVS systems achieve universal registration of births, deaths and stillbirths (15). Based on the fact that births and deaths often take place within a health institution and health workers are in contact with people at key moments in the life course – at the time of birth and at the moment of death or shortly thereafter – the guidance advocates that the health agents take a proactive role in ensuring that births and deaths are officially notified to and registered by national civil registration systems.

The guidance describes the mutual benefits that would accrue to individuals and societies from enhanced collaboration between civil registrars, health entities and other stakeholders with a role in vital statistics. It describes some common scenarios in which births and deaths occur and outlines steps that health workers can take to enable them to be registered. Implementation of the actions recommended in the guidance would contribute significantly to increasing the civil registration of births and deaths, thereby reducing the numbers of people lacking fundamental legal trace of their existence.

Given a supportive legal and administrative framework, information collected by health agents on births, including details such as sex, date, place of occurrence, and maternal characteristics, can be shared with the civil registry to enable the birth to be registered in a timely manner. Many countries in the SEA Region have low levels of birth registration despite having high coverage of BCG (given as soon as possible after birth) and DPT immunization (preferably with three doses administered before the age of 6 months), indicating major potential opportunities to increase the
completeness of birth registration through information sharing between the health sector and civil registries (Table 2 and Fig. 7). Closer integration between health and civil registration could rapidly increase birth registration and reach populations currently “left behind”.

**Table 2.** Comparison between vaccination coverage and percentage of children under 1 and under 5 years whose births have been registered, 2014-2019

<table>
<thead>
<tr>
<th>Country</th>
<th>Children whose births have been registered (%) (16)</th>
<th>BCG coverage (%) (17)</th>
<th>DPT1 coverage (%) (17)</th>
<th>DPT3 coverage (%) (17,18)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>By age 1 year</td>
<td>By age 5 years</td>
<td>Administered as soon as possible after birth</td>
<td>Administered 6 weeks after birth</td>
</tr>
<tr>
<td>Bangladesh (18,19)</td>
<td>28</td>
<td>56</td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>Bhutan (20)</td>
<td>88.4</td>
<td>NA</td>
<td>92</td>
<td>99</td>
</tr>
<tr>
<td>India (21)</td>
<td>85</td>
<td>80*</td>
<td>92</td>
<td>94</td>
</tr>
<tr>
<td>Indonesia (22)</td>
<td>72</td>
<td>72</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Maldives (23)</td>
<td>100</td>
<td></td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>Myanmar (24)</td>
<td>74</td>
<td>95</td>
<td>91</td>
<td>93</td>
</tr>
<tr>
<td>Nepal (25)</td>
<td>23</td>
<td>77</td>
<td>96</td>
<td>96</td>
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<tr>
<td>Sri Lanka (26)</td>
<td>97</td>
<td>97</td>
<td>99</td>
<td>99</td>
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<tr>
<td>Thailand (27)</td>
<td>100</td>
<td>100</td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>Timor-Leste (28)</td>
<td>60</td>
<td>95</td>
<td>92</td>
<td>83</td>
</tr>
</tbody>
</table>

*National Family Health Survey (NFHS-4) 2015-16: India

**Fig. 7.** Comparison between vaccination coverage and percentage of children under 1 and under 5 years whose births have been registered; selected countries of the SEA Region, 2014-19
Just as health workers are on the scene when life begins and in the early years, they may be present at the end of life, particularly when death occurs in a health facility, care home or other institution. Administrative staff and health-care personnel maintain event-based and longitudinal patient records and registers, and some may routinely contribute to national level disease-based registers (e.g. cancer registries). These patient records and the many disease-specific health services and programmes that maintain event-based registers and track mortality can often furnish much of the information needed to register a death. In such circumstances, the administrator can notify the civil registration authorities and provide information needed to register the event. When a physician is present, it is also possible to obtain information on the medical cause of death, which is of inestimable value for determining public health priorities. Fig. 8 shows the potential for integrating mortality monitoring into CRVS systems to ensure that deaths are registered and causes of deaths recorded.

**Fig. 8.** Potential for integrating mortality monitoring in the health sector into CRVS systems

For deaths outside a medical setting (the majority in many countries of the SEA Region), community-based health practitioners are often among the first to know that a death has occurred, generally during their regular visits to the household, and may be responsible for reporting such deaths to the local health centre. This is frequently the case for CHWs involved in reproductive and child health programmes.

The potential contribution of health personnel in notifying vital events to the civil registration office will be enhanced if strategies are in place to avoid burdening health workers with multiple information collection responsibilities given their existing heavy workloads. To mitigate this risk,
health managers should standardize and simplify data collection instruments to capture essential data elements. They should also ensure that staff have the knowledge and support they need to accurately input the data on births that are required for civil registration purposes.

The increased use of digital technologies in health systems presents valuable opportunities to link health and civil registration systems, thereby optimizing the quality and efficiency of civil registration. Most countries are exploring or already implementing electronic medical record systems that are built from scratch or adapted from available platforms such as DHIS2 Tracker, Commcare and OpenSRP. Such platforms can be programmed to create a patient record or chart for each individual, starting from birth or a first encounter with the health system, and continuing across the life course, for example during medical interventions or management of chronic conditions in later life. Information regarding a birth or death recorded in the digital health chart facilitates active notification to the civil registration authority and can improve the coverage, completeness and accuracy of civil registration.

**The SEA CRVS improvement project**

The SEA CRVS strategy provides overall guidance relevant to the Region as a whole. However, it is evident that within the Region, CRVS systems vary greatly, with different policy perspectives and administrative structures. Meeting the needs of this diversity of countries and the variation in current operational status of national CRVS systems necessitates a country-specific approach to CRVS system strengthening. In response, in 2020, the WHO Regional Office for South-East Asia partnered with Vital Strategies to formulate a CRVS improvement project designed to provide technical support tailored to the specific needs of countries of the Region.

The project has been designed to take into account lessons learnt from previous CRVS strengthening initiatives within and beyond the SEA Region. Drawing upon technical and operational guidance now available, it adopts a systemic, comprehensive approach rather than narrowly targeted interventions such as off-the-shelf IT solutions or ad hoc training. The aim is to ensure that all implementation actions are designed for institutionalization and continuity within CRVS systems. Stakeholder involvement and clear business processes will help maintain this coordinated approach and ensure that organizational factors are addressed, including the CRVS legal framework, human resources, sharing information across the health, civil registration, and statistical sectors, links between CRVS and national ID systems, and IT functionality. The comprehensive approach will also help ensure that development partner support is coordinated and consistent.

The Regional Office for South-East Asia project is guided by the CRVS Systems Improvement Framework (29) developed through collaboration among international and country partners and based on the following principles:

- Ensuring country leadership and ownership;
- Implementing well-coordinated and consultative processes;
- Following international standards and concepts, and best practices;
- Building a more proactive system for registering deaths as opposed to a passive system;
- Introducing innovations that are integrated within the CRVS system, for example VA based on a nationally representative sample of civil registration records.
The Regional Office for South-East Asia CRVS improvement project is supporting countries to strengthen CRVS systems with a focus on the registration of deaths and the determination of causes of death, aspects that are currently lagging in many countries. Seven countries have been identified for the initial phase: Bangladesh, Bhutan, India, Indonesia, Myanmar, Nepal and Timor-Leste. With advice from technical experts, participating countries develop strategic and action plans based on a holistic and systemic analysis of the CRVS system. The project also envisages providing advisory support to a few countries in the implementation and monitoring of their improvement plans.

**A process-centric approach**

The basic premise of support of the WHO Regional Office for South-East Asia to countries is that sustainable CRVS strengthening requires action across all aspects of country CRVS business processes – the linked chains of actors, events, activities and decisions across all components of the CRVS system. The efficient execution of a business process depends not only on its design but also on the availability of necessary resources and an enabling environment. The resources and enabling environment needed in the CRVS systems include:

- policies, laws and regulations;
- management and coordination;
- human resources;
- physical infrastructure; and
- information technologies.

Without these organizational capabilities in place, business processes will fail, service users and service providers will be disappointed, and the organization’s performance will be substandard and inefficient. The CRVS improvement framework is intended to help stakeholders analyse and redesign existing business processes to enhance organization capacities and thereby improve overall CRVS system performance. A holistic focus on processes ensures that all stakeholders involved in implementation are engaged in the business process improvement effort. Because of this focus on improving business processes, the approach is called “process-centric”. The framework is made up of six steps, as shown in Fig. 9.

The framework can be applied in a modular or comprehensive way, depending on the strategic value of improving a particular business process in the CRVS systems based on current system needs. This consideration will drive the scale and scope of process improvement. The framework’s long-term value lies in its use as part of an iterative and sustainable cycle of continuous CRVS system improvement. Tools to be used include Business Process Mapping (BPM) and the CRVS System Analysis and Redesign (CRVS-SAR) tool.
Fig. 9. Process-centric framework for CRVS improvement

- Identify key performance indicators
- Collect baseline information
- Set targets
- Develop ‘As-Is’ business process maps
- Identify performance issues
- Analyze root causes
- Develop ‘As-Desired’ business process maps
- Develop redesign ideas
- Develop costed strategic and action plan
- Develop M&E framework
- Monitor progress using key indicators
- Implement strategic and action plan

Applying the framework in countries

Each country involved in the CRVS improvement framework convenes a core team to work on the project. WHO coordinators facilitate the establishment of the country team. Membership may include persons already involved in various CRVS-related agencies or committees and may also bring in new members as the country assessment and plan evolve. One of the country team members is nominated by acclamation as the focal point for the project. The core team may involve other partners actively working in CRVS and cause-of-death improvement activities in order to ensure that there is no duplication of effort and to ensure that all views are adequately represented in the discussions.

As of January 2021, four countries – Bangladesh, Bhutan, Nepal and Timor-Leste – had established a core team involving all relevant CRVS agencies and nominated a focal point for reporting progress. India is initiating the project in selected states, namely, Assam and Madhya Pradesh. All core team members in these countries have been trained in the use of BPM tools. Core team members have also completed the World Bank CRVS e-learning course, all modules, modified to meet the needs of countries of the SEA Region and with a particular focus on the death registration module. This is part of the broader capacity-development goals inherent in the Regional Office for South-East Asia project.

Information sharing between countries and with WHO Regional Office for South-East Asia and development partners is assured through multiple methods. A shared drive has been set up for guidance documents that are commonly used as well as for country-specific documents. WhatsApp groups have been created: one for WHO country coordinators, technical advisers and partners; and separate groups for each country, including the WHO country coordinator, country team members, and technical advisers. An overall project monitoring sheet has been prepared and is updated and shared on a regular basis. Each country is also preparing a country factsheet with summary information on current status and roll out of CRVS improvement plans.
Sharing of country experiences is also promoted by way of intercountry workshops, the first of which took place in August 2020 and brought together CRVS technical staff from Bangladesh, Bhutan, India, and Nepal. A draft list of key process indicators has been developed and provided the background for kick-off meetings in Bangladesh and Bhutan during October 2020. There is close collaboration with partners committed to CRVS strengthening, such as UNESCAP, UNICEF and Vital Strategies.

Experiences during the initial stages confirm that this is a highly process intensive activity and that it is essential that all participants fully understand the importance of identifying the key process indicators and of completing the business process mapping as fundamental to the development of improvement plans.

**Challenges and lessons learnt**

The start of the project coincided with the spread of the COVID-19 pandemic and the resulting restrictions on in-person meetings and travel. The ability to convene collaborators remotely enabled many of the planned activities to go ahead, albeit with some delays the dialogue has continued. In addition to the direct impact of the pandemic, a number of indirect consequences and additional challenges have emerged and continue to require attention during the initial phases of implementation. These are:

- Difficulties in prioritizing CRVS due to the urgent need of relevant staff within the health, registration and statistics sectors to manage and monitor the impact of the COVID-19 pandemic in countries.
- Capacity challenges within government agencies as well as in WHO country offices, sometimes linked to the transfer of staff to COVID-related activities.
- Need to ensure that sound and sustainable mechanisms are in place for overall management, coordination and technical aspects.
- Country partners need time to become familiar with the tools used, such as BPM and the CRVS-SAR tool.

In response, WHO Regional Office for South-East Asia is supporting the ramping up of high-level advocacy in some countries and working to strengthen regional level partnerships for a more unified and holistic approach. Additional support will also be provided to WHO coordinators to help deal with intense demands and high workloads.
Conclusions and the way forward

The SEA Regional Strategy for CRVS 2015–2024 focused attention to the role of CRVS systems in protecting people’s rights, good governance and sound administration, as well as for the generation of reliable statistics on the demographics and health of the population. It described priority actions that countries need to take to ensure that their CRVS systems are able to meet emerging challenges in health and development. A key element has been the focus on the role of the health sector as a key partner for CRVS system strengthening.

At the mid-point of its remit, this is an opportune moment to take stock and assess how the strategy might evolve in the light of new challenges. This is all the more urgent given the impact of the COVID-19 pandemic on people in the Region and around the world and also on country CRVS systems. During a health emergency, decision-makers need reliable data as a matter of urgency in order to identify populations in greatest need, track the progress of an epidemic and assess the effectiveness of interventions. However, during the pandemic countries have faced challenges in maintaining the operational capabilities of the civil registration system while simultaneously protecting both workforce and clients. In response, some countries have devised innovative approaches, focusing on continuity plans to ensure minimum essential registration services – especially for deaths – and using the power of digital connectivity to facilitate service provision and access for clients.

At the same time, experience is building on the potential contribution that health institutions and agents can make by identifying the occurrence of vital events, recording key information needed to register them, and sharing the information with civil registration officials. Guidance is now available on ways of capitalizing on the health sector for CRVS improvement. By virtue of their proximity to families and communities and their established reporting structures, health workers are ideally placed to support the documentation and timely reporting of births and deaths. For vital events that occur in hospitals and health centres, routinely collected information – patient records, admission and discharge registers, ward registers and laboratory records – capture much of the information that is needed to register a birth or a death. Records kept by CHWs serving more rural populations are likely to include any births and deaths that occur and CHWs can be potential partners for the reporting of vital events. Information collected close to the place and time of occurrence of a birth and death can improve the accuracy of vital statistics and has the potential to bring multiple benefits: civil registration agencies benefit from the ongoing supply of information on vital events and the health sector benefits from improved data on fertility, mortality and cause of death, which enable better planning and targeting of needed health-care services. The role of health agents can extend to rural and remote areas and to population groups that are often left behind by CRVS systems. Health outreach workers have experience and credibility in reaching out to marginalized and hard-to-reach groups, including the very poor and street dwellers. It may be useful to declare health officials as registrars or legal informants of births and deaths, if the national regulation allows for it.

The approach and priorities of the SEA Regional CRVS Strategy 2015–2024, designed to guide and support the improvement of CRVS systems in the Region, remain pertinent today, in particular the strong focus on strengthening the role of the health sector to improve CRVS systems.
However, the COVID-19 pandemic has accentuated the need to scale up country CRVS systems. It is increasingly clear that CRVS systems need to move from being passive, dependent on families coming forward to declare vital events to the civil registrar, to active engagement with partners, particularly those in health, to identify and notify births and deaths so that they are registered quickly and with minimal effort and delay for the population. It is also crucial for the health sector to use the available intelligence from CRVS to inform policies and interventions. Lessons learnt from the SEA CRVS improvement project highlight the importance of adopting country-specific strategies characterized by a high degree of intersectoral and cross-programme collaboration. To achieve this, countries need to establish the following structures and arrangements.

**Revised business processes**

- Stakeholder involvement in the review and revision of business processes to enhance the flow of records and information between health and civil registration systems, as well as the individuals/offices involved in the civil registration process.
- Designation by the legal and regulatory framework of health institutions and agents as legally recognized informants of the occurrence of births and deaths to the civil registrar, as recommended by the United Nations.
- Establishing a better coordination approach at all levels of government (national, state/provincial, and district) by establishing CRVS Committee, if possible at all levels, in line with country regulation and system, with providing clear tasks and functions of each party.
- Allocation of civil registration staff to health facilities to provide on-the-spot registration and certification services. Where CRVS regulations permit, designation of health institutions or agents as registrars, providing registration services directly to the population.
- Support families to complete any necessary forms and reduce the costs and challenges of attending registration offices.

**Information sharing**

- Agreements, such as a memorandum of understanding (MoU), between health and CRVS agencies, which provide for the exchange of information on individual live birth, stillbirth and death records.
- Information and data sharing protocols that protect individual confidentiality and privacy and ensure data security while also enabling efficient sharing of information or interoperability among key agencies.

**Interoperability and standardization of data collection protocols**

- Use of common definitions, classifications, forms and software instruments across all health programmes to help avoid parallel data “siloes”.
- Standard templates for the notification of live and stillbirths and deaths that are compatible across the health, CRVS agencies for both paper-based and electronic systems, and which will enable civil registration of the events.
- Decentralization and digitization of the civil registration system, preferably using open-source software based on published standards.
- Consensus on interoperable databases for birth, death, fetal death data, and cause of death
- Mechanisms to avoid duplication of birth or death registrations, such as issuing a unique identity number to all individuals at the time of birth registration and retiring the identity after death registration.
- Enable families to notify births and deaths using easy-to-use mobile and web-based applications and receive the birth and death certificates online after due validation.

**Capacity development**

- Skills development for community- and facility-based health workers to complete notification forms for births or deaths that include the information needed for the events to be officially registered.

Since the launch of the SEA Regional CRVS Strategy in 2015, many lessons have been learnt in how to strengthen country CRVS. It now evident that CRVS systems must be integrated, efficient and inclusive to meet routine data needs while also having the ability to be responsive, agile and robust to address the urgent demands that accompany any health emergency. These competencies are not mutually exclusive but mutually reinforcing and together will enable CRVS systems to address the needs and demands of today while also building competencies to be able to deal better with future crises (30). Collaboration between the health, registration and vital statistics agencies can facilitate CRVS systems to ensure the continuous and universal registration of vital events and the generation of complete and timely birth and death data, which are critical for decision-making, not only from a health perspective but also from an economic one (31).
Annex

Country CRVS Profiles
Bangladesh

Policy and implementation framework

The legal framework as well as administrative structure and organization of CRVS in Bangladesh has undergone rapid developments over the past few years. CRVS is compulsory under the Birth and Death Registration Act of 2004 and implemented according to the Birth and Death Registration Rules of 2018, which have been published separately to cover events in Union Parishads (rural areas), municipalities (urban areas), corporations (large cities), cantonments (military areas), and embassies (in foreign countries). The rules specify that births and deaths must be registered within 45 days of occurrence, and also specify penalties for delayed or non-compliance. The rules prescribe a format for notifying the birth or death as well as the format for the birth and death certificates to be issued by the registrar. There is no mention in the Act or rules for reporting of stillbirths. Also, the rules did not make specific instructions for assigning causes of death. There were instructions for compiling summary data on completed death registrations (not notifications), and the information is only for total deaths.

In 2013, a comprehensive CRVS assessment was undertaken, with support from UNESCAP and WHO and the findings of the assessment were used to develop a Strategic Plan (2015–2024) for improvement of CRVS system. In 2014, a CRVS Steering Committee and Coordination mechanism was established, headed by the Cabinet Secretary. The high-level committee consists of 25 members, including 19 secretaries of ministries for policy support. A CRVS Implementation Committee, headed by the Secretary Coordination and Reforms, Cabinet Division, has been established to support the Steering Committee and coordinate the CRVS implementation activities. This committee consists of 14 members of CRVS implementing agencies and departments. In addition, there is a Technical Committee and a Legal Review Committee which oversaw a detailed review of legislation related to CRVS during 2020 and made recommendations that are now being implemented under the guidance of the Implementation Committee.

Since 2010, Bangladesh has used an online Birth and Death Registration Information System (BDRIS) to replace manual birth registration. Each birth registered is assigned a 17-digit birth registration number and pursuant to the Birth and Death Registration Act of 2004, both registration and issuance of certificates are free for births and deaths. Registration is compulsory within 45 days following a birth or death, and a late fee is charged for any registration done after 45 days.

In 2013, the Birth and Death Registration Act of 2004 was updated to establish the administration of CRVS under the Office of the Registrar General (ORG), which was established in 2016 in the Local Government Division of the Ministry of Local Government. The ORG is the civil registry authority for births and deaths in the country. The CRVS system in Bangladesh is a shared functional responsibility between the ORG, the Bangladesh Bureau of Statistics, the Directorate General of Health Services, and the Office of the Inspector General of Registration, Law and Justice Division. The Registration of Birth and Death Rules was promulgated in 2018. Also, an online Birth Registration Information System has been established and implemented through a network of registration offices at all levels, to facilitate registration, issuance of certificates, record archival and data transmission.
To address low registration completeness, the ORG and the Ministry of Health and Family Welfare, under the leadership of the CRVS Secretariat at the Cabinet Division, began to enforce an existing requirement for frontline medical workers to assist with the civil registration of births and deaths. Currently, frontline medical workers help families in registering vital events in a way that requires minimal effort on the part of family members and places the responsibility for the registration of births and deaths with government authorities. This approach, called the Kaliganj model, has been adopted at the national scale (12). Since 2016, technical support for CRVS system improvement in Bangladesh has been provided by Vital Strategies.

**Birth registration**

Nationally, in 2020, birth registration completeness (registered within one year of birth) was estimated at 40% (Bangladesh MICS 2019). In the areas of implementation of the Kaliganj model, birth registration completeness has increased from 50% to 83% in just a few years. To date, the government has replicated the approach in at least one subdistrict in each division of Bangladesh.

**Death registration**

Nationally, in 2020, death registration completeness within one year of occurrence was estimated at 24%. The implementation of the Kaliganj model has resulted in an increase in death registration in implementation areas from 31% to 91% in just a few years. To date, the government has replicated it in at least one subdistrict in each division of Bangladesh.

**Cause of death**

Prior to 2018, hospitals in Bangladesh were using an MCCD that did not conform to WHO standards, preventing the country from compiling high-quality cause-of-death information from hospitals. In 2017, the Ministry of Health and Family Welfare developed a new certificate that meets the WHO standards for the medical certification of cause of death, allowing the collection of high-quality cause-of-death information. Over 500 master trainers have trained over 12,000 doctors and relevant staff in 114 hospitals to complete the MCCD and code the underlying cause of death in accordance with the WHO ICD Startup Mortality List (ICD-10 SMoL). The government intends to roll out the approach to all district level hospitals by 2022. For the first time, Bangladesh has over 169,994 coded MCCD certificates that can be analysed for policy and planning.

With approximately 80% of deaths in Bangladesh occurring outside of hospitals with no doctor in attendance, it is of critical importance to learn as much as possible about the likely causes of these deaths. In order to generate data on causes of community deaths, the Ministry of Health and Family Welfare and the ORG are working together to introduce VA in selected areas of the country. Deaths in the community are notified by a community-based health worker. Following registration, CHWs conduct VA interview using tablets and automated analyses of the responses. More than 28,500 VAs have been collected, giving the government access for the first time to cause-of-death data for communities collected as part of routine CRVS activities (Fig. 10).
**Fig. 10.** Death notification and verbal autopsy (VA) implementation process, Bangladesh, 2016

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Death occurs at home in the community</td>
</tr>
<tr>
<td>2.</td>
<td>Health assistant or family welfare assistant records death during routine monthly household visit</td>
</tr>
<tr>
<td>3.</td>
<td>Assistant health inspectors (supervisors) at local level check details to remove duplicates</td>
</tr>
<tr>
<td>4.</td>
<td>Supervisors share information on deaths (date, age, sex) with local civil registrar</td>
</tr>
<tr>
<td>5.</td>
<td>Death registered by local civil registrar (chairpersons of the union council)</td>
</tr>
<tr>
<td>6.</td>
<td>Health assistant makes appointment with family to conduct verbal autopsy following mourning period</td>
</tr>
<tr>
<td>7.</td>
<td>Health assistant conducts verbal autopsy interview with family members using hand-held tablets</td>
</tr>
<tr>
<td>8.</td>
<td>Health assistant uploads completed verbal autopsy interview to central server for analysis. The server uses automated algorithms to determine probable cause of death</td>
</tr>
<tr>
<td>9.</td>
<td>Statistics on mortality by age, sex and causes of death shared with health ministry and Bangladesh Bureau of Statistics</td>
</tr>
</tbody>
</table>

**Source:** Reference No. 12.

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**Vital statistics**

The Bangladesh Bureau of Statistics is the official source of vital statistics data and produces disaggregated reports from the Sample Vital Registration System (SVRS). Under the “Monitoring the Situation of Vital Statistics of Bangladesh” project, the SVRS covers 2012 primary sampling units, each comprising 100–150 households. The Bangladesh Bureau of Statistics then disaggregates the regional and national figures and publishes them on its website. However, this sample approach does not include the official civil registration of births and deaths identified during the survey.

Currently, Bangladesh does not produce disaggregated vital statistics reports from civil registration data. Instead, the ORG produces aggregated e-reports with the number of birth and death registrations from seven division, as well as the percentage of birth registrations against estimated population numbers and provides “real-time” data on its website.
Bhutan

Policy and implementation framework

Civil registration in Bhutan is the responsibility of the Department of Civil Registration and Census (DCRC) under the Ministry of Home and Cultural Affairs. District-specific civil registration and census offices were institutionalized under 20 district administration units to manage the flow of the registration process for vital events. The DCRC and the Department of Immigration are responsible for registering Bhutanese citizens and Special Resident Permit holders, as well as foreign nationals and non-Bhutanese individuals, respectively.

There is no specific law on registration of births and deaths, except for a reference to birth registration in the Citizenship Act of 1977, and a death registration form in the Census Handbook of 1993. As per the existing instructions, births and deaths are to be registered within one year; however, people are now being encouraged to do so within 30 days. Until 2002, the registry was maintained manually in the paper-based register known as “family diary”, maintained by the respective gewog (block), dungkhag (subdistrict) and dzongkhag (district). Each year, a local census was conducted between November and January, during which births and deaths were updated in the family diary. From 2003, the DCRC initiated the computerization of all records from the family diaries into a database called the Bhutan Civil Registration System (BCRS). Since 2004, Dzongkhag Civil Registration and Census offices were established in all 20 dzongkhags with the responsibility of civil registration aspects. In 2011, under the auspices of the Government to Citizen (G2C) project initiatives, the BCRS was made into a web-based system enabling birth and death registration online. Under the G2C project, community centres were also established at the gewog (block) level taking the registration points closer to the people.

Starting in mid-2017, Bhutan established the civil registration system for online reporting births and deaths at registration points in all 20 dzongkhags, most of its 205 dungkhags, as well as its four major thromdes (municipalities). Birth and death can be reported for registration in any registration centre in the country. Unique personal identification numbers (PINs) are assigned to the completed registration of each new birth. The unique PINs are then printed on citizenship identity cards, which are made available for citizens upon reaching the age of 15 years.

Births in health facilities are registered by the birth notification issued by attending doctors. For births that occur outside of health facilities, the tshogpa/thromde tshogpa (local community leader) issues information on birth to the nearest hospital for obtaining the birth notification/certificate. The applicant then completes birth registration forms and gets endorsement of the local government officials. The completed documents are submitted to the operator located at any of the registration points. A similar process is followed for deaths in hospitals and in the community.

A nationality certificate or birth certificate is not compulsory for use of health services but proof of child being registered with the civil registration system is required for school admission and for processing passport and other travel-related documents. Difficulties in collecting the various documents required to register a birth from local authorities is an impediment to timely birth registration. One of the main reasons for registering a death is to enable surviving family members
to claim rural life insurance. The amount claimed from insurance facilitates the family members to perform funeral rites for the deceased person. Because the rural life insurance can be claimed only for persons aged 8 years and above, reporting and registration of deaths below 8 years of age is low (32).

A CRVS Technical Working Group has been established, consisting of representatives from the Ministry of Home and Cultural Affairs; the DCRC; the Department of Immigration; the Legal Unit; the MoH; the Health Management and Information System (HMIS); the Policy and Planning Division; the Health Research Section, Policy and Planning Division; the National Statistics Bureau; and the Social Statistics Division.

**Birth registration**

Birth registration is free and Bhutanese citizenship laws make registration compulsory within one year of the occurrence. With increased accessibility to medical facilities, the majority of births in 2019 took place at a health facility (98%) with only 2% at home. The Bhutan 2020 vital statistics report estimated birth registration completeness at 78% for 2019. There are delays in registering births due to the need to collect multiple forms from local authorities; the mean number of days taken to register a live birth was 162 days in 2019, an improvement on the almost 200 days in 2016.

**Death registration and causes of death**

Death registration completeness in 2018 was estimated to be 63% in the 2020 vital statistics report. The mean number of days taken to register deaths was 65 days in 2019 compared with 168 days in 2016. In 2019, 60% of deaths occurred at home with 36% in health facilities. For deaths in health facilities, the doctor issues a death notification form, which is required to register the death, and completes the MCCD.

Deaths occurring in Bhutanese medical facilities use a standard medical cause-of-death form, but efforts are under way to improve the quality of cause-of-death reporting through the health sector. In 2019, alcohol liver disease (139) was reported to be the number one cause of death in Bhutan followed by other circulatory diseases (107), other respiratory and nose diseases (104) and other cancers (92).
DPR Korea

No information available.
India

Policy and implementation framework

The CRVS system in India is backed by the Registration of Births and Deaths (RBD) Act, 1969 and operates through a decentralized model with multiple levels of administration and state-specific rules and regulations. The national Office of the Registrar General India (ORGI), under the Ministry of Home Affairs, is responsible for unifying and coordinating the work of CRVS in the country and production of vital statistics. The ORGI is headed by the Registrar General of India. The subnational level operational responsibilities are held by a range of departments from different ministries. The Ministry of Health and Family Welfare supports the civil registration system providing incentives for registration, workforce and logistic support under the National Health Mission.

At the national level, the Registrar General is appointed by the Central Government, who coordinates and unifies the work of civil registration system in India. He/she is supported by the Civil Registration Unit of the Vital Statistics Division, which is headed by a Deputy Registrar General. At the state level, the Chief Registrar of Births and Deaths is appointed by the state government and is the chief executive authority in the state responsible for implementing the CRVS work under the provisions of the RBD Act 1969. The Chief Registrars in 18 States and three Union Territories (UTs) are from the Health Department, in 10 States and three UTs are from the Planning, Economics and Statistics Departments, in one State (Kerala) from Panchayat Department and in the remaining one UT (Puducherry), it is with the local administration. The state government also appoints District Registrar/Additional District Registrar/sub-registrars for substate level operations.

Several challenges, such as lack of awareness regarding the need and importance of registration, low priority accorded to the system of civil registration, lack of national and subnational level coordination among the concerned ministries/departments, lack of proactive measures for improving low levels of medical certification of cause of death and poor engagement/recruitment of private health facilities for medical certification and reporting have been identified by the ORGI and states. To tackle these issues, several initiatives have been taken. For example, legal items are now separated from statistical ones reducing the number of forms from 21 to 13, a more efficient coordination mechanism has been established and a nationwide database of medical institutions has been prepared. Also, a software application for online and offline registration of birth and death has been developed to cover the entire gamut of the civil registration system: registration of events, generation of certificates, and generation of statistical tables and reports. Pool of master trainers for ICD coding has been created to build capacity of health-care professionals.

The Indian national CRVS coordination mechanism was established in August 2015, while a national CRVS strategy and a comprehensive assessment are still in progress. In addition, a new project on data digitization is being implemented, with the support of UNICEF, to keep old records in an easy-to-retrieve digital form. This will help in storage of registers in electronic format and allow easy access to the records.
**Birth registration**

Although not all states have reported the place of occurrence of birth, of those that did so, the majority of registered births (81.2%) occurred in an institution, either in government or private hospitals; a further 8.4% of births were attended by a physician, nurse or midwife. However, about 4.5% of births were attended by an untrained midwife/dai and another 3.2% by others. There is no birth registration fee within the prescribed period of 21 days, and the first copy of the certificate, as per the law should be provided free of cost.

The birth registration level increased from 82.4% in 2011 to 92.7% in 2019 as per the latest vital statistics report based on the civil registration system 2019. A majority of births (81.2%) took place in public and private health-care institutions (33).

**Death registration**

The death registration level increased from 66.4% in 2011 to 92.0% in 2019 as per the latest vital statistics report based on the civil registration system 2019. There is some evidence of underreporting of deaths among infants and women both in urban and rural areas. The reason of underreporting of infant deaths is mainly due to cultural sensitivity and the fact that more than 60% of infant death occur within 3–4 week of their birth (2).

**Cause of death**

Nationally, it is estimated that 21% of total registered deaths are medically certified according to WHO standards. Physician-attended deaths that are reported to the CRVS system must be certified to a cause using the MCCD form 4 for institutional deaths, form 4A for non-institutional deaths. The complete form 4/4A along with the death report form 2 has to be submitted to the local civil registration unit for death registration (33). According to the MCCD Report for the year 2019, around 70% of the 81471 medical facilities in the country with in-patient facilities, used the WHO MCCD form and 50.1 reported cause of death data in the National List of Tabulations.

The 2019 report on MCCD is based on a total of 1 571 540 medically certified deaths (males: 977 199 and females: 594 341) accounting for 21% of total registered deaths in 35 states/UTs which supplied data for the report. Owing to different levels of efficiency of medical certification across the states/UTs, the number of deaths reported may not be fully representative of all deaths. Rather, the data provide valuable insights into deaths due to various causes.

WHO India has been supporting the Government of India on various initiatives to improve cause-of-death information through capacity building of physicians and coders on MCCD and ICD, carrying out assessments to develop a strategic action plan, developing online tools for mortality audit systems, MCCD capacity building and piloting algorithm-based prediction of cause-of-death logical sequencing and automated ICD coding. The Ministry of Health and Family Welfare, Indian Council of Medical Research and WHO India also undertook a study to compare manual and automated cause-of-death assignment methods. The study report provides useful insights on the feasibility of WHO VA tool implementation in the Indian context and performance of three automated cause-of-death assignment algorithms.
The distribution of leading cause-of-death groups across all ages and both sexes derived from the MCCD system is shown in Fig. 11.

**Fig. 11.** Distribution of causes of death by major groupings derived from the MCCD system, 2019

An important source of cause-of-death information is the nationally representative Sample Registration System (SRS), which was established in 1970 as an interim measure to generate population level mortality information. The SRS covers about 0.6% of the national population and makes use of VA methods for assignment of cause of death. The SRS system does not provide any legal documentation of identity, civil status and family relations to individuals and families.

The SRS-VA system provides annual estimates on maternal mortality ratio, neonatal, infant and under-5 mortality rates. This system also analyses cause-specific mortality statistics but the reports have not been released in the recent years. WHO India is a member of the technical advisory committee set up at the ORGI and has been providing technical advice since the inception of the committee in 2017.

**Vital statistics**

The registration of births and deaths system generates a continuous flow of statistical information at the local level. The information is consolidated by the local registrar for onward transmission to the chief registrar of each state/UT. The chief registrar is required to submit an annual report on the working of the Act and a statistical report to the state government by July and December, respectively, of the following year to which the report relates. The chief registrars are also required to send a copy of these reports to the ORGI, Government of India.

Based on the annual reports prepared by the states/UTs, the ORG issues an annual comprehensive report entitled “Vital Statistics of India based on the Civil Registration System”. However, not all states issue their annual statistical reports in a timely manner and this, in turn, delays the publication of the national report. Furthermore, some states do not include all the prescribed tables in their
reports, thereby weakening the comprehensiveness of the national report. Notwithstanding these constraints, the ORGI report provides vital indicators including the district-wise registered births and deaths, including infant deaths, by sex and rural–urban disaggregation.

The ORGI vital statistics report publishes estimates of birth and death registration completeness based on estimated total births and deaths derived from the India SRS. In the absence of reliable estimates of numbers of births and deaths on a year-to-year basis from any other source, the number of events as revealed from the SRS is used to calculate the level of registration. The level of registration so calculated is very high for some of the smaller states/UTs either due to the lower estimates of vital events than the actual and due to the fact that SRS estimates of vital events are based on the place of usual residence while events are registered at the place of occurrence irrespective of the place of residence.

Completeness of birth registration increased to 92.7% in 2019 compared with 82.4% in 2011. The level of registration of deaths rose to 92.0% in 2019 compared with 66.4% in 2011, an increase of 19.1% over the past 10 years (Fig. 12).

**Fig. 12.** Birth and death registration completeness in India, 2011–2019

Indonesia

Policy and implementation framework

The key government agencies for CRVS in Indonesia are the Ministry of National Development Planning, Ministry of Social Affairs and the Ministry of Home Affairs. The Ministry of National Development Planning, is the nodal agency for all CRVS coordination work. Civil registration is integral to the Indonesian government’s current poverty-reduction strategy, both for its ability to confer legal identity to citizens and as the principal source of the country’s vital statistics. The CRVS structural design is based on a centralized model with a single agency for implementation, which is the Directorate General of Population Administration and Civil Registration (Dukcapil) under the Ministry of Home Affairs. The Directorate General operates an electronic Population Administration Information System (SIAK). Registration Officers at the village level, subdistrict level and district level, and city and regency level are responsible for receiving and processing birth and death registration. The Ministry of Home Affairs decree No. 95 (2019) provides guidelines on the assessment, development and management of the Population Administration Information System. The legislation also establishes the financial, human resources and technologies/documents needed for the proper functioning of civil registration.

Most recently, the government has issued the Presidential Regulation No. 62 of 2019, named Strategi Nasional Percepatan Administrasi Kependudukan untuk Pengembangan Statistik Hayati (AKPSH) [National strategy for accelerating the Population Administration System for the development of Vital Statistics]. The national strategy committee is chaired and co-chaired by the Minister of National Development Planning/Head of Bappenas and Minister of Home Affairs, respectively. This legislation stated that, in addition to data generated by the population administration process, vital statistics are also compiled using data from other ministerial/agency, such as population census data from Statistics Indonesia (BPS), and the Ministry of Health regarding the births, deaths and causes of death. The particular target (100% coverage of birth and death certificates by 2024) is also stated in the legislation and 2020–2024 National Medium-Term Development (RPJMN).

Following that, the inter-ministerial/inter-agency task force which comprises of 5 working groups was established by the Ministry of National Development Planning Decree No. 57 (2021) for supporting and implementing the national strategy.

In 2016, the Minister for Home Affairs issued a Ministerial Regulation covering the child ID card, which aims to protect and fulfil the constitutional rights of citizens. In order to obtain a child ID card, the parents must produce the child’s birth certificate and ID cards of the parents or guardians. Also, the Minister for Home Affairs issued a circular to all provincial governors and city mayors and requested them to accelerate the services for recording and publication of electronic ID cards and birth certificates.

The adoption of advanced technologies such as SIAK has been central to the current improvement of civil registration service provision. However, the success of these initiatives has been moderated by the lack of necessary facilities and equipment, internet connectivity and human resource capability at the district and subdistrict levels (34).
Birth registration

In 2020, data from the National Socio-Economic Survey showed that 58.03% of children under 1 year and 77.4% of children under 5 years of age were having a birth certificate. Meanwhile, 88.3% of under 17 years old were having a birth certificate.

Death registration

There are no official data on completeness of death registration in Indonesia. In a presentation to UNESCAP, the Ministry of Home Affairs (SIAK 2016) indicated an estimated completeness rate of 10%. An estimated 84% of deaths took place at home, and only 2% of these deaths were registered (KOMPAK – PUSKAPA, CRVS study at the selected subdistricts in three provinces 2015) (35). The CRVS study in 2019 at the selected subdistricts in five provinces, showed that 19% of households reported the death of a member in the past 5 years. Of these cases, only 12% of these households applied for a death certificate (KOMPAK – PUSKAPA, CRVS study 2019) (36).

Cause of death

In its reporting to the UNESCAP mid-term evaluation, Indonesia declared that 45% of deaths occurring in the health sector had a medically certified cause of death recorded using the international form of the death certificate. However, in 2018, 35% of deaths were coded to ill-defined codes.

Vital statistics

Currently, Indonesia does not issue a regular national vital statistics report derived from civil registration of births and deaths. On May 2021, the Directorate General of Population Administration and Civil Registration (Dukcapil) under the Ministry of Home Affairs and Statistics Indonesia (BPS) National conducted a meeting of all relevant stakeholders for compiling and releasing of vital statistics based on the registration of births and deaths in the SIAK system, survey and census.

From 2014 to 2019, vital statistics in Indonesia were largely derived from the Indonesian national SRS. The SRS covered a population of 8.6 million in 128 subdistricts (103 rural and 25 urban). Births and deaths were continuously recorded by local community health centres and causes of death were ascertained through VA methods. The system reported some mortality indicators such as the crude death rate, neonatal, infant and under-5 mortality rates and the leading causes of death based on VA. However, this was an enumeration method rather than a civil registration system and did not provide legal certificates of vital events to individuals and families.
Maldives

Policy and implementation framework

The legal framework for civil registration in the Maldives is to be found mostly in the law on birth registration and death certification, enacted in 1993. Two main authorities have responsibilities in the system, the MoH and the Department of National Registration (DNR). The DNR is responsible for the collection of birth forms and death forms and their entry in the online database, and the MoH maintains data relating to births and deaths with the information collected from the birth and death forms completed at the time of occurrence of a birth and a death. Registration can be locally carried out in two hospitals (both in capital city Malé), six regional hospitals, 13 atoll hospitals, 168 health centres, 189 island councils or 19 atoll councils.

Vital statistics are published in the Annual Statistical Yearbook, which reports information on births, fertility indicators, age-specific mortality rates, and abridged life tables. The Annual Health Statistics reports from the MoH also provide information on causes of deaths by sex, age and specific causes/cause-categories. The Maldives government convened a first national CRVS coordination mechanism in 2017, which included representatives from the MoH, the DNR, the National Centre for Information Technology, and the National Bureau of Statistics, chaired by the State Minister of Health.

Although both birth and death registration completeness is relatively high, there are a number of challenges, including limited resources and training for personnel. This results in inconsistent data quality, most prominently in cause-of-death coding.

Birth registration

Birth registration has a legally defined 7 days limit and is subject to fees. Birth registration was almost complete in 2014 and is currently estimated to be 100%. The establishment of the online birth and death system, in 2010, an online software application built on the Government Network of Maldives or GNM (e-government platform) has contributed to the development of the CRVS system, but some challenges remain, particularly with regard to the quality of data.

Death registration

There is no defined time limit for the registration of a death but is necessary to obtain a funeral permit and is free of charge. The lack of incentives for death registration has also been pointed out as an impediment on the road to registering all deaths. In 2017, it was reported to UNESCAP that death registration completeness was 89%. The quality of age and sex reporting in the CRVS system has been consistently high.

Cause of death

In 2014, an estimated 86% of deaths occurring in health facilities or with the attention of a medical practitioner had an underlying cause-of-death code derived from the medical certificate according
to the standards defined by the ICD (latest version as appropriate). The proportion of deaths coded to ill-defined codes was reported to the UNESCAP mid-term review as 6% in 2017. However, some studies have identified high levels of coding to unusable ICD codes. Unusable codes are most common in deaths of older persons and among men (37). Assessments of the quality of MCCD have identified problems such as illegible handwriting and poor-quality guidelines on death certification.

Vital statistics

Vital statistics are the responsibility of the National Bureau of Statistics under the Ministry of National Planning and Infrastructure. A CRVS coordination committee was established in 2017, chaired by the State Minister of Health, and with representatives from the Department of National Registration, the National Centre for Information Technology, and the National Bureau of Statistics. So far, no exclusive report on vital statistics has been released.
Myanmar

Policy and implementation framework

The registration of births and deaths in Myanmar started in 1907. Currently, four institutions are involved in the CRVS system. At the village level, data collection is the responsibility of the local workers of the General Administration Department, in collaboration with midwives. They work in close collaboration with the Department of Immigration for household listing. At the township level, medical officers, under the Ministry of Health and Sport, issue the certificates. At the national and subnational levels, the vital events database is compiled by the Central Statistics Office under the Ministry of Planning and Finance, which produces and publishes vital statistics.

To deal with the complexity of the system, coordination committees on birth and death registration have been established at the national, state/regional, district, township, ward and village tract levels. The national level committee is led by the Deputy Minister for Immigration and Population. The roles of the coordination committee are: to strengthen and upgrade the CRVS system in accordance with international standards; to make the vital event registration system more complete and reliable for population updates; and to enhance the collaborative activity of involved sectors in vital statistics reporting (Fig. 13).

The challenges for Myanmar include its lack of a legislative framework for CRVS and limitation in resources and personnel. Combined with a lack of community awareness on the importance of birth and death registration, this has led to inequitable access to services within the country. Suggested solutions include the linkage between birth registration and public services such as immunization, school enrolment, and application of household registration, as an incentive for registration (38).

Birth registration

Birth registration is free of charge for children under 10 years of age in order to accelerate progress towards universal birth registration. According to the 2010 MICS, birth registration completeness was 72%. However, there are significant urban–rural disparities, with birth registration completeness at 94% in urban areas compared with 64% in rural areas.

Death registration and causes of death

Deaths must be registered within 3 days. In 2014, the government estimated that death registration was 60% complete. For cause-of-death coding, only hospital deaths (16% of total deaths) have a medically certified cause of death by doctors; ICD coding is usually of poor quality, with an estimated 45% of deaths coded to ill-defined codes. Reliable cause-of-death information for community deaths (84% of total deaths) is not available.
Vital statistics

The Myanmar Statistical Yearbook presents annual statistics on infant, child and maternal deaths, age-specific fertility and mortality rates as well as life expectancies at birth by gender for urban rural areas, and numbers and rates for leading causes of death. However, it does not provide estimates of birth or death registration completeness (39). Also, while deaths assigned ill-defined causes of death account for over a fifth of all deaths, there is no mention of this aspect of data quality in the report.

Source: Role of Health Institutions in Vital Registration, Dr Nyein Aye Tun, Assistant Director, Department of Public Health, Ministry of Health and Sports. Country report to UN Statistics Division.
Policy and implementation framework

CRVS was established and governed in Nepal through Births, Deaths and Other Personal Events (Registration) Act, 1976 and Births, Deaths and Other Personal Events (Registration) Rules, 1977. Revisions are made in both the Act and rules following legal, administrative, infrastructural and political developments in the country. Recently, the National Identification and Civil Registration Act, 2020 and the National Identification and Civil Registration Rule, 2021 have been enacted. Birth and death registration is compulsory to ensure the legal right and process several administrative and legal procedures. The Ministry of Home Affairs has recently endorsed the Civil Registration Strategy 2019. Birth registration is particularly provisioned in the Constitution of Nepal for securing child rights. The Constitution has assigned “personal events, birth, death, marriages and statistics” as a concurrent power of all three tiers of government – federal, provincial and local.

The UNESCAP Ministerial Declaration for Asia and the Pacific 2014 is a major milestone in the CRVS systems that facilitate the citizens’ realization of their rights and support good governance and development by the decade (2015–2024) – “Get Everyone in the Picture”. Supported by this initiative and widening the scope of CRVS, a specialized agency – Department of Civil Registration (DoCR) – was established in 2014–2015. Further, The Department of National Identity and Civil Registration (DoNIDCR) was formed after merging together NID and CR in 2018 under the Ministry of Home Affairs. It is responsible for managing national ID as well as registration and monthly reporting of vital events from local level registrars and annual publication and dissemination of vital statistics. Inter-agency coordination mechanisms are formed in the DoNIDCR and the Ministry of Health and Population to govern and facilitate CRVS.

The Act and rules have made head of households, parents and spouse responsible for major vital events registrations. The legal time set for birth, death and marriage registration is 35 days, free of charge. Birth registration is necessary for many administrative processes including legal entitlement, school attendance and access to cash grant for poor families. Vital events are generally registered at the place of permanent residence. Registration of vital events is implemented through Municipal Ward Secretaries in the capacity of local registrars.

The DoNIDCR is continuously improving its service delivery, record management and reporting system by introducing robust and dynamic Management Information Systems integrated with vital events and social security schemes. Till 2021, almost 76% of the local registrars have initiated online record management of CRVS.

Despite all the efforts, there is much scope for improvement in the system. The health-SDG monitoring framework shows remarkable data gap to monitor mortality reduction-related targets; where seven indicators are related to mortality and eight sub-indicators for measuring specifically by cause of death. SDG localization is initiated by the Government of Nepal allowing opportunity for disaggregated data collection and analysis.

Partners are aligned to support CRVS strengthening for a long time and since 2020, the UNESCAP–SEA Region project for strengthening CRVS in Nepal is being implemented.
**Birth registration**

According to the Nepal MICS 2019, the coverage of birth registration for children under-5 is 77%. (As per the mid-term report questionnaire of UNESCAP, the birth registration completeness in 2018 was reported to be 23.2% in Nepal.)

A CRVS Mini Survey was conducted in 2015, which showed the birth registration coverage as 76% regardless of the date of occurrence of events. Birth registration of under-5 children is captured through the Nepal Demographic Health Survey and Nepal MICS.

The Ministry of Health and Population has initiated piloting of the birth registration system to facilitate information management on birth in hospitals and linking it to CRVS for sharing and use in the CRVS process.

**Death registration**

A CRVS Mini Survey was conducted in 2015, which showed the death registration coverage as 75% regardless of the date of occurrence of events.

CRVS data 2019–2020 shows 170,543 deaths registered which comes around 80 percent of estimated deaths in a year (Nepal reported 53.6% completeness of death registration in the mid-term report questionnaire of the UNESCAP). Though the coverage seems high, it includes people died any time in the past but registered in the year.

No data available on cause of death in the country at present. MCCD is not practised in Nepal, which caused the lack of information on cause of death. The Ministry of Health and Population and DoNIDCR are actively considering to establish a Death Registration System or MCCD in hospitals. From the beginning, the “cause of death” is missing in the CRVS.

**Vital statistics**

The DoNIDCR prepares the annual report on vital statistics based on online data and paper-based data. There is more opportunity to observe the disaggregated data through the online platform.

In general, the issues identified in the CRVS system at present are as follows:-

- Increasing the registration coverage and timeliness of registration.
- Identifying the population subgroups left behind and promoting for timely registration of events.
- Urgency of the cause-of-death recording and reporting in CRVS.
- High proportion of home deaths limiting MCCD in very little number.
- Little use of VA tools due to challenges in resources, management and notification of deaths.
- Lack of capacity in registration offices for ICD coding, cause-of-death recording and analysis of mortality data.
- Enabling the health sector for facilitating birth and death data management and linking to CRVS.
- Setting up a proper coordination mechanism, vertically and horizontally in the federal structure.
**Sri Lanka**

**Policy and implementation framework**

The centralized civil registration system of Sri Lanka is the responsibility of the Registrar General’s Department, with registrar’s divisions in the 332 divisional secretariats, for a total close to one thousand registration divisions. The current civil registration system is based on a 1951 law, last amended in 2008. Vital statistics are compiled at the Statistics Branch of the Registrar General’s Department from the birth and death returns provided by the Registrars of Births and Deaths. The legal time limit for birth and death registration is 3 months, and both acts are free of charge if done in time. Death registration is now mandatory to obtain a funeral permit.

Each registrar is required to send a monthly summary statement regarding the births, deaths, marriages and stillbirths in proclaimed areas to the Vital Statistics Unit via the District Registrar of Divisional Secretariat. The Vital Statistics Unit takes necessary actions to release aggregates on births and deaths in advance. Provisional estimates on mid-year population and other demographic indicators are prepared using these aggregates.

**Birth registration**

Almost all births take place in health facilities and in 2006–2007 an estimated 97% of children aged less than 1 year of age had their births registered.

**Death registration**

Sri Lanka reports that 97% of deaths are registered.

**Cause of death**

Cause-of-death information is generated from the death declaration for hospital deaths and VA for home deaths. With regard to sudden deaths, the coroner report is used. The ICD-10 classification is applied for coding the cause of death. Of the approximate 130,000 deaths reported annually, close to half occur outside of hospitals, i.e. at home or in the community. These deaths are not medically certified by a doctor, but by coroners and registrars of births and deaths who do not have the medical knowledge and skills to accurately determine the medical cause of death. Furthermore, many doctors working in health facilities have not been trained to accurately complete the WHO MCCD, resulting in high proportions of poorly specified and unusable cause-of-death data even when an MCCD has been used (40). As a result, around one third of deaths are insufficiently specified and are of little use in informing public health policy.

In response, a project involving the MoH, the Registrar General’s Department and the Health Informatics Society of Sri Lanka (HISSL) is introducing two initiatives to improve the quality of cause-of-death statistics: introducing automated VA to ascertain the cause of death of people dying in the community; and upskilling Sri Lanka’s doctors in correct medical certification practices through
training and use of electronic tools that will assist them to improve the accuracy of their medical certification (and thus the overall quality of cause-of-death data generated in hospitals).

**Vital statistics**

The Sri Lanka Vital Statistics 2008–2017 report issued by the Registrar General’s Department (41) contains detailed information on numbers of births and deaths registered, but does not provide estimates of birth and death registration completeness. Data on causes of death are extracted from the death declaration for hospital deaths, VA for home deaths or a coroner report for sudden deaths. The ICD-10 is used to code the cause-of-death information.
Thailand

Policy and implementation framework

The civil registration system in Thailand is centralized, automated and fully digitalized. Currently, all provincial registration offices and almost all of the district registration offices are online, collecting and transferring data to the central database in real-time. The computerized population database project started in 1982.

Civil registration is the responsibility of the Ministry of Interior and is carried out by the Bureau of Registration and Administration (BORA) and the Civil Registration Division under the Department of Local Administration.

Over the past decade, the civil registration system changed from a manual, paper-based registration system to a centralized, electronic, online system linked to a unique identification number (UIN) system. The vital statistics system improved when the civil registration system began feeding electronic birth and death data directly into the vital statistics management system. Currently, vital statistics are considered of good quality and are available in a timely manner. The use of UINs and the civil registration databases has enabled and facilitated rapid enrolment of beneficiaries into the universal health coverage (UHC) policy in 2001. The use of UINs and personal demographic information from the civil registration system significantly improved the quality of health-care information and provider payment systems (42).

Because of the high number of deaths occurring outside of health facilities, Thailand had to implement a special programme aimed at enhancing the cause-of-death coding, providing medical training. At the beginning of the CRVS decade, Thailand was close to a complete civil registration system, with an estimated 98% of births and deaths registered.

Birth registration

Birth registration needs to be completed within 15 days and is free of charge, and in only 24 hours for death registration. Both registrations are free. In the 2020 UNESCAP mid-term report, Thailand reported 100% birth registration completeness.

Death registration

Death registration should be completed within 24 hours for death registration and is free of charge. In the 2020 UNESCAP mid-term report, Thailand reported 100% death registration completeness.

Cause of death

Because 60–70% of deaths occur outside of hospitals, there is concern about the accuracy of cause-of-death reporting. These deaths are often classified as natural cause of death by the head of the village and civil registration officers who do not have a medical background. In response, Thailand is implementing a special programme aimed at enhancing the medical cause-of-death certification
and ICD-compliant coding by providing pre-service and in-service training for doctors and coders. The aim is to reduce the percentage of registered deaths classified to symptoms or signs (R00–R99 of the WHO ICD-10 code) from 38% in 2077 to the WHO recommend limit of 10%.

**Vital statistics**

Vital statistics are produced by the Ministry of Public Health, using both data from the MoI and standardized data sets primarily used for public insurance purposes. The two ministries have been collaborating since 1996, which allows for more accurate and timely data.
**Timor-Leste**

**Policy and implementation framework**

Civil registration is the responsibility of the Ministry of Justice, through the National Directorate of Civil Registration and Notary. There are 13 civil registration offices, one in each municipality. Two additional government agencies collect civil registration data: the Ministry of State Affairs assists the Ministry of Finance of which the General Directorate of Statistics (GDS) is a part by collecting and collating data at the Aldeia (community), Suco (village), administrative post and municipality (district) levels and passing these compiled lists of births and deaths on a semi-annual basis to GDS head office. The MoH also collates birth and death registration data through health facilities across the country. Currently, there is no unique ID but a committee has been established by the government and UN agencies under the Prime Minister’s office to implement the process of unique ID.

The CRVS system is totally reliant on declaration of vital events by family members, as shown in Fig. 14. Births and deaths should be reported by the family within 4 weeks.

*Fig. 14.* The CRVS system in Timor-Leste

**Birth Registration Process**

- Live Birth at Hospital
  - Fill tear off form in Lisjo
  - Self Service
  - Parent takes the form to District Civil Registry office
  - Birth Certificate issued

- Live Birth at Home
  - Fill Birth Declaration Form or Baptism certificate
  - Suco chief/Mid wife takes the form to District Civil Registry office
  - Birth Certificate issued

**Death Registration Process**

- Death in Hospital
  - Medical declaration of death with COD issued
  - Carry identification documents (Birth/Baptism certificate)
  - Form taken to District Civil Registry Office
  - Death Certificate issued

- Death outside Hospital
  - Lay-reported COD most often marked as “Sickness”
  - Carry identification documents (Birth/Baptism certificate)
  - Form taken to District Civil Registry Office
  - Death Certificate issued

A CRVS assessment was conducted in 2011–2012, led by the MoH in collaboration with the Ministry of Justice and the National Statistics Office. A national CRVS coordinating mechanism was established in 2012, chaired by the Ministry of Justice and including the MoH, Ministry of State Administration, and the General of Statistics, Ministry of Finance. Subsequently, a multisectoral CRVS strategy (2014–2024) was drafted and the resolution is awaiting approval of the council of ministers. A steering group has been set up and is responsible for the monitoring and evaluation plan. To date, no CRVS inequality assessment has been carried out.
Birth registration

For children under 5 years, birth registration is free of charge. The cost is $5 for registration of those aged over 5 years. A new reform of civil registration processes proposes a fine of $3 for delayed registration (after 4 weeks).

The Demographic and Health Survey of 2009–2010 estimated that 55% of children under 5 years of age were registered and the 2015 census reported that 31% of children aged less than 6 years of age had a birth certificate. No information is available on the percentage of children whose births are registered within the first year of life.

Collaboration with Suco chiefs and midwives, as well as mobile registration have increased coverage, but remote areas remain hard to reach.

Death registration and causes of death

Based on extrapolations from the 2015 census, there are an estimated 9600 deaths annually. In 2011, completeness of deaths registrations was estimated to be approximately 20%. There are no more recent official estimates of the completeness of death registration within one year of occurrence.

It is estimated that the cause of death is accurately determined and coded in fewer than 10% of cases. No up-to-date information is available on numbers of deaths recorded by the health sector or numbers with a completed medically certified cause of death coded to the ICD. The version of the ICD currently used is ICD-10, but this is not fully implemented by hospitals. VA has been used for maternal and perinatal deaths only.

Vital statistics

The Births and Deaths Statistics Report 2014–2015 (43) identified a number of problems, including several overlapping and duplicative systems for registering births and deaths managed by different agencies, including the Ministry of Justice, the General Directorate of Statistics and the MoH. Whether a birth or death takes place in a health facility or at home, the declaration to the registration office is the responsibility of the family and there is a lack of checks and balances to ensure that registration has taken place. Civil registration officers based at the municipality level have a remit to visit at least one Suco every month to conduct a mobile registration camp but anecdotal evidence suggests that lack of resources for transportation deter visits especially to remote areas. Since most births and deaths take place outside of health facilities, there is a high incidence of unregistered births and deaths. The report estimated birth registration completeness at 38.3% for boys and 31.7% for girls, concluding that there is evidence of underreporting of female births. There were also large disparities in birth registration completeness in different geographical areas of the country. By contrast, the completeness of death reporting was significantly higher than for births, at 52.5% for males and 55.9% for females. However, it is possible that these rates may be overestimated due to underestimation of total expected deaths.
References


19. UNESCAP CRVS Midterm review 2020 Bangladesh (Table 3.2).


21. UNESCAP CRVS Midterm review 2020 India.

22. UNESCAP CRVS midterm review 2020, Indonesia

23. UNESCAP CRVS midterm review 2020, Maldives

24. UNESCAP CRVS Midterm review 2020, Myanmar

25. UNESCAP CRVS Midterm review 2020, Nepal

26. UNESCAP CRVS Midterm review 2020, Sri Lanka

27. UNESCAP CRVS midterm review 2020, Thailand

28. UNESCAP CRVS midterm review 2020, Timor-Leste


To accelerate progress towards strengthening CRVS systems, Member States in the WHO SEA Region adopted the “WHO South-East Asia Regional strategy for strengthening the role of the health sector for improving civil registration and vital statistics 2015–2024”. The regional CRVS strategy articulates common principles in CRVS development, key strategic objectives to be met, and a range of recommendations and key action areas to be addressed. The regional CRVS strategy focuses on health sector initiatives at the regional, national and local levels to support notification and universal civil registration of births and deaths and causes of deaths, and improve the generation of accurate, complete and timely vital statistics.”