



# Asia-Pacific CRVS Research Forum

3–4 April 2023 | Bangkok, Thailand

## Applying legal analysis and business process mapping for CRVS system strengthening: Lessons from three districts study in Indonesia

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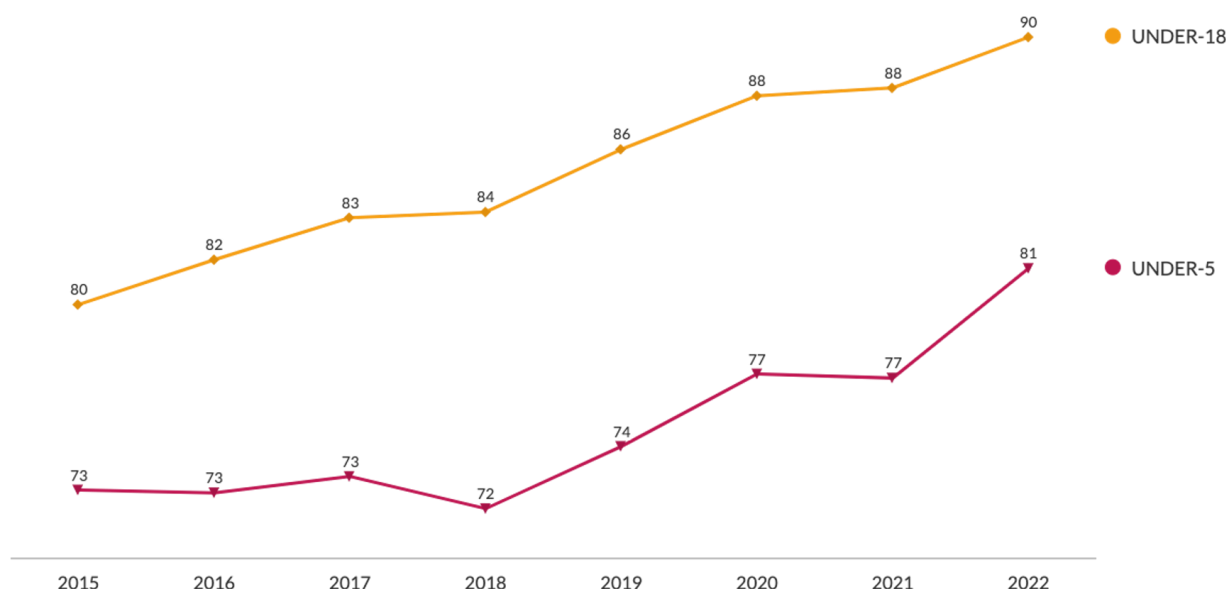
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## Introduction

The Government of Indonesia has established its national strategy on Civil Registration and Vital Statistics (CRVS) through Presidential Regulation Number 62 of 2019 on the Acceleration of Population Administration for the Development of Vital Statistics. This strategy aims to provide accurate, complete, and timely vital statistics<sup>6,10</sup>. Ideally, the primary data source for vital statistics should be the civil registration system, offering data on key vital events disaggregated by place of residence, sex, and age group. However, Indonesia's civil and population registration system has not yet achieved this, and most published vital statistics are derived from national census data or surveys<sup>3,4</sup>.

Although the government has successfully implemented a single identification number for nearly all citizens, the quality and completeness of civil registration data, signified among others, by birth certificate coverage, remain significant challenges. Based on the official release from the agency of Statistics Indonesia (BPS), birth registration coverage for under-18 in Indonesia was showing an upward trend, but the progress remained slower for under-5s (Figure 1). Moreover, death registration is very low, and data on the causes of death are either insufficient or unavailable in many parts of the country<sup>10,13</sup>. A 2019 survey reported only 12 percent of death events in the past five years were registered by a deceased’s household member among the sample<sup>3</sup>.

Figure 1. Estimated Proportion of Birth Registration for Under-18s and Under-5s



Source: National Socioeconomic Survey 2015-2022, Statistics Indonesia, 2023.



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Civil registration is not consistently timely across the country, and vulnerable groups often face difficulties registering<sup>1,8,10</sup>. In response to these challenges, various good practices have emerged from national and regional governments and community organizations, strengthening the administrative system but also creating complex, potentially unconnected parallel mechanisms<sup>5,6</sup>. To date, there has been no assessment of these systems or the data they produce.

To address these issues, the Government of Indonesia's National Secretariat of CRVS National Strategy or Seknas AKPSH, in collaboration with Vital Strategies and the Center on Child Protection and Wellbeing at Universitas Indonesia (PUSKAPA), is working to understand the CRVS system's business processes and data flows in Indonesia, from event notification to certification and vital statistics production. By jointly applying a legal and regulatory review framework and business process mapping approach, this study aims to assess the current key business processes and sub-processes, contextualize them within recommended legal and regulatory best practices, and identify opportunities to strengthen the Indonesian CRVS system.

## Methods

### Legal Analysis

The legal analysis was conducted using the comprehensive CRVSID Legal Review Toolkit, developed by the Global Health Advocacy Incubator (GHA) and Data for Health partners. This toolkit is grounded in international best practices as outlined by the United Nations, the World Health Organization (WHO), and other international bodies, ensuring a rigorous and globally recognized approach. The legal analysis covers various aspects, including the structure of the civil registration system, registration of births and deaths, determining and certifying causes of death, production of vital statistics, marriage and divorce registration, and the national ID system.

Each chapter of the legal analysis presents best practices on specific topics and addresses key questions guided by the CRVSID Legal Review Toolkit, ensuring a thorough and structured assessment. A total of 61 laws and policy documents were meticulously assessed for this legal analysis, comprising national laws, presidential regulations, ministerial technical policies, and sub-national level policies. The review not only encompasses civil registration-related policies but also extends to regulations on decentralization, statistics, health, and social welfare, which intersect closely with the CRVS system. This multi-dimensional approach ensures the robustness of the analysis.

For the purpose of this paper, the legal review will focus on the structure of the civil registration system, birth and death registration, cause of death certification, and vital statistics. By honing in on these key areas and employing a methodical and comprehensive toolkit, the legal analysis provides a solid foundation for understanding and evaluating the Indonesian CRVS system within the context of international best practices.

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## Business Process Mapping

The As-Is business process maps for birth and death registration were initially constructed based on information gathered from existing regulations and a thorough desk review. While the study aimed to understand the business process for cause of death certification and vital statistics production, these aspects were yet to be strongly institutionalized at the national level. Consequently, the study also investigated local opportunities and efforts to improve cause of death certification and vital statistics production.

To ensure the accuracy and relevance of the initial As-Is business process maps for birth and death registration, consultations were conducted with stakeholders in three districts: Bener Meriah (Aceh Province), South Manokwari (West Papua Province), and Padang Pariaman (West Sumatera Province). These districts were selected based on ongoing CRVS initiatives and their unique geographical and cultural characteristics. However, it is important to note that, due to Indonesia's vast regional diversity, these three districts may not fully represent the overall Indonesian context. They provide specific information on the civil registration business process in their respective districts, contributing valuable insights.

Further consultations with national-level stakeholders were conducted to gain a deeper understanding of the context, policy, and programs organized at the national level. A total of 161 participants were involved in the district consultations conducted in September 2022, as detailed in Table 1. National-level consultations took place through interviews with representatives from relevant directorates of three key ministries/agencies: the Ministry of Home Affairs, Statistics Indonesia, and the Ministry of Health. These interviews were conducted between 12 December 2022 and 9 January 2023, involving 23 informants.

Following the consultations, researchers reviewed and refined the business process maps to incorporate the new information obtained. The findings from the consultations also served to complement the legal analysis and inform policy recommendations.

**Table 1. Participants of Consultations in Three Districts**

Background/ Government/Agency	Number of Participants		
	Bener Meriah	South Manokwari	Padang Pariaman
Civil and population registration	24	5	27
District planning agency	-	2	-
Health sector	11	9	12
Statistics agency	2	1	3
Village resident	11	5	9
Village government	11	11	18



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## Analysis

The analysis of this study is characterized by an integrated qualitative approach, drawing on the interactions between the business process mapping and the legal review findings. The meticulous construction of the As-Is business process maps, coupled with the diverse selection of districts for consultations and the inclusion of both local and national-level stakeholders, enabled a comprehensive assessment of the existing CRVS system. This assessment was further enriched by the legal review, which provided valuable insights into the regulatory framework governing the system.

By employing a constant comparative method, the researchers systematically coded and analysed field findings to identify discrepancies, commonalities, and opportunities for improvement in the CRVS system. This method facilitated a thorough examination of the business process practices in relation to the established regulatory framework. The approach allowed the researchers to identify potential gaps, inefficiencies, and areas for enhancement within the system, ultimately informing targeted and evidence-based recommendations for policy and practice.

## Limitations

It is important to acknowledge the limitations of this study. Firstly, the selection of only three districts may not be fully representative of the broader Indonesian context due to the country's vast regional diversity. While the findings provide valuable insights into the specific conditions and practices in these districts, they should not be generalized to represent birth, death, and cause of death registration across Indonesia. Despite this limitation, the diverse recording business processes and innovations observed in these districts contribute essential knowledge on overcoming challenges arising from unique regional conditions.

Secondly, during data collection in the three locations, hospitals, public health centers, and villages were selected based on consultations with field informants, considering factors such as substantive information, logistics, and geographical accessibility. Although the researchers employed triangulation with multiple sources to ensure comprehensive data collection, it is possible that some barriers to the registration process remain unaddressed in the study's results. These limitations should be considered when interpreting the findings and recommendations of this study.

## Preliminary Findings

The following presents the preliminary findings from this study, starting with the overview of Indonesia's civil registration system structure that summarizes the legal framework and the roles and responsibilities of various government institutions involved in the civil registration system in the country. After that, the findings discuss the business processes, regulatory framework, and innovations found in the three study sites, highlighting the diversity of entry points and the uniformity of the birth and death registration sub-processes, followed by identification of the challenges faced by the study sites, such as data quality and completeness, insufficient human resources, and lack of policies and standardized mechanisms that ease

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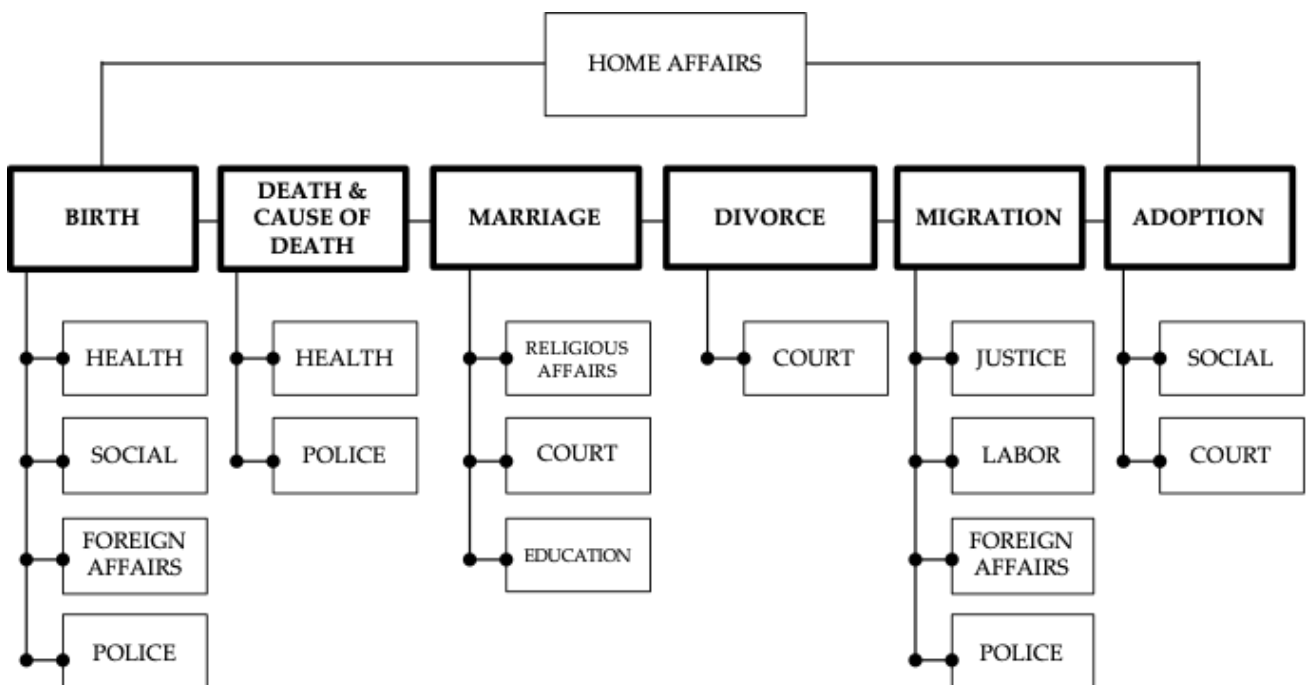
access for vulnerable populations. The findings section end with the current status of cause of death certification in Indonesia, the absence of national policy, and pilot interventions at the district/city level, followed by the current situation of vital statistics production in Indonesia, highlighting the lack of specific regulations and the varying understanding among stakeholders.

## Indonesia’s Civil Registration System

In Indonesia, the Ministry of Home Affairs (MOHA) oversees the civil registration system, which produces legal identity documents such as national ID cards (*Kartu Tanda Penduduk* or KTP), family cards (*Kartu Keluarga* or KK), and civil documents like birth, death, and marriage certificates. MOHA's Directorate General Population and Civil Registration (DG Pop & CR) assigns unique identification numbers (*Nomor Induk Kependudukan* or NIK) and manages the population administration data through the Population Administration Information System (Sistem Informasi Administrasi Kependudukan or SIAK). This data ideally informs Indonesia's vital statistics.

Although MOHA holds the primary civil registration authority, Indonesia's CRVS system involves multiple line ministries, such as the Ministries of Health, Social Affairs, Home Affairs, Education, and Religious Affairs, the Police, and the Supreme Court. (Figure 2).

Figure 2. Sectoral Stakeholders in Indonesia’s CRVS System



Source: Kusumaningrum, 2019.

Indonesia's civil registration system is governed by a legal framework that comprises several national laws and regulations. The implementation of population administration and national identity services is primarily



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guided by two main laws: Law 23/2006 on Population Administration (Adminder) and its amendment, Law No. 24/2013. Additionally, service delivery is influenced by Law 23/2014 on Local Government. The requirements and procedures for reporting and registering important events are detailed in Law 23/2006, Law 24/2013, and their implementing regulation No. 40/2019.

DG Pop & CR is tasked with formulating national policies as per Presidential Regulation No. 11/2015 on the Ministry of Home Affairs. The provincial level population and civil registration office plays a role in coordinating, supervising, and presenting population data at the provincial level, while the district-level Population and Civil Registration holds the authority to conduct civil registration services.

Civil registration services are also available at the sub-district and village levels, although their availability varies across Indonesia. The presence of these services at the sub-district and village levels depends on the decision of the governor or head of the regent, as determined by subnational level regulations.

## **Birth Registration**

The Indonesian government mandates that all residents, including Indonesian citizens in the country and abroad, as well as foreign residents within Indonesia, report birth events. Under Law 23/2006, Article 3, Indonesian citizens and foreigners within Indonesia can report births at their local Population and Civil Registration office, while Indonesian citizens abroad can report through the representative office of the Republic of Indonesia in their country. Additionally, Indonesian residents can report births through the Registration Officer at the village level, as per Minister of Home Affairs Regulation 119/2017, or through a subdistrict implementing unit under Regulation 120/2017, if the local government has appointed an officer or established such a unit.

Under Law 23/2013, birth reporting in Indonesia should be done within 60 days of the event, primarily by the head of the family. This requires completing the birth reporting form (F.2-01), which must be signed by the head of the household, as indicated on the resident's Family Card (Minister of Home Affairs Regulation 109/2019). The head of the household can be male or female and doesn't need to be biologically related to the child. Required documents for birth registration include a birth notification letter from the health sector or village, a marriage certificate or statement of absolute responsibility if parents don't possess a marriage certificate, and the national ID cards and family cards of the child's parents.

The birth registration business processes across the three study sites illustrate a relatively uniform and well-established system compared to death or cause of death registration. Despite the absence of a specific policy governing birth registration business processes, diverse implementations at the subnational level have emerged. This situation might lead to inconsistent procedures across Population and Civil Registration offices, but it also creates opportunities for each Population and Civil Registration to adopt more efficient and consumer-oriented services.

Various approaches for registering births are evident in the key actors and the administrative level at which the birth registration process begins. The study in the three districts identified different entry points for the birth registration process. In Bener Meriah, Manokwari Selatan, and Padang Pariaman, families can register a child's birth directly at the local Population and Civil Registration office, with Population and Civil

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Registration serving as the main actor in this self-management process and offices located at the district level.

In Bener Meriah, an innovation called Alibbata (Child born, Midwife gives certificate/*Anak Lahir, Bidan Beri Akta*) has been developed as a collaboration between Population and Civil Registration and the Bener Meriah Health Office. Through Alibbata, midwives help facilitate birth registration by sending required documents to Population and Civil Registration via WhatsApp. Similarly, in Padang Pariaman, midwives can also help forward applications for birth certificates through the SIPAKEM application developed by Population and Civil Registration, providing health sector support.

Village-level officer support is available in Bener Meriah through a village registration facilitator, and in Padang Pariaman, the village government can help facilitate birth registration through the *Dukcapil Ceria Mobile* application provided by Population and Civil Registration.

In Manokwari Selatan, an innovation that facilitates birth registration is the mobile service provided by Population and Civil Registration. Through mobile services, Population and Civil Registration visits villages to provide population document services, including birth registration.

Despite different entry points, the flow of the birth registration sub-process once it reaches Population and Civil Registration was found to be fairly uniform, particularly in Bener Meriah and Padang Pariaman. The differences in the sub-processes of Padang Pariaman Population and Civil Registration's birth registration business can be seen in the use of application systems at several stages that replace manual processes. For example, in Padang Pariaman, the application is processed with the required documents through the *Dukcapil Ceria Mandiri* or SIPAKEM application. In contrast, in Bener Meriah, the application is made directly to the counter officer or via a WhatsApp Population and Civil Registration Operator.

Table 2. Variations in Entry Points of the Birth Registration Business Process in the Three Sites

Variations in Entry Points of the Birth Registration	Bener Meriah	South Manokwari	Padang Pariaman <sup>7</sup>
Self-Administration	Applicants go directly to the Population and Civil Registration office	Applicants go directly to the Population and Civil Registration office	Applicants use <i>Dukcapil Ceria Mobile</i>

<sup>7</sup> Padang Pariaman has innovated to make civil registration services fully online. Counter services only serve special cases, such as files with missing or problematic requirements, such as double data, erroneous data, incomplete data. Residents can record birth events through the Birth and Death Reporting and Recording System (SIPAKEM) or *Dukcapil Ceria Mobile*. SIPAKEM is web-based, while *Dukcapil Ceria Mobile* is application-based and can be accessed via the web as well.



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<b>Through Health Sector</b>	Alibbata Innovation ( <i>Anak Lahir Bidan Beri Akta</i> )	-	The midwife assists with application through the SIPAKEM application
<b>Through the Support of Village Level Officers</b>	Village Registration Facilitator/Petugas Registrasi Kampung (PRK)	-	The village officer assists with registration through Dukcapil Ceria Mobile
<b>Other Innovations</b>	-	Mobile services	-

## Death registration

Similar to birth registration, Indonesian citizens must report death events to their local Population and Civil Registration offices or a subdistrict implementing unit based on their domicile (Article 3 of Law 23/2006). If available, the Registration Officer at the village level can also assist with death registration. In cases where a missing person's status is unknown, the family can report the death to Disdukcapil after obtaining a death determination from the local court.

To register a death event, the family of the deceased must fill in the death reporting form (F.2-01), similar to the process for birth registration (Minister of Home Affairs Regulation 109/2019). Required documents for death registration include a death notification letter from the health sector or village, the deceased's national ID card, and the deceased's family card.

The study discovered that death registration business processes in the three sites, particularly the sub-processes within Dukcapil, are quite similar to birth registration business processes. However, the level of coverage for death registration is significantly lower than that of birth registration. The variety of approaches and entry points for the death registration business process in the three sites generally aligns with those for birth registration, involving self-management, health sector support, village-level officer support, and other innovations.

In all three sites, families of deceased residents can register the death directly at the local Population and Civil Registration office through self-administration. Cooperation between Population and Civil Registration and the health sector for death registration was only found in Padang Pariaman, which allows health workers to facilitate death registration by submitting a request through the SIPAKEM application. Although this is possible, the practice of facilitating birth registration by health workers in Padang Pariaman has not yet been implemented.

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As with birth registration, death registration can also be facilitated by the village registration facilitators in Bener Meriah through the support of village-level officers. In Padang Pariaman, the village government can help facilitate registration through the *Dukcapil Ceria Mobile* application.

Similar to birth registration, death registration in Manokwari Selatan can also be captured when Population and Civil Registration conducts mobile services in villages, reaching areas far from the Population and Civil Registration office. This innovation showcases another way Population and Civil Registration works to ensure the registration of vital events, including deaths, within their jurisdiction.

Table 3. Variations in Entry Points of the Death Registration Business Process in the Three Sites

Variations in Entry Points of the Birth Registration	Bener Meriah	South Manokwari	Padang Pariaman <sup>8</sup>
<b>Self-Administration</b>	Applicants go directly to the Population and Civil Registration office	Applicants go directly to the Population and Civil Registration office	Applicants use <i>Dukcapil Ceria Mobile</i>
<b>Through Health Sector</b>	-	-	The health worker assists with application through the SIPAKEM application
<b>Through the Support of Village Level Officers</b>	Village Registration Facilitator/Petugas Registrasi Kampung (PRK)	-	The village officer assists with registration through <i>Dukcapil Ceria Mobile</i>
<b>Other Innovations</b>	-	Mobile services	-

<sup>8</sup> Padang Pariaman has innovated to make civil registration services fully online. Counter services only serve special cases, such as files with missing or problematic requirements, such as double data, erroneous data, incomplete data. Residents can record birth events through the Birth and Death Reporting and Recording System (SIPAKEM) or *Dukcapil Ceria Mobile*. SIPAKEM is web-based, while *Dukcapil Ceria Mobile* is application-based and can be accessed via the web as well.

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## Gaps and Challenges

### ***Birth and Death Registration***

While birth and death data quality and completeness are essential for producing accurate vital statistics, these aspects remain an issue in all assessment sites. Only Padang Pariaman has initiated data interoperability with the SIPAKEM innovation. However, the SIPAKEM database remains incomplete due to the existence of another database, the *Dukcapil Ceria Mobile*.

Since the implementation of the Centralized SIAK policy, district Population and Civil Registration offices have lost their authority to process the population database. However, there is a need from other sectors to obtain processed population data quickly. The centralized SIAK network has also experienced disruptions, hampering the recording process. Furthermore, there is an insufficient number and quality of human resources to support birth and death registration and data utilization at Population and Civil Registration.

There is no policy regarding the organization of causes of death in general. In Bener Meriah and Manokwari Selatan, no official mechanism is used, from standardized forms and reporting systems to data entry for recording the cause of death.

Civil registration services for vulnerable populations present their own set of challenges. Although available regulations have accommodated the requirements and procedures to register birth and death for Indonesian citizens abroad, people who cannot report themselves, the elderly, and people with disabilities (Minister of Home Affairs Regulation No. 96/2019 on Data Collection and Issuance of Population Documents for Vulnerable Populations), this regulation has yet to address services for other vulnerable groups, such as establishing birth certificates (with the names of the father and mother) for children born outside a legal marriage or birth and death registration for indigenous groups.

In general, challenges faced by vulnerable groups can be attributed to two factors: 1) barriers to access services and challenges to outreach services; or 2) challenges in fulfilling the information or requirements needed to record vital events. Another challenge identified in the legal review is the limited access of citizens to services because Indonesian regulations only apply the domicile principle to record/register vital events. Best practices show that the principle of universality of services (which accommodates both domicile and event principle) is an essential component for creating accessible and inclusive civil registration services.

### ***Certification of Cause of Death***

The Ministry of Health holds the authority for recording the cause of death in Indonesia. Through the National Strategy on CRVS, the Indonesian Government aims to achieve 100 percent coverage of death events with identified causes based on the International Classification of Diseases-10 (ICD-10) within the past year by 2024. Additionally, the Ministry of Health targets the establishment of an integrated mechanism for recording and reporting death events and causes of death at both central and regional levels by the same deadline.

However, the legal review and national consultations reveal a lack of a comprehensive national policy that provides systems and guidelines for recording causes of death applicable across the country. This absence explains why the certification of the cause of death using the Medical Certificate of Cause of Death (MCCOD)



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guidelines developed by the World Health Organization (WHO) has not been made mandatory in all three locations under study.

Current efforts primarily involve system development and pilot interventions at the district or city level. For instance, the Padang Pariaman District has been selected as an intervention district for the development of a verbal autopsy mechanism by the Ministry of Health. Strengthening the certification of cause of death will require the development and implementation of a national policy that accommodates systems and guidelines on recording causes of death that can be applied nationwide. This will help ensure that Indonesia meets its ambitious goals by 2024 and improves the overall quality and coverage of cause of death data.

## ***Production of Vital Statistics***

The production of vital statistics using civil registration data remains unachieved in the three study locations and at the national level in Indonesia. Consultations reveal varying levels of understanding among relevant stakeholders regarding the production of vital statistics, which may be attributable to the absence of specific regulations on this matter. Despite being one of the explicit goals in the National Strategy on CRVS, the Government of Indonesia has not yet established specific regulations governing the production of vital statistics. The authority to collect, process, and publish data on important events is currently dispersed across various government sectors based on their respective duties and authorities.

## **Discussion**

The assessment of civil registration and vital statistics (CRVS) practices in Indonesia reveals disparities in policy comprehensiveness and implementation at the national and subnational levels. While birth registration policies are considered comprehensive, owing to the government's prioritization of achieving universal birth registration over the past decade, policies on death and cause of death registration remain sparse. Furthermore, clear linkages between civil registration and vital statistics production are still lacking.

These preliminary findings emphasize the diverse approaches adopted by various districts for registering births, including self-administration, health sector support, village-level officer support, and other innovations. However, challenges persist in increasing coverage for death registration and standardizing cause of death registration across assessment areas.

To address these challenges, the Government of Indonesia must focus on developing and implementing comprehensive regulations that foster cross-sectoral collaboration between civil registration services and other sectors, such as education, health, social security, and villages. Although some regions, like Bener Meriah and Padang Pariaman, have seized the opportunity to link legal identity document ownership with service delivery, limited regulations at the national level hinder broader implementation of such initiatives.

Strengthening and enhancing the production of vital statistics requires the development and implementation of clear and comprehensive regulations that address data collection and processing. By consolidating the authority and responsibilities associated with vital statistics, the government can ensure a more streamlined and efficient process, promoting better understanding among stakeholders, improving

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data quality and consistency, and ultimately contributing to more informed decision-making and policy development at both regional and national levels.

## Conclusion

The vital statistics system in Indonesia, ranging from production to data quality control and dissemination, remains underdeveloped. The government of Indonesia now has practical lessons learned from the legal review and business process mapping exercises conducted and can use them to inform strategic ways forward that are in line with the National Strategy on CRVS priorities and directions. Some of the first key steps include harmonizing the process of registering births, deaths, and causes of death carried out by various sectors and streamlining the regulatory framework on vital events recording mechanisms.

Furthermore, addressing the gaps and challenges in CRVS practices in Indonesia demands a multifaceted approach that encompasses policy development, cross-sectoral collaboration, and capacity building. By focusing on these areas, the Government of Indonesia can work toward achieving universal coverage of birth and death registration, standardizing cause of death registration, and enabling the integration of data and the production of vital statistics that accurately reflect the country's population dynamics and social health status to inform decision-making and policy development.

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