

Gaps in the civil registration and vital statistics systems of low- and middle-income countries and the health sector's role in improving the situation

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Abstract: Civil Registration and Vital Statistics (CRVS) is an essential administrative system that provides legal identification to all individuals and accurate statistical data of vital events, such as birth and death rates within the population. Globally, CRVS has been considered a priority issue, especially for low- and middle-income countries where the coverage of this system is poor. This may be attributed to factors such as inefficiency of laws, poor inter-ministerial cooperation, and a lack of awareness among people. To address these issues and improve coverage of the CRVS, the health sector could play a key role by acting as an entry point, collecting accurate vital data, and utilizing information from CRVS. However, the function of the health sector in implementing CRVS has not been fully analyzed in most countries. Further investigation is necessary to develop effective measures to strengthen CRVS.

Keywords: Civil Registration and Vital Statistics (CRVS), birth registration, death registration, low- and middle-income countries, health sector

Civil Registration and Vital Statistics (CRVS) is an essential administrative system that maintains a record of the occurrence and characteristics, and produces vital statistical data, of major events within the population (notably, births, deaths, and marriages) (1). CRVS provides individuals with documentation that is necessary to establish legal identity and family relationships, make claims of nationality, exercise civil and political rights, access public services, and participate in modern society (2,3). In addition, CRVS can provide governments with essential information that can be used to develop, implement, and monitor policies related to public services.

However, on average, the coverage of civil registration globally is currently low. A United Nations Statistics Division (UNSD) report showed that, as of 2017, only 68% and 55% of countries and regions in the world had birth and death registration rates of 90% and above, respectively (4). In addition, there were large regional disparities. As described in Figure 1, in the African region that includes many low- and middle-income countries, the percentages of countries with less than 50% coverage or no data of birth and death registration were approximately 40% and 60%, respectively. However, in Europe and North America, where there are many high-income countries, most countries had more than 90% birth and death registration rates. In light of these facts, international

aid organizations, United Nations (UN) agencies, and academic institutions have recognized a weak CRVS system in low- and middle-income countries as a global priority issue for development. Several regional initiatives provide support to these countries to strengthen their CRVS. Moreover, the Sustainable Development Goals (SDGs) highlight the importance of CRVS for accurate measurement of health-related indicators. Target 16.9 of the SDG aims to improve the birth registration rate in order to provide basic legal identification, access to justice for all, and to promote peaceful and inclusive societies for sustainable development.

According to Mikkelsen (5), the low civil registration rates in low- and middle-income countries may be attributed to the following factors: *i*) Despite existence of a legal framework, the law in these countries is either inefficiently framed and needs to be revised, or its enforcement is inadequate; *ii*) Due to the lack of inter-ministerial cooperation and unclear division of roles, the legal and statistical position of CRVS becomes ambiguous. Therefore, it becomes difficult for each ministry and agency to adopt collaborative measures to strengthen CRVS; *iii*) People may not be able to access the registration office due to physical and socio-economic barriers, even though they may understand the necessity of civil registration; *iv*) People lack knowledge about the purpose, need, and the medium-and long-term benefit of registration. They

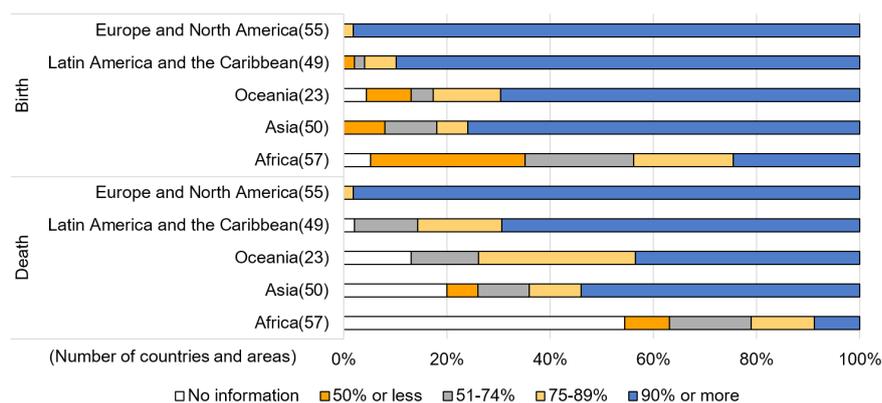


Figure 1. Proportion of countries' live birth and death registration coverage by region. Data Source: United Nations Statistics Division, last updated in UN Data: December 2017 (Original data year 2001-2017), https://unstats.un.org/unsd/demographic-social/crvs/documents/Website_final_coverage.xls (accessed October 20, 2020)

therefore have little or no incentive to participate in the registration process.

To address these issues, building an effective collaboration between the health sector and civil registration offices can be helpful. Healthcare institutions can serve as an entry point for the civil registration process and can be used for filing notifications (1). For example, in South Africa, a significant improvement was observed in the birth registration rate after registration offices were established within healthcare facilities for childbirth (6). Similarly, the health sector can play an important role in improving death registration rates by not only serving as an entry point for registration agencies, but by also identifying the exact causes of death. This information is essential for effective, optimal, and inclusive policy management. In many low- and middle-income countries, it can be difficult to collect accurate information regarding the cause of death. According to Burger *et al.*, in about 24% of deaths in South Africa, the reported causes were either ill-defined or unknown, thereby resulting in sub-optimal and biased information for planning purposes (7). Therefore, by having the health sectors and clinicians strengthen their ability to create a standard death certificate (8) and produce quality medical records, as per the International Classification of Diseases, more accurate and reliable information might be available.

Moreover, the health sector can also use information from CRVS to formulate, implement, and monitor policies for public services to meet the needs of citizens. According to Phillips *et al.* (9), a functional CRVS can benefit people's health in the following ways: *i*) By providing the legal foundations for ensuring human rights and access to various social services, and *ii*) by collecting accurate vital and mortality data in a timely manner. Such data can then be utilized by the national or local governments to develop, implement, and monitor health policies in an effective, efficient, and strategic manner. Phillips *et al.* (9) further proved that countries with a well-developed CRVS

system tended to have significantly longer healthy life expectancies. Thus, the health sector could play a key role in improving CRVS by serving as an entry point and collecting accurate vital data. It could then also utilize information from CRVS to improve health outcomes and formulate policy.

In conclusion, the poor coverage of CRVS in low- and middle-income countries has been globally recognized as a priority issue for achieving the SDGs. Currently, international organizations are taking various measures to strengthen CRVS in collaboration with various stakeholders worldwide. To promote such efforts, a situational analysis of the entire CRVS system was conducted through a rapid survey in the Asia-Pacific region (5) and an assessment within the African region (10). However, in respect to the health sector, its role in the implementation of the CRVS, its current circumstance, and its possible interventions have not been sufficiently examined. Figure 2 summarizes the abovementioned roles of the health sector in CRVS, the challenges in implementing CRVS reported by Mikkelsen (5), and the gaps in the health sector to improve CRVS. In the future, it will be important to conduct subgroup investigations on the functions of the health sector in the entire CRVS system in low- and middle-income countries, in order to translate the global political momentum into concrete actions to improve CRVS throughout the world.

Acknowledgements

The authors wish to thank the Ministry of Health, Labour and Welfare in Japan for funding this research.

Funding: This work was also funded by Health, Labour and Welfare Science Research Grants in Japan for Research on policies for global health issues in 2015.

Conflict of Interest: The authors have no conflicts of interest to disclose.

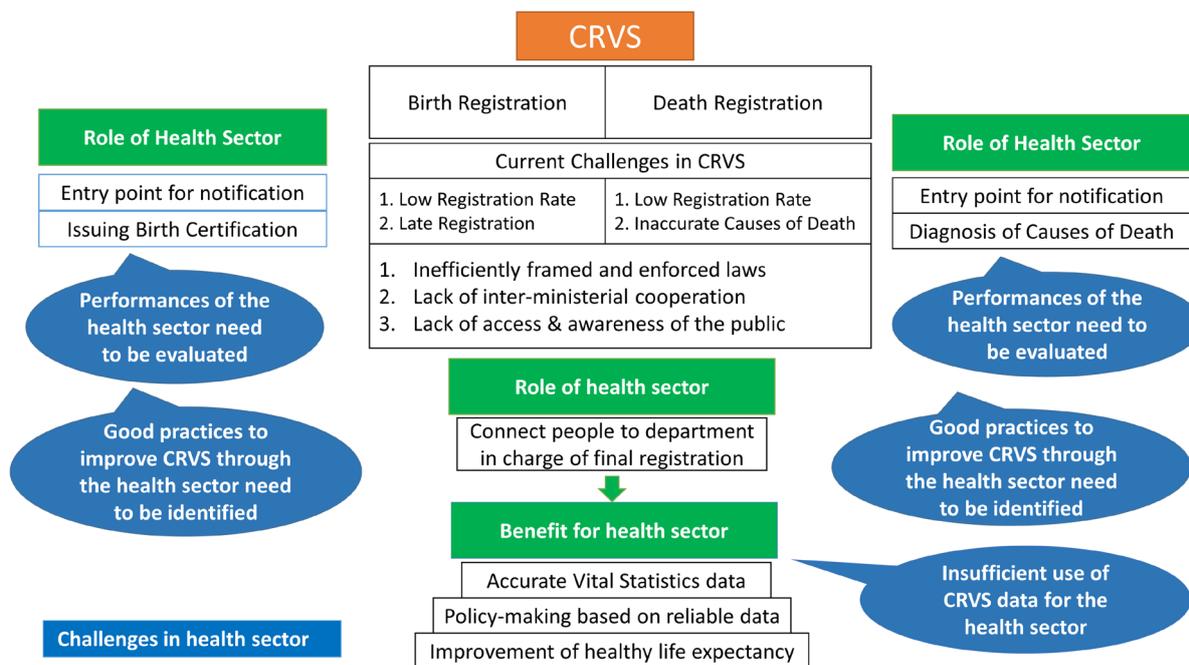


Figure 2. The role of the health sector in CRVS and the existing gaps.

References

1. AbouZahr C, de Savigny D, Mikkelsen L, Setel PW, Lozano R, Nichols E, Notzon F, Lopez AD. Civil registration and vital statistics: progress in the data revolution for counting and accountability. *Lancet*. 2015; 386:1373-1385.
2. United Nations International Children's Emergency Fund. A passport to Protection: a guide to birth registration programming. New York: United Nations International Children's Emergency Fund, 2013. <https://www.refworld.org/docid/52b2e2bd4.html> (accessed October 20, 2020)
3. Scott JC. Seeing like a state: how certain schemes to improve the human condition have failed. New Haven: Yale University Press, 1998.
4. United Nations Statistics Division, Demographic and Social Statistics. <https://unstats.un.org/unsd/demographic-social/crvs/> (accessed October 20, 2020)
5. Mikkelsen L. Rapid assessment of vital statistics systems: evaluation of the application of the WHO/HIS Hub tool in 26 countries in the Asia-Pacific region. Working Paper No. 10. Brisbane, Australia: University of Queensland School of Population Health, Health Information Systems Knowledge Hub; 2015. <https://crvsgateway.info/file/16930/103> (accessed October 20, 2020)
6. Bah S. Multiple forces working in unison: the case of rapid improvement of vital statistics in South Africa post-1996. *World Health Popul*. 2009; 11:50-59.
7. Burger EH, Groenewald P, Rossouw A, Bradshaw D. Medical certification of deaths in South Africa – moving forward. *S Afr Med J*. 2015; 105:27-30.
8. Rampatige R, Gamage S, Peiris S, Lopez AD. Assessing the reliability of causes of death reported by the Vital Registration System in Sri Lanka: medical records review in Colombo. *Health Inf Manag*. 2013; 42:20-28.
9. Phillips DE, AbouZahr C, Lopez AD, Mikkelsen L, de Savigny D, Lozano R, Wilmoth J, Setel PW. Are well-functioning civil registration and vital statistics systems associated with better health outcomes? *Lancet*. 2015; 386:1386-1394.
10. United Nations Economic Commission for Africa, Report of the Regional Assessment Study of Civil Registration and Vital Statistics Systems in Africa, Second Conference of African Ministers Responsible for Civil Registration. UNECA, Addis Ababa, Ethiopia, 2012; pp. 1-18.

Received November 2, 2020; Revised December 21, 2020; Accepted December 23, 2020.

Released online in J-STAGE as advance publication January 17, 2021.

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