



**Bloomberg
Philanthropies**  **DATA FOR
HEALTH INITIATIVE**

CRVS country report

Sri Lanka: Reflections on
the first four years of the
Bloomberg Philanthropies
Data for Health Initiative

March 2021





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Melbourne School of Population and Global Health
Building 379
207 Bouverie Street
Carlton, VIC 3053
Australia

CRVS-info@unimelb.edu.au

www.mspgh.unimelb.edu.au/dataforhealth

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Sri Lanka: Reflections on the first four years of the Bloomberg Philanthropies Data for Health Initiative

This report, which forms part of a series of papers documenting interventions led by the Bloomberg Philanthropies Data for Health Initiative at the University of Melbourne over a four year period from 2015 to 2019, presents the interventions implemented through the Initiative in Sri Lanka to improve the accuracy and quality of data produced by the country's civil registration and vital statistics system. Other reports in this series and further resources on the Initiative's activities in Sri Lanka can be found on the CRVS Knowledge Gateway: <https://crvsgateway.info/>

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Executive summary

'Sri Lanka's vital registration system, which has been in operation for over 150 years, captures pretty much all the deaths. [Sri Lanka is] very good at registering the deaths, the problem Sri Lanka faces is the quality of the cause of death diagnosis.'

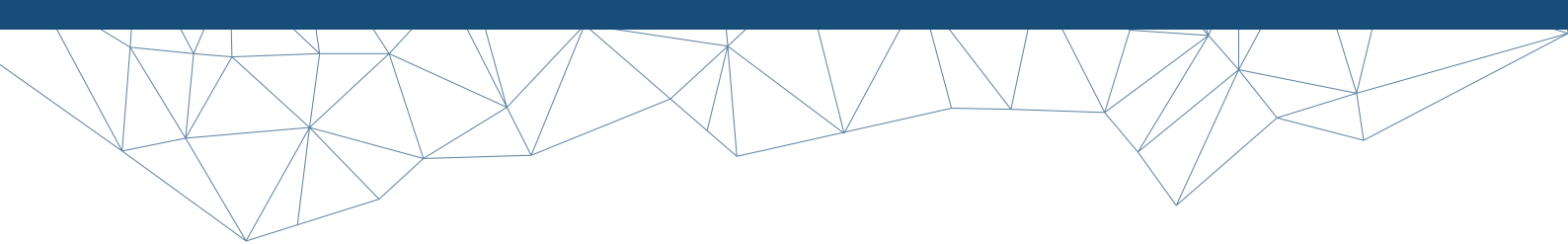
- Alan Lopez, Director of the Bloomberg data for Health Initiative at the University of Melbourne.

Owing to Sri Lanka's mature and well-functioning civil registration and vital statistics (CRVS) system, the country's birth and death completeness levels are exceptionally high.¹ Despite this, problems with mortality statistics persist, with a lack of good quality cause of death (COD) data available.² Producing COD data that is accurate and reliable is imperative for Sri Lanka to provide informed, evidence-based health policy and planning, particularly as demand for correct and timely mortality data is on the rise. Encouragingly, both the Ministry of Health (MOH) and the Registrar General's Department (RGD) are aware of this and value the support of the Bloomberg Philanthropies Data for Health (D4H) Initiative.

Equipped with an evidence-based understanding of the challenges the country's CRVS system faces, Sri Lanka, in collaboration with D4H, has taken the necessary steps to begin rectifying the situation. Sri Lanka has developed a strategy with interventions focussing on two main areas: (1) up-skilling doctors in correct medical certification of cause of death (MCCOD) to improve the accuracy of medical certification (and thus improve the overall quality and accuracy of COD data generated in Sri Lanka's hospitals); and, (2) reducing unusable COD data by introducing automated verbal autopsy (VA) to ascertain probable COD for deaths that occur outside of hospitals. By effectively addressing these shortcomings in medical certification practices and COD data collection, Sri Lanka is expected to see a significant shift in the quality component of the Vital Statistics Performance Index (VSPI) which, because of poor and late availability of data, has previously scored very low.

¹ Sri Lanka Implementation Working Group. Sri Lanka: Strengthening the quality and availability of mortality statistics. CRVS country perspectives. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/17887/1786>

² Summary: Improving the quality of mortality statistics in Sri Lanka. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/16993/1554>



On joining the D4H Initiative in 2015, a Sri Lankan Technical Working Group convened to guide the CRVS improvement activities, providing crucial insight and advice on local circumstances and setting the path for improved COD data from hospital and community settings.³ Throughout the implementation of activities through the Initiative, significant steps were taken to strengthen the quality and capture of mortality statistics.

By March 2019, 125 hospitals had conducted MCCOD training, with in-hospital “Master Trainers” equipped to execute training plans moving forward. A suite of innovative tools, such as the interactive mobile medical certification app,⁴ have been implemented to support doctors and ensure continuous best practice. VA now covers six districts and 22 MOH areas within Sri Lanka, achieving strong community engagement and significantly improved collection of accurate COD information. The success of these interventions has helped not only to begin discussions on the capture of community COD but also to better understand the health status of the population, providing a more reliable evidence base for the government to introduce effective health policies.

Strengthening Sri Lanka’s CRVS system

In November 2014, Sri Lanka became a signatory to the Ministerial Declaration for Universal Registration in Asia and the Pacific, thereby committing fully to the United Nations’ Economic and Social Commission for Asia and the Pacific (UNESCAP) Regional Action Framework on CRVS that covers the period of 2015 to 2024.⁵ These actions represented high-level expression of political commitment to strengthening CRVS systems and recognition of the value of such systems in effective health and social policy and decision making:

‘Without good-quality mortality data, countries are planning in a vacuum, so it’s really important particularly for countries like Sri Lanka that are advanced in their epidemiological transition to understand very clearly who’s dying of what, so these deaths can be prevented.’

- Alan Lopez, Director of the Bloomberg data for Health Initiative at the University of Melbourne.

To address necessary improvements, D4H undertook a baseline evaluation for Sri Lanka (**Box 1**). From this evaluation - with cooperation from the country stakeholders - a workplan was created, focusing on interventions that would benefit Sri Lanka’s CRVS system moving forward. During a number of meetings with the two main CRVS stakeholders, the MOH and the RGD, a prioritised list of CRVS interventions and trainings were developed to improve the accuracy of COD data and strengthen staff capacity to analyse the quality of CRVS system outputs.

3 Sri Lanka Implementation Working Group. Sri Lanka: Strengthening the quality and availability of mortality statistics. CRVS country report. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/17887/1786>

4 The University of Melbourne. Summary: Developing a mobile app for doctors to improve the recording of cause of death in Sri Lanka. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/17098/2141>

5 UNESCAP. Implementing the Regional Action Framework on Civil Registration and Vital Statistics in Asia and the Pacific. 2015.

Box 1: Baseline status of Sri Lanka

At the beginning of the Bloomberg Philanthropies Data for Health (D4H) Initiative, partner cities and countries were involved in completing a baseline evaluation for their county. The baseline evaluation framework is a best-practice technical tool used to comparatively measure and track the impact of CRVS technical interventions.⁶ It does this by providing a comprehensive scientific assessment of the CRVS system at baseline, to help countries identify the most efficient and cost-effective areas for CRVS technical intervention.

Sri Lanka's baseline evaluation was based on information collected from senior staff of the Vital Statistics Unit of the Registrar General's Department (RGD) and the Ministry of Health (MOH), with supporting data from official publications, websites and the offices from the relevant departments. The baseline evaluation found that:

- The CRVS system was largely paper-based, with the pace of computerisation slow. With morbidity and mortality data taking a long time to compile, data were often out of date by the time they became available to decision-makers.
- There was no law stating that only medically qualified personnel can certify a cause of death (COD), thereby allowing causes of death to be assigned by non-medical individuals (i.e. coroners or registrars of birth and death).
- Many studies suggest that even when COD is medically certified it is not always of good quality – Sri Lankan doctors may have not have been trained in death certification, may not practice it accurately, and may not take the time to complete the form properly.
- There was a lack of awareness of the importance of correct COD diagnosis of vital statistics, resulting in poor quality information.

The baseline evaluation revealed that Sri Lanka's CRVS system should focus on becoming more efficient and produce higher quality information to benefit policy decision-making and public health planning. Improving the quality of COD data both within the medical setting and the community emerged as a high priority for Sri Lanka moving forward.

Improving the quality of cause of death data

Background

Sri Lanka's RGD dates back to 1864, when it first began collecting information on births and deaths. Sri Lanka's CRVS system is therefore well established and shows very high levels of completeness for both births and deaths. The registration of vital events is decentralised and is under the control of district and divisional authorities, allowing families to obtain birth and death certificates from the Registrar of Births and Deaths. The easy accessibility and availability of the Registrar coupled with the absence of additional certificate costs have contributed to the high levels of registration completeness within the country.

Around 146 000 deaths occur each year in Sri Lanka, with the law requiring all deaths to be registered and assigned a COD.⁷ However, with no law stating that only a medically qualified person can certify the death, roughly half of the deaths have no MCCOD. Additionally, a high proportion of deaths occur outside of health facilities, with the COD often reported by coroners and registrars of births and deaths^{8,9} – neither of whom are medically trained. Furthermore, prior to the D4H intervention, the underlying COD was often not accurately recorded for deaths certified by doctors in hospitals or under medical attention.¹⁰ For instance, one study found that 16 per cent of doctors at a Sri Lankan hospital commonly used "cardiac arrest" and other ill-defined or poorly specified causes as the COD, which cannot be coded (and thus used) for statistical purposes.¹¹

6 University of Melbourne. *A framework for evaluating national CRVS systems at baseline*. CRVS technical outcome series. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/17043/277>

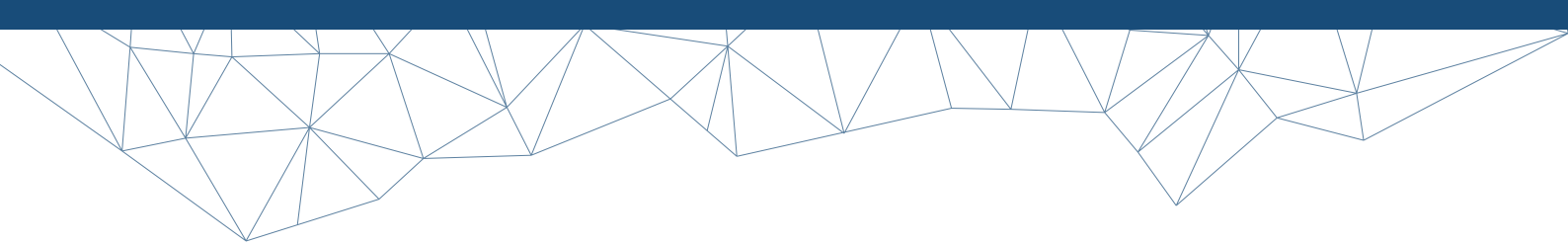
7 Department of Census and Statistics. Number of Births, Deaths Marriages in Infant and Maternal Death Rate 2000 – 2019. Sri Lanka; 2019. Available at: <http://www.statistics.gov.lk/Population/StaticInformation/VitalStatistics/NumberofBirthsDeathsMarriagesDistrict2018-2019>

8 Sri Lanka CRVS Implementation Working Group. *Data for Health baseline evaluation report: Sri Lanka*. Unpublished; 2017

9 The University of Melbourne. *Summary: Improving the quality of mortality statistics in Sri Lanka*. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/16993/1554>

10 Sri Lanka Implementation Working Group. *Sri Lanka: Strengthening the quality and availability of mortality statistics*. CRVS country perspectives. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/17887/1786>

11 Fonseka W. *A Study in the Quality and Coverage of Death Registration in a District of Sri Lanka*. MD dissertation in Community Medicine, University of Colombo, Sri Lanka; 1996.



This suggested that even for medically certified deaths, policy and resource allocation in Sri Lanka could not reliably depend on the vital statistics data produced. These challenges, alongside a largely manual system with slow collection of COD data, resulted in between 30 to 40 per cent of the national mortality statistics being “garbage” codes, or, codes unusable for informing public health policy.¹² This had a big impact on the country’s mortality data which did not accurately represent the true health status of the population.

Improving the quality of medical certification of cause of death

Improving MCCOD was a high priority for Sri Lanka, with ongoing progress made throughout the intervention. At the beginning of the intervention in 2015, a strategy was proposed to train 25 of the largest hospitals to run MCCOD training for their doctors. This approach put the responsibility of training with the hospitals to have their own Master Trainers able to provide on-going, in-house MCCOD training. The strategy aimed to substantially improve hospital data in participating hospitals, expanding to hospitals in other areas of the country once successfully piloted.

Box 2: What is medical certification?

Certification is the process physicians use to determine the underlying cause of death, that is, ‘the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury’.¹³ To correctly complete a medical certificate of death, the physician must identify the disease directly causing the death, and then trace the sequence of events back to the underlying cause of death. The physician must also enter other diseases or conditions contributing to the death.⁹

Training in medical certification of cause of death

Initially, focus was primarily directed toward training doctors in five major hospitals (Lady Ridgeway Children’s Hospital, Colombo South Teaching Hospital, Colombo North Teaching Hospital, Kurunegala Teaching Hospital and Homagama Base Hospital) that were using the new COD form (B33). At the end of the pre-test in 2017, eighteen Master Trainers and over 400 doctors (including Intern Medical Officers, Senior House Officers, Registrars/ Senior Registrars and Consultant Physicians) were trained in MCCOD and were able to apply their learnings instantly. An evaluation of the content and accuracy of a sample of medical certificates from the pre-test hospitals at the end of a six-month period showed that there was an average of 30 per cent improvement in error-free certification in just a six-month period,¹⁴ highlighting the success of the MCCOD trainings and the value of further training.

From the success of the original pre-test, a pilot was conducted in 25 of the large government hospitals in Sri Lanka. Using the training-of-trainer’s model, each hospital had five to six Master Trainers trained in MCCOD, and had developed training plans to train all doctors responsible for certifying death certificates. The training plans, focussing on correct certification practices and raising awareness of the value of COD data, were presented to the Deputy Director General of Medical Services, who endorsed further trainings. Training was later conducted in 125 hospitals across Sri Lanka, each with five Master Trainers, with the capacity to provide ongoing training in-country and ensure continuous best practice.

¹² Mikkelsen L, Richards N, Lopez AD. *Redefining ‘garbage codes’ for public health policy: Report on the expert group meeting, 27–28 February 2017*. CRVS best practice and advocacy. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/16948/276>

¹³ The University of Melbourne. *Handbook for doctors on cause of death certification*. CRVS technical guide. Melbourne, Australia; Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, The University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/17384/57>

¹⁴ Sri Lanka Implementation Working Group. Sri Lanka: Strengthening the quality and availability of mortality statistics. CRVS country perspectives. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018.

Medical certification of cause of death tools

'We're working with colleagues and experts in Sri Lanka to provide tools and guidelines and handbooks for improving death certification. Doctors are very busy but they're also very smart and they're able to understand principles very quickly if they're correctly trained. So, we've worked with colleagues in Sri Lanka to develop mobile phone apps that doctors can consult, we've developed handbooks for cause of death certification with a bit more detail, and we've developed online and offline tools to guide the evaluation of how much knowledge of that retention of knowledge for cause of their certification.'

- Alan Lopez, Director of the Bloomberg Data for Health Initiative at the University of Melbourne.

In addition to face-to-face training, a country-specific MCCOD manual (B33 Guidelines) and a COD mobile app were developed to provide additional support for doctors.¹⁵ The manual, finalised in November 2017 and distributed to all pilot hospitals, provides clear guidance for doctors to correctly certify a death to International Statistical Classification of Diseases and Related Health Problems – Version 10 (ICD-10) standards using the death declaration (B33) form.¹⁶ The MCCOD app is an "interactive educational mobile app" designed to improve the accuracy of MCCOD in Sri Lanka by educating doctors in correct certification practices.¹⁷ It is free, easy to use, and convenient for doctors seeking guidance when certifying a death. The app proved immediately successful among doctors, who were extremely interested in the technology and its benefits:

'The mobile app was a definite advantage, it was very popular at the beginning and straight away, and following the training program they uploaded everything.'

- Dr Lakshmi Somatunga, Public Health Services, MOH Sri Lanka.

Figure 1: MCCOD mobile app (cause of death tutor with case scenario and user feedback)



¹⁵ See *Summary: Development a mobile app for doctors to improve the recording of cause of death in Sri Lanka*. Available at: <https://crvs.gateway.info/file/6496/2141>

¹⁶ Summary: Improving the quality of mortality statistics in Sri Lanka. Version 0618-01 Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018

¹⁷ The app can be downloaded at: <https://play.google.com/store/apps/details?id=com.mohsi.cod>



Introducing verbal autopsy

With nearly half of all deaths in Sri Lanka occurring outside of a medical setting, VA serves as a cost-effective tool to help reduce the amount of unusable COD data,¹⁸ significantly improving the knowledge about vital events that take place within the community (also known as “out-of-hospital” deaths) (**Box 3**). An automated VA tool (SmartVA) was introduced in Sri Lanka in 2015, which uses a validated questionnaire based on symptoms entered on a tablet or smart phone.

Box 3: What is verbal autopsy?

Verbal autopsy is a method for collecting information about an individual’s signs and symptoms prior to their death from their family or next of kin and interpreting these to diagnose the likely or most probable COD.¹⁹

In Sri Lanka, public health midwives (PHMs) are well known and trusted by their communities, making them a logical and reliable choice for conducting VA interviews:

‘The result that you get from a VA is totally dependent on the interview, and therefore, having the right interviewer is as critical as interviewing the family member who looked after the person who died.’

- Dr Lene Mikklesen, Senior Technical Adviser, Bloomberg Philanthropies Data for Health Initiative at the University of Melbourne

The SmartVA questionnaire was translated into Sinhalese and Tamil and piloted in seven MOH areas across the country, representing three districts: Colombo (Piliyandala, Rathmalana, Kesbawa); Kurunegala (Ibbagamuwa, Rideegama), and; Jaffna (Naloor, Kopai, Uduwil). Close to 150 PHMs were trained in VA data collection and use of SmartVA, with 12 medical officers of health selected as supervisors. To support PHMs in locating households with deaths, the medical officers of health were advised to establish a link with the District Registrars to allow for the monthly transfer of names and addresses of households with deaths. Data collection was carried out through the existing PHM domiciliary care model, and 291 VA interviews were conducted from January to March 2017 on all out-of-hospital deaths in the three districts, excluding cases referred to the coroner, police or magistrate.

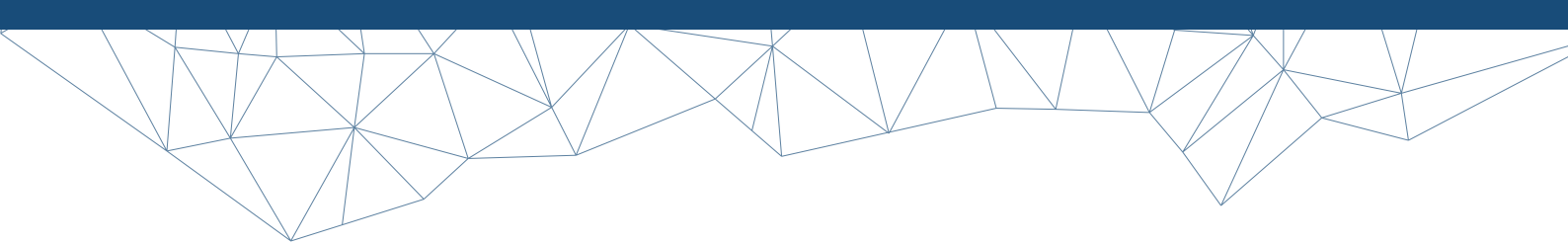
Analysis of the VA pilot test showed that reliable, quality data have been generated on the disease profile of community deaths for the first time in Sri Lanka’s history.²⁰ The SmartVA pilot showed a rise in usable COD data; with 82 per cent usable CODs, compared to only 30 per cent in the data collected through the RGD for home deaths.⁷ Comparison of results with Global Burden of Disease (GBD) estimates for Sri Lanka showed similar distributions among the leading causes of death (stroke, cancer, ischemic heart disease, chronic respiratory diseases, diabetes). This highlights that the application of SmartVA could drastically improve the quality of COD data for community deaths for use in targeted health policy and planning in the future.

Due to the success of the VA pilot in 2017, the government committed to the use and integration of VA, with further roll out of training. The pilot was subsequently expanded to three more districts Nuwaraeliya (Bogawanthalawa, Ambagamuwa); Mathale (Dambulla, MC Dambulla); Kilinochchi (Kandawalai, Palai, Poonakary, Karachchi) and the Colombo Municipal Council (which includes six MOH Areas), bringing the total of participating MOH areas to 22. Another batch of approximately 150 PHMs were trained from January to August 2018. PHMs in the newly recruited areas were given a four-day training, while a one-day refresher training was provided to those from the original pilot areas. PHM supervisors were also given a one-day orientation to help better understand the VA process, including entering data in the tablet and authorising data uploaded to the central MOH server. PHMs are able effectively manage VA data collection in addition to their routine work, as most are assigned only one to two VA cases per month.

18 Hernández B, Ramírez-Villalobos D, Romero M et al (2011). Assessing quality of medical death certification: concordance between gold standard diagnosis and underlying cause of death in selected Mexican hospitals. *Population Health Metrics* 9:38.

19 de Savigny D, Riley I, Chandramohan D et al (2017). Integrating community-based verbal autopsy into civil registration and vital statistics (CRVS): system-level considerations. *Global Health Action* 10:1272882.

20 Sri Lanka Implementation Working Group. Sri Lanka: Strengthening the quality and availability of mortality statistics. CRVS country perspectives. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018.



There were some challenges implementing automated VA in Sri Lanka. For instance, difficulties were experienced uploading the saved data from the tablet. This was resolved by establishing a central server at the MOH and installing the “Team Viewer” app (which allows for remote screen sharing) on the tablets to facilitate provision of IT support from within the MOH when needed. Another challenge that needed to be resolved was the difficulty many medical officers of health faced obtaining the list of deceased from the SmartVA app. To address this, it was decided that the details of the deceased could be extracted manually, on a monthly basis, through the Birth and Death Registrars of the respective PHM areas. PHMs have also received assistance to obtain information on home deaths from ‘Mother Support Groups’ established in communities.

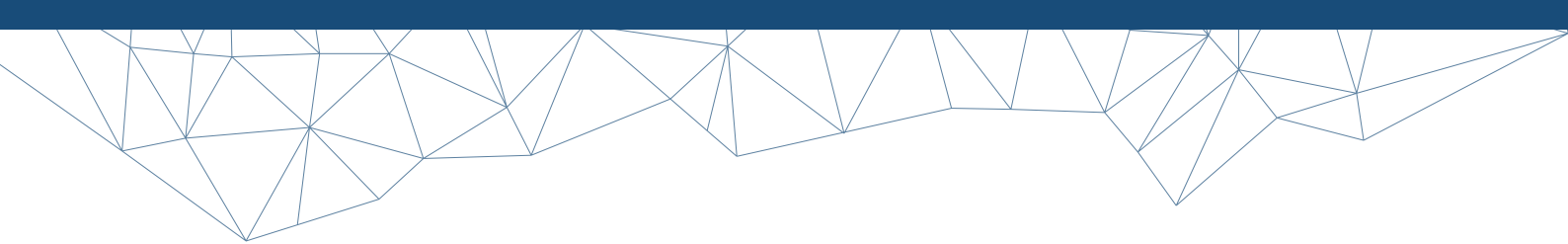
The results from the pilot study (illustrated in **Box 4**) - demonstrated some interesting findings when compared to data from RGD records. The overall usability of COD data had significantly improved, helping to enhance the reliability of available COD data and justify the introduction of SmartVA for community deaths. The leading causes identified by the cause-specific mortality fractions from the VA data were plausible and consistent with local epidemiological knowledge of home deaths. Another contrasting factor was that the leading COD identified through RGD records was ischaemic heart disease (for both men and women), while SmartVA identified stroke as leading the COD prevalent in almost one-third of all community deaths in the pilot areas. This information was extremely important and not only helped to begin discussions on the overall practice of capturing COD data, but also contributed to an improved understanding of the health status of the population within the participating communities.

Box 4: SmartVA pilot study comparison results

The pilot study results were compared against records from the Registrar General’s Department (RGD) to assess whether SmartVA improved the policy utility of the data. The results, when compared to RGD data, demonstrated that:

- Usability of the cause of the death (COD) data almost doubled (from 45 per cent in the 2014 RGD data to 86 per cent in the SmartVA data).
- The age distribution of hospital deaths versus out-of-hospital deaths from RGD data revealed more elderly people dying in the community than in hospitals. The age distribution of SmartVA deaths versus out-of-hospital deaths from RGD data were almost identical.
- Comparison of the leading causes of **male** deaths from RGD and SmartVA data (before redistribution) revealed that unusable codes were five times more common in the RGD data than the SmartVA (54.7 per cent garbage codes compared with 9.9 per cent undetermined, respectively). The leading COD in RGD data was ischaemic heart disease (9.6 per cent) versus stroke (30.3 per cent) in the SmartVA data.
- Comparison of the leading causes of **male** deaths in the RGD data (after redistribution using GBD algorithms) versus SmartVA (after redistribution) revealed the leading COD to be ischaemic heart disease (20.9 per cent) versus stroke (30.9 per cent) respectively.
- Comparison of the leading causes of **female** deaths from RGD data and SmartVA data (before redistribution) revealed that unusable codes were four times more common in the RGD data than the SmartVA (63.3 per cent garbage codes compared with 17.2 per cent undetermined, respectively).
- Comparison of the leading causes of **female** deaths in the RGD data (after redistribution using GBD algorithms) versus SmartVA (after redistribution) revealed the leading COD to be ischaemic heart disease (20.2 per cent) versus stroke (32.1 per cent) respectively.

By March 2019, VA covered six districts and 22 MOH areas within Sri Lanka, and had a large impact on community engagement and collection of accurate COD information. Unfortunately, due to unforeseen challenges with upper management changes and stakeholder cooperation, implementation and rollout of the VA training was slower than anticipated. However, with the introduction of a new Director of Health Information, training was able to proceed again in 2018, with the pilot continuing well. Sri Lanka will continue to implement training, for eventual national rollout.



Ensuring sustainability and facing challenges

'Most importantly, is how we can ensure sustainability of the work in Sri Lanka. For example, you could have a very successful intervention, but because you have entirely paid for that intervention, the moment that you no longer pay, the whole thing will collapse.'

- Lene Mikklesen, Senior Technical Advisor, Bloomberg Philanthropies Data for Health Initiative at the University of Melbourne

By building capacity within both the health facilities and the community, awareness of the importance of vital statistics in Sri Lanka has continued to grow. This awareness has greatly contributed to the success of the intervention, enabling the interventions implemented in Sri Lanka to be sustained. To achieve sustainability of the interventions, D4H worked with the country's existing health structures, utilising the skills of staff within the hospitals and communities. While the re-training of doctors already working in the hospitals often proved challenging, having Master Trainers within the medical setting meant that doctors became more conscious of the importance of MCCOD. Further steps, such as engaging with Sri Lanka's medical schools to introduce MCCOD into the curriculum for medical students are planned, building support from the Sri Lankan Medical Association and other professional colleges to ensure sustainability of the interventions.²¹ Another step planned to be introduced to further strengthen the quality of COD data is the introduction of ANACONDA training for MOH and RGD staff to verify COD data accuracy and plausibility.

The progress made in Sri Lanka is promising, however, to truly see a change in Sri Lanka's CRVS system long-term, focus must move towards automating the mortality coding system. Currently, close to 130 000 death certificates are coded manually each year by the Vital Statistics Unit at RGD in Colombo. This is an extremely slow process, with close to 47 per cent of deaths coded to ill-defined or unclear codes. This means that it remains unclear what the leading causes of death are within Sri Lanka. By introducing an automated coding process such as Iris (interactive software to code and select the underlying COD using ICD-10 coding rules), significant improvements could be made to the accuracy and timeliness of COD statistics. To implement this intervention, cooperation from the Civil Registrar will be needed to ensure that it is inter-operational with current systems.

Sri Lanka is fortunate that, owing to its CRVS system dating back many years, completeness levels of birth and death data are already high. Focus can therefore be directed toward continuing the momentum of improvements to the quality of COD data being produced. In collaboration with MOH, RGD and other stakeholders, the D4H Initiative has successfully initiated vital interventions to improve the quality of MCCOD in hospitals and availability of usable COD data for out-of-hospital deaths. A scaling up of these interventions, alongside automation of the country's mortality coding system, will ensure Sri Lanka is able to confidently capture and use its COD data to inform responsive and relevant health planning and policymaking.

²¹ Summary: Improving the quality of mortality statistics in Sri Lanka. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018. Available at: <https://crvsgateway.info/file/16993/1554>

The program partners on this initiative include: The University of Melbourne, Australia; CDC Foundation, USA; Vital Strategies, USA; Johns Hopkins Bloomberg School of Public Health, USA; World Health Organization, Switzerland.

Civil Registration and Vital Statistics partners:



For more information contact:

CRVS-info@unimelb.edu.au
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