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CRVS Fellowship profile

Improving the quality of
cause of death data in Laos,
Dilip Hensman

August 2020





Resources available from the University of Melbourne, Bloomberg Philanthropies Data for Health Initiative

CRVS course prospectuses

These resources outline the context, training approach, course content and course objectives for the suite of CRVS trainings delivered through the Bloomberg Philanthropies Data for Health Initiative. Each course focuses on a specific CRVS intervention or concept, and is designed to support countries to strengthen their CRVS systems and data.

CRVS Fellowship reports and profiles

The CRVS Fellowship Program aims to build technical capacity in both individuals and institutions to enhance the quality, sustainability and health policy utility of CRVS systems in Fellows' home countries. *Fellowship reports* are written by Fellows as a component of the program, and document, in detail, the research outcomes of their Fellowship. *Fellowship profiles* provide a summary of Fellows' country context in relation to CRVS, an overview of the Fellowship experiences, the research topic and the projected impact of findings.

CRVS analyses and evaluations

These analytical and evaluative resources, generated through the Initiative, form a concise and accessible knowledge-base of outcomes and lessons learnt from CRVS initiatives and interventions. They report on works in progress, particularly for large or complex technical initiatives, and on specific components of projects that may be of more immediate relevance to stakeholders. These resources have a strong empirical focus, and are intended to provide evidence to assist planning and monitoring of in-country CRVS technical initiatives and other projects

CRVS best-practice and advocacy

Generated through the Initiative, CRVS best-practice and advocacy resources are based on a combination of technical knowledge, country experiences and scientific literature. These resources are intended to stimulate debate and ideas for in-country CRVS policy, planning, and capacity building, and promote the adoption of best-practice to strengthen CRVS systems worldwide.

CRVS country reports

CRVS country reports describe the capacity-building experiences and successes of strengthening CRVS systems in partner countries. These resources describe the state of CRVS systems-improvement and lessons learnt, and provide a baseline for comparison over time and between countries.

CRVS technical guides

Specific, technical and instructive resources in the form of *quick reference guides*, *user guides* and *action guides*. These guides provide a succinct overview and/or instructions for the implementation or operation of a specific CRVS-related intervention or tool.

CRVS tools

Interactive and practical resources designed to influence and align CRVS processes with established international or best-practice standards. These resources, which are used extensively in the Initiative's training courses, aim to change practice and ensure countries benefit from such changes by developing critical CRVS capacity among technical officers and ministries.

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Fellowship profile: Improving the quality of cause of death data in Laos, Dilip Hensman

From February to March 2020, Dilip Hensman from the World Health Organization (WHO) in Lao PDR undertook a Civil Registration and Vital Statistics (CRVS) Fellowship through the Bloomberg Philanthropies Data for Health (D4H) Initiative at University of Melbourne (UoM), developing a strategy for improving the notification of community deaths and piloting automated verbal autopsies for these deaths.

This profile documents Dilip's personal experiences and outcomes and the broader impact his Fellowship might have on improving the quality of mortality data in Laos.

For more information on the CRVS Fellowship Program, including information on how to apply for a Fellowship, visit the CRVS Knowledge Gateway at: <https://crvsgateway.info/fellowship>



Pre-Fellowship: Dilip's workplace

After graduating from the University of Melbourne with a Master of Geographic IT, Dilip continued to work at the WHO.

After graduating with a Bachelor in Computing and Information Systems from the University of London, Dilip began working at the United Nations High Commissioner for Refugees (UNHCR) and then the World Health Organization (WHO) Country Office for Sri Lanka, where he developed a keen interest in health information systems. In order to continue developing his knowledge of information systems, Dilip completed a Master of Geographic Information Technology at the University of Melbourne, and continued working with the WHO shortly after graduating where he has worked for over 16 years.

WHO's main role in Laos' civil registration and vital statistics (CRVS) system involves supporting the Ministry of Health (MOH) and Ministry of Home Affairs (MOHA) in strengthening the country's mortality statistics (**Box 1**). By ensuring that the CRVS system captures all vital events like births and deaths, Laos will be able to generate reliable health statistics – information which decision-makers rely on to inform priorities for effective health policy and planning.¹

¹ Richards N, Sorchik R, Brolan C. *Why the Sustainable Development Goal agenda needs strong civil registration and vital statistics systems*. CRVS best-practice and advocacy. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2018.



Box 1: CRVS in Laos

Every year in Laos, only about seven per cent of all estimated deaths occur in health facilities.² The remaining 93 per cent of deaths occur in community settings, where little is known about what these people die of.² Cultural norms are a main contributor to out-of-facility deaths, where terminally ill patients are often sent home to die instead of dying in health facilities where physicians can medically certify causes of death (COD).² Laos thus faces a critical health data gap due to a lack of accurate mortality data.

The MOHA has direct responsibility for civil registration in Laos, and together with the MOH, aims to strengthen the country's cause of death data by improving death notification, certification and registration.³ Following the promulgation of the Family Registration Law of 1991, the Ministry of Public Security established a system for family registration,⁴ and MOHA aims to expand this system to enable notification for deaths that occur in community settings.

As Technical Officer for Health Information Systems, Dilip works with other CRVS stakeholders to improve systems for capturing mortality data.

Prior to his move to Vientiane, Dilip spent four years in the Solomon Islands setting up a system for capturing COD data for community deaths – an experience which helped prepare him for his current role as Technical Officer for Health Information Systems. Currently, one of Dilip's key duties involves working with the Director of Health Information in Laos to develop systems to strengthen morbidity and, in particular, mortality information.

Applying for the Fellowship

After hearing about the CRVS Fellowship program from colleagues and seeing it advertised on the University of Melbourne's (UoM) CRVS Knowledge Gateway, Dilip applied for the Fellowship. Closely aligning with WHO's work on improving death notification for out-of-facility deaths, Dilip's Fellowship topic focused on developing a strategy for improving community death notification, including follow-up of these deaths via automated verbal autopsy (**Box 2**). By undertaking the Fellowship, Dilip aimed to learn from technical experts at D4H and determine which CRVS-improvement strategies might be best suited for Laos.

² Data obtained from Laos PDR's Health Management Information System, District Health Information System (DHIS2)

³ United Nations Economic and Social Commission for Asia and the Pacific 2019. Get every one in the picture: Lao PDR'. Retrieved from <https://getinthepicture.org/country/lao-pdr>

⁴ The World Bank. Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS). Lao PDR Civil Registration and Vital Statistics Project (P167601). 27-Jun-2019. Retrieved from <http://documents1.worldbank.org/curated/en/408371561720719822/pdf/Concept-Project-Information-Document-Integrated-Safeguards-Data-Sheet-Lao-People-s-Democratic-Republic-Civil-Registration-and-Vital-Statistics-Project-P167601.pdf>



Box 2: What is verbal autopsy (VA)?

Verbal autopsy (VA) is a method for collecting information about an individual's signs and symptoms before their death from their family or next of kin, and interpreting these to diagnose the likely or most probable cause of death (COD).⁵

The VA process consists of three steps:

1. Setting up an interview by a trained VA staff member at home (or another appropriate place)
2. Conducting a structured interview to collect information on signs and symptoms of illnesses and events that the deceased had before death
3. Interpreting the interview data to diagnose the most probable COD.⁶

In settings where physicians may not be available to perform VA, automated VA methods may be used. Automated methods are as reliable as physicians in diagnosing COD from VA interviews, involve minimal ongoing costs, and can easily recognise symptom patterns in the data and correctly associate them with the most probable underlying COD.⁷

Undertaking the Fellowship

Dilip's strategy aimed to capture data on deaths that occur in the community, and to follow-up on these deaths using automated VA.

Upon arriving in Melbourne, Dilip began drafting a two-pronged strategy for: 1) the notification of community deaths to the MOH, and 2) piloting of automated VA in selected districts. Dilip's strategy for community death notification to the health sector involved reporting of deaths by village chiefs to nearby health facilities, allowing health facility staff to then follow-up the deaths with automated VA interviews during routine outreach visits.

A key focus of the strategy was to secure MOH access to mortality data - a change from the existing system implemented by the MOHA, which inadvertently bypasses the MOH leaving them unable to freely access important CRVS data.

Throughout his time in Melbourne, Dilip learned from technical experts at D4H as well as Fellows from other countries undertaking Fellowships at the same time. To help Dilip assess the completeness of Laos' death data, his Fellowship supervisor, Dr Tim Adair, instructed him in an empirical method for estimating the completeness of death registration.⁸ Dilip also learned about other countries' experiences with CRVS-strengthening by speaking with Fellows from Colombia and India, and heard from D4H staff about how countries like Bangladesh and Myanmar addressed their respective challenges, allowing Dilip to gauge which strategies may best serve Laos going forward.

5 de Savigny et al. Integrating community-based verbal autopsy into civil registration and vital statistics (CRVS): system-level considerations. *Global Health Action* 2017; 10:1272882.

6 University of Melbourne. *Challenges associated with automated VA training and rollout*. CRVS best-practice and advocacy. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, The University of Melbourne; 2018.

7 Zhao Y, Joshi R, Rampatige R et al. Use of smartphone for verbal autopsy: results from a pilot study in rural China. *Asia Pacific Journal of Public Health* 2016; 28; 601-610.

8 Adair, T., and Lopez, AD. Estimating the completeness of death registration: An empirical method. *PLoS ONE* 2018; 13(5):e0197047.



Moving forward

Through the development of his strategy and close working relationships with key CRVS stakeholders, Dilip will play an important role in Laos' CRVS strengthening initiatives.

After leaving Melbourne and finalising his Fellowship report, Dilip plans to present his strategy for death notification and VA to MOH stakeholders. After the MOH reviews and approves his strategy, Dilip then intends to meet with the MOHA, who have a direct mandate on civil registration, to advance the process of implementing the strategy. Once Laos' CRVS system begins generating timely mortality statistics, Dilip intends to use tools like ANACONDA and VIPER to assess and maintain the plausibility and quality of the data collected.

Going forward, Dilip also intends to share his new knowledge with MOH and MOHA staff. The implementation of a system for community death notification will ensure that Laos' CRVS system can capture all deaths in the country, generating for the first time in Laos, complete, accurate and timely mortality statistics.⁹ These statistics will serve as an evidence base for informing the development of relevant and effective health policy and planning, enabling the Government of Laos to maximise the health and wellbeing of its population.

⁹ University of Melbourne. *Summary: Integrating verbal autopsy into CRVS systems*. CRVS best-practice and advocacy. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, The University of Melbourne; 2018.

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:



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