CRVS Fellowship profile
Counting all deaths by scaling up verbal autopsy, David Lenga (Tanzania)

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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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Suggested citation

Fellowship profile: Counting all deaths by scaling up verbal autopsy, David Lenga (Tanzania)

From February to March 2020, David Lenga from the Ministry of Health in Tanzania undertook a Civil Registration and Vital Statistics (CRVS) Fellowship through the Bloomberg Philanthropies Data for Health (D4H) Initiative at University of Melbourne (UoM), learning to apply tools and methods to understand verbal autopsy data as part of national plans for verbal autopsy scale-up in Tanzania.

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

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: David's workplace

Working as a statistician at Tanzania's MOH, David is responsible for monitoring and evaluating health-related data systems across the country.

After graduating from Mzumbe University in Tanzania with a Bachelor of Applied Statistics, David continued his studies at Nanchang University in China, where he graduated with a Master of Business Administration in 2011. After returning to Tanzania and working as a statistician at the Arusha Region Office, in 2015 David applied for a statistician position in the Monitoring and Evaluation (M&E) Section of Tanzania's Ministry of Health (MOH). Sitting under the MOH's Department of Policy and Planning, the M&E Section is responsible for monitoring all health-related data systems across the country, including evaluating data quality and progress of national health programs.[1]

Now, David works as a Country Coordinator for civil registration and vital statistics (CRVS) at Tanzania's MOH (**Box 1**). David's role centres around coordinating with other CRVS stakeholders, such as the Registration Insolvency and Trusteeship Agency, Office of the President of the Regional Administration and Local Government, and the Ministry of Constitutional and Legal Affairs to strengthen the country's CRVS system. The production of quarterly and annual reports for policymakers, for example, is one of David's main duties, requiring the aggregation of CRVS data from multiple sources. David is in regular communication with stakeholders across MOH departments to ensure that data aggregated for dissemination are accurate – a task which can occasionally be difficult given that Tanzania's CRVS system does not yet capture data on all births and deaths in the country.

1   Ministry of Health, Community Development, Gender, Elderly and Children – Tanzania. 'Departments and Units'. 2020. The United Republic of Tanzania, MoHCDGEC. Available from http://www.mcdgc.go.tz/index.php/departments/department_of_policy_and_planning/

Although Tanzania has made great strides in improving its CRVS system, registration of vital events is still low.

Box 1: CRVS in Tanzania

In order to maximise the health of its population, the Government of Tanzania is collaborating with the Bloomberg Philanthropies Data for Health (D4H) Initiative. The central objective of this collaboration is CRVS system-strengthening, as a strong CRVS system captures data on vital events, like births and deaths, in order to produce reliable health statistics. Decision-makers rely on such health statistics to inform priorities for effective health policy and planning.[2]

Although Tanzania has made great progress in CRVS-strengthening, some aspects can still be improved. Registration of vital events, for example, is low – in 2017, about 28 per cent of all births and 26 per cent of all deaths were registered.[3]

David decided to apply for the Fellowship to learn about scaling up VA, given that completeness of death registration is one of Tanzania's key priorities.

Applying for the Fellowship

David applied for the CRVS Fellowship after receiving a recommendation to do so from a colleague. With improved death registration completeness one of Tanzania's top CRVS priorities, David decided to use his Fellowship to investigate methods for national scale-up of verbal autopsy (VA) for collection of death data (**Box 2**). To ensure that the Fellowship had significant relevance to his M&E role, David narrowed his Fellowship topic further to focus more specifically on methods for analysing the quality of VA data.

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).[4]

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.[5]

2   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.

3   Registration Insolvency and Trusteeship Agency (RITA). Provisional figure. Available from https://www.rita.go.tz/

4   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.

5   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.

Undertaking the Fellowship

As Tanzania rolls out VA in selected regions, tools like VIPER will indicate the representativeness of the VA data collected.

Upon arriving in Melbourne, David's first objective was to learn about methods for analysing VA data. As VA had already been piloted in Tanzania's Iringa Region, and the country had been utilising data collection tools for the capture of death data, David recognised the need for the introduction of tools to analyse and monitor the quality of the data collected.

To help David assess Tanzania's VA data once available, his supervisor, Dr Tim Adair, instructed him in the use of a tool for analysing and understanding the COD data generated by VA. Known as the Verbal Autopsy Interpretation, Performance, and Evaluation Resource (VIPER),[6] the tool uses the VA population's demographic data along with VA interview data to assess the plausibility of the VA age distribution of death and COD.[1] If Tanzania begins to implement VA in selected regions, tools like VIPER will allow the MOH to determine the generalisability of the VA data – in other words, how well the VA data represents the entire country's population.[7]

Moving forward

By presenting his Fellowship experiences and learnings to colleagues, David will be integral in the development of plans to roll out VA nationally.

For David, the best part of the Fellowship was the "freedom of learning". Being able to discuss country experiences with other Fellows in Melbourne, as well as the guidance received from his supervisor and other D4H technical staff, meant David was able to form a clear idea of how Tanzania could begin scaling up VA and how best to communicate this to key stakeholders.

After the Fellowship, David plans to share his knowledge with his colleagues at the MOH's M&E Section. By presenting his Fellowship experiences and learnings to colleagues, David will be integral in the development of plans to roll out VA nationally. Implementing VA and applying VA data analysis tools, will help to ensure that Tanzania's CRVS system captures all deaths in the country, and as a result, generate for accurate and timely mortality statistics.[8] These statistics will form a solid evidence base for decision-makers to use to guide the formation of health program and policy, enabling Tanzania to maximise the health and wellbeing of its population.

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6   University of Melbourne. Verbal Autopsy Interpretation, Performance and Evaluation Resource (VIPER). CRVS tools. Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, The University of Melbourne; 2020.

7   D4H Technical Working Group. Guidelines for interpreting verbal autopsy data. CRVS resources and tools. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, The University of Melbourne; 2020.

8   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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