Bloomberg Philanthropies

DATA FOR HEALTH INITIATIVE

BRAZIL

CRVS country overview

Brazil has implemented a number of effective measures to improve the registration of vital events. Given this, four research-based interventions are proposed to generate the evidence needed to improve the efficiency and accuracy of an already well-performing system.

The Challenge

Brazil has implemented a number of measures to improve the registration of vital events, and completeness of births and deaths registered by the Civil Registrar and Ministry of Health is very high (over 95%). Although national completeness estimates are high, completeness varies by region, with the North and Northeast reporting the lowest levels. Further, the quality of cause of death (COD) data needs improvement, with 33% of all deaths in 2013 attributed to an ill-defined or unusable code (often referred to as 'garbage codes'). Factors contributing to the poor quality of mortality data include the high number of deaths that occur outside of health facilities, geographic barriers to certifying COD for rural populations, and poor medical certification in some areas. As a result, continued improvement in the quality of COD data is a top priority of the Ministry of Health.

Our Approach

In collaboration with the Bloomberg Philanthropies Data for Health Initiative, Brazil has identified **four research-based interventions** to generate the evidence needed to improve the efficiency and accuracy of an already well-performing system. The overall aim of these interventions is to produce more accurate data, from a more cost-effective system, to better serve policy making in the country.

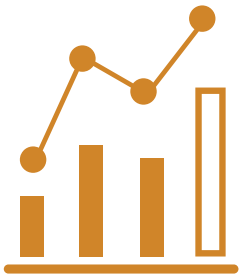
INTERVENTION 1

Strengthen verbal autopsy practices

Brazil operates a physician certified verbal autopsy (PCVA) system as part of its overall monitoring and investigation system. **Continuous monitoring of COD data** is undertaken to identify deaths initially assigned an ill-defined cause, which are investigated by autopsy, medical record review, and/or PCVA.

This intervention aims to **assess the validity of data collected through a short-form** questionnaire, using SmartVA. By introducing a shorter form of the VA questionnaire, the efficiency of the VA process will be increased. If a decision is taken to introduce the form nationally following the intervention, then the VA interview process will be shortened, permitting the Ministry of Health to investigate more CODs through VA, **improving the quality of Brazil's mortality data**.

INTERVENTION 2



Reducing 'garbage' codes

Deaths initially assigned an ill-defined cause are investigated by the Ministry of Health using a combination of autopsy, medical records reviews and PCVA to re-assign the COD. This intervention will **extend the existing system**, initially focusing on codes related to diseases with the most significant potential to impact policy and allocation of resources.

The intervention will **decrease the proportion of deaths assigned to ill-defined or unusable codes**, which will improve the quality and representativeness of COD data, as well as vital statistics available for policy and decision-making. For the pilot, physicians and residents in participating hospitals and health facilities in seven cities across all five regions were trained in ascertainment of the underlying COD. Of the approximately 1,200 deaths investigated, nearly **92% were re-classified to a usable code**. This validated protocol is now being scaled-up at the national level and should reduce the proportion of deaths initially assigned a 'garbage' code by up to half by April 2019.

INTERVENTION 3

Develop a Smartphone app to support certification

All deaths in Brazil require medical certification of cause of death (MCCOD) by physicians using the International Form of Medical Certificate of Cause of Death. However, Brazil has no standards in place for continuing medical education or re-licensure requirements for physicians. Given the number of practicing physicians and their geographic spread, alternatives to face-to-face training are required to achieve **sustainable, long-term improvements in certification**. This intervention will develop an interactive **Smartphone app** to assist physicians in certification through the provision of case studies, external links to MCCOD and ICD-10 coding best practices, and a discussion platform for physicians.

INTERVENTION 4

Introduce and support automated coding

Coding of death certificates is undertaken manually and using an automated coding system designed specifically for use in Brazil. This intervention will introduce Iris, an automatic coding software based on principles of the International Classification of Diseases. Introduction of Iris will ensure Brazil complies with international recommendations for coding software and is expected to simplify annual updates of the country's automated coding software. In addition, as introduction of Iris will be accompanied by coder training, the intervention will improve manual coding skills, leading to a significant **improvement of the quality of coding and timeliness of cause of death statistics.**

For more information on the CRVS D4H Initiative in Brazil, contact Raquel Barbosa (**racblima@gmail.com**) or Carolina Cunha (**carolina.candida.cunha@gmail.com**), Data for Health Country Coordinators, Dr Fatima Marinho, University of Melbourne Technical Lead (**mfmsouza@gmail.com**), or Ashley Frederes, Vital Strategies Senior Project Officer (**afrederes@vitalstrategies.org**).

For more information, contact:

E: CRVS-info@unimelb.edu.au

W: mspgh.unimelb.edu.au/dataforhealth

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