As part of their commitment to introduce systemic improvements in a phased and scalable manner, Rwanda will implement two interventions as part of the CRVS D4H Initiative: improving notification and registration, and implementing verbal autopsy for community deaths. These interventions will contribute to the achievement of key objectives for the government.

**The Challenge**

The Rwandan government commenced a program to strengthen civil registration and vital statistics (CRVS) in 2008 with the aim of building a sustainable and continuous source of vital statistics. A CRVS system was established, with registration functions coordinated by the Ministries of Justice, Local Government and Health, and the National Institute of Statistics of Rwanda (NISR) responsible for the compilation, analysis and dissemination of vital statistics.

The ongoing concerns of the Rwandan government are the incomplete notification and registration of births and deaths that occur in the community and the large gap between the notification of births and deaths by the health facilities to the sector, and the official registration of those events. In the calendar year 2015, approximately 44% of births were notified by health facilities using the web-based system. Of these notifications, only 55% were officially registered. Overall, birth registration completeness is estimated at 25%.

For death registration, completeness is much lower, estimated at around 4%. Although deaths that occur in health facilities are notified by health facilities using the web-based system, only 55% were officially registered. Overall, death registration completeness is estimated at around 4%.

**Our Approach**

As part of the Bloomberg Philanthropies Data for Health (D4H) Initiative and in close collaboration with the government of Rwanda, two interventions have been developed. These interventions are based on analysis of the CRVS Roadmap and of the planned deployment of a new cadre of frontline health workers, and bearing in mind the strong wish of the government to introduce systemic improvements in a phased and scalable manner.

The D4H supported activities will contribute to the achievement of the following key objectives of the NISR and Ministry of Health (MOH):

- Rapidly increase the notification of community deaths to health facilities and sector registration offices
- Permit the ascertainment of causes of death in the community through the implementation of an automated verbal autopsy system
- Establish standard operating procedures to improve timely registration and close the gap between notification and registration of both deaths and births
- Increase registration completeness, thus enabling the timely production of a continuous stream of up-to-date and complete vital statistics.
INTERVENTION 1

Improve notification and registration

The CRVS system in Rwanda has a well established structure to the lowest level of government administrative systems. But it lacks the link to the communities where the majority of deaths and a significant proportion of births occur. Furthermore, there are important gaps between health facility notification and official registration. This intervention will support NISR and MOH to develop clear pathways for notification and registration of births and deaths occurring in the community and in health facilities. Tools will be developed to ensure interoperability with the existing CR system at sector level.

The intervention will transfer enterprise architecture (EA) business process mapping skills to MOH, NISR and CR staff. EA is a tool that applies system science and analysis to better describe, understand, analyse, compare and visualise the organisation, processes, workflows and functionality of a CRVS system. Trained staff will be instrumental in monitoring efficiency of CRVS systems through visualisation of key CRVS processes from notification of vital event to registration. They will be able to conceptualise CRVS design needs and identify design bottlenecks, failure points, and assist with creative thinking on modifications to design for efficiency.

Improved process designs will be used to establish clearer pathways from health facility notification to sector registration, interoperability of databases, and continuous data sharing, hence closing the gap between notification and registration of both deaths and births. Reduced delays between notification and official registration will enable timely production of a continuous stream of up-to-date and more complete vital statistics.

INTERVENTION 2

Implement verbal autopsy for community deaths

When people die at home or in areas without doctors, it is difficult to know what they died from. However, cause of death information is critical for governments to know for effective policy, planning and resource allocation. Verbal autopsies are based on systematic interviews about the signs and symptoms of someone before they died. In Rwanda health system staff will conduct verbal autopsies using a standardised questionnaire. This information will then be used to determine the probable underlying cause of death (COD) for such cases.

As the vast majority of deaths in Rwanda occur outside of health facilities, information on fact of death and COD is challenging to capture. This is contributing significantly to the poor completeness and quality of COD statistics. The MOH primarily depends on COD statistics obtained from health facility deaths, which result in highly biased population-level mortality information. This intervention will support the integration of VA to the ongoing rollout of the home based care practitioners (HBCP) program, as a means to improve the capture of COD data for community deaths.

For more information on the CRVS D4H Initiative in Rwanda, contact Ngoboka Godfrey, Data for Health Country Coordinator (ngobokagodfrey@gmail.com), Don deSavigny or Carla AbouZahr, University of Melbourne Technical Leads (CRVS-info@unimelb.edu.au), or James Mwanza, Vital Strategies Project Officer (jmwanza@vitalstrategies.org).