



Verbal autopsy costing & budgeting tool

Background

Reliable information on causes of death is required to support health policy development, efficient planning, evaluation of programs, and allocation of resources. In low income countries civil registration and vital statistics (CRVS) systems to monitor births, deaths and causes of death (COD) often produce data of low coverage and poor quality. According to WHO, less than half of all deaths (around 30 million each year) go unrecorded globally, and half of those do not have a documented cause.

Despite increasing support to strengthen CRVS systems in recent years, it will still be some time before routine CRVS systems, as currently conceived, will register the majority of deaths that occur at rural community levels. In many of these same countries, there is a long experience in the use of verbal autopsy (VA) in research projects for determining the cause of death in rural and urban settings.

VA is an epidemiological tool that has been used to estimate cause-specific mortality rates (CSMR) in settings where medical certification of deaths is not feasible. Although an imperfect tool VA is still the best alternative in the absence of medical practitioners. This has led to advances in the VA questionnaire design, in data capture on mobile devices, and in the use of computer algorithms for determining and coding the causes of death. These advances make mobile community based VA an increasingly available and effective proxy means to emulate physician certified cause of death. Such research generated VA data are not normally made available to, or used in CRVS.

Rapid developments in VA associated cause of death computer algorithms such as SmartVA, InterVA, InSilicoVA can analyse information collected in VA questionnaires on mobile tablet-based devices makes the use of VA in routine CRVS a potentially practical undertaking. Integrating VA into existing CRVS systems should improve collection of data and information on causes of death which can be used to support health planning, priority setting, monitoring and evaluation in countries with incomplete vital registration systems. Such integration will be a complex undertaking and poses a large number of design issues for stewards of CRVS.

Despite the increasing interest in integrating VA methods into routine CRVS data collection systems at country level, the full extension of VA is yet to be incorporated in CRVS anywhere except in Brazil. This is attributed in part to the dearth of information on the costs of adopting VA based surveillance systems. To date, few studies have attempted to estimate the costs of the different components of verbal autopsy based surveillance in low and middle-income countries.

The cost of VA in CRVS systems is unknown. This is a critical issue for policy makers and managers. There is a pressing need for a tool that can assist the forecasting such costs for budget and planning purposes, and also for monitoring and analysing such costs as implementation of VA scales up. Swiss Tropical and Public Health Institute and the University of Melbourne under the Bloomberg Philanthropies Data for Health Initiative (D4H) have developed a Verbal Autopsy Costing & Budgeting Tool to help planners and managers to determine the costs of implementing VA systems. This tool can be customized to country context and covers all cost aspects of a verbal autopsy system comprising of start-up, training, community-level service delivery, as well as support, supervision, and management at all administrative levels. Additionally, the tool has a budgeting element that can be used to estimate budgets for VA systems.

The tool

The tool automatically produces the following outputs:

- Total program costs for baseline year by activity and input type
- Average costs per VA
- Key drivers of costs

The information collected could be used to strengthen budget preparation and justification in the annual budget preparation process; and to assist in verbal autopsy system implementation - measuring efficiency while identifying inefficiencies.

Aim

To introduce the basic principles of costing VA integrated in the CRVS system and to help participants develop the skills needed to use the VA Costing & Budgeting Tool to estimate the cost of VA implementation in D4H countries.

Target audience

Officials from institutions related to CRVS systems involved in the implementation or management of VA in the country. Officials from bilateral and multilateral organisations working on CRVS in the countries could also benefit from this training as it will help them understand the cost and resource implications of integrating VA in a CRVS system.

Ideally, participants would have a health economics background or have participated in a costing study of health interventions.

Teaching and learning methods

A participatory approach must be used with a combination of lectures, guidance documents, demonstrations, practical seminars using the VA Costing & Budgeting Tool, facilitated group work, group work feedback, and private study. We expect to use participants' knowledge of VA implementation as part of the CRVS systems in their countries to go populate the different sections of the tool.

Participants must bring their own laptop (or computing facilities should be available) and a recent version of Microsoft Excel.

Learning objectives

By the end of the training, participants should be able to:

- Demonstrate an understanding of basic costing methods applied to VA interventions
- Define assumptions and basic parameters to conduct a costing/ budgeting study of VA interventions
- Describe the rationale and methods underlying the VA Costing & Budgeting Tool
- Plan the data collection of the information required to estimate the cost of VA as part of the CRVS system
- Use the VA Costing & Budgeting Tool to collect costing information
- Understand the outputs of the costing analysis produced by the VA Costing & Budgeting Tool
- Use the modelling section in the tool to define different implementation scenarios to estimate cost of implementation
- Produce a report describing the main results of the costing or budgeting analysis.

Day	Topics	Session	Session type
Day 1	Introduction and general approach	Session 1 (1 hr) Introduction to VA costing and budgeting	Presentation
		Session 2 (45 mins) Basic costing and budgeting concepts	Presentation
		Session 3 (45 mins) Basic concepts: practical	Group work
	VA Costing & Budgeting Tool overview and first steps	Session 4 (1.5 hrs) Overview of the VA Costing & Budgeting Tool, and file structure	Presentation
		Session 5 (1.5 hrs) First steps: Define basic assumptions and identify VA activities	Group work
Day 2	Start-up and governance cost	Session 6 (1.5 hrs) Overview of start-up and governance cost for VA	Presentation
		Session 7 (2.5 hrs) Start-up and governance section in the tool	Practical
	Program management cost and time allocation	Session 8 (1 hr) Overview of program management cost for VA and section in the tool	Presentation
		Session 9 (1.5 hrs) Time allocations and share of resources	Presentation & practical
Day 3	VA delivery and analysis cost (I)	Session 10 (1.5 hrs) Overview of VA delivery and analysis cost	Presentation
		Session 11 (2 hrs) Field activity to collect data on VA delivery and analysis (I)	Field activity
	VA delivery and analysis cost (II)	Session 12 (2 hrs) Field activity to collect data on VA delivery and analysis (II)	Field activity
		Session 13 (2 hrs) VA delivery and analysis section in the tool	Practical
Day 4	Understanding the results	Section 14 (1 hr) Understanding the outputs of the VA Costing & Budgeting Tool	Presentation
		Section 15 (3 hrs) Costing results presentation	Group work
	Budgeting and modelling	Section 16 (2 hrs) Modelling VA implementation scenarios	Presentation & practical
		Section 17 (1 hr) Budgeting VA implementation	Presentation & practical
		Section 19 (1 hr) Planning a VA costing study	Group work
Day 5 (optional)	Advanced budgeting and modelling	Session 20 (2 hrs) Advanced modelling VA scenarios	Presentation
		Session 21 (2 hrs) Advanced budgeting VA interventions	Group work
	Programming the tool	Session 22 (2 hrs) Programming VBA structure of the costing tool (I)	Presentation & practical
		Session 23 (2 hrs) Programming VBA structure of the costing tool (II)	Presentation & practical

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:



The University of Melbourne recognises the Swiss Tropical and Public Health Institute for their partnership and contribution



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