CRVS technical guide
Verbal autopsy budgeting and costing tool: User guide

March 2019

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.
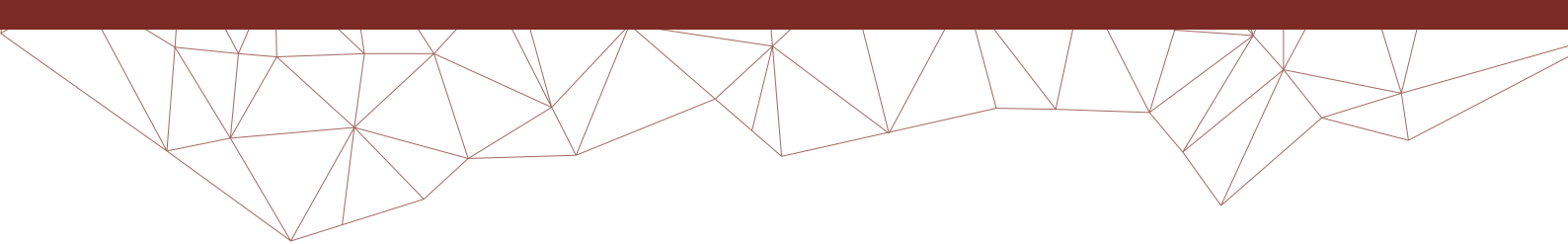
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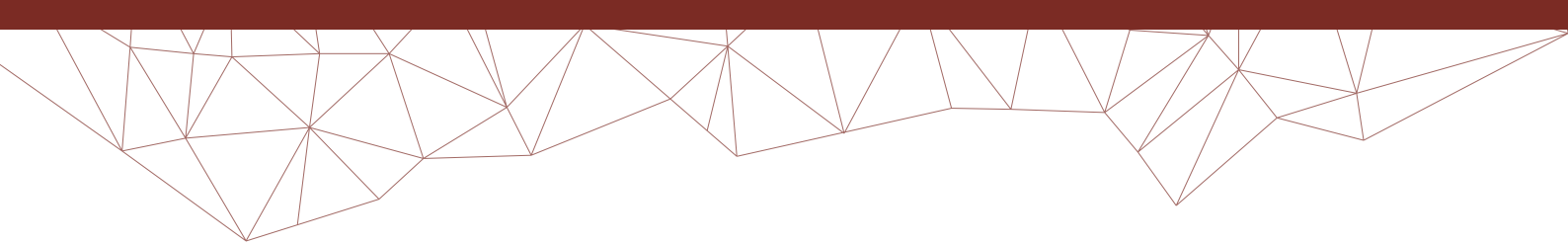
Acronyms

CDR	crude death rate
CHW	community health worker
COD	cause of death
CR	civil registration
CRO	Civil Registration Office
CRVS	civil registration and vital statistics
CSMR	cause-specific mortality rates
D4H	Data for Health
FTE	full-time equivalent
ICD	International Classification of Diseases
ID	identity
IT	Information and Technology
LMIC	low and middle-income country
SwissTPH	Swiss Tropical and Public Health Institute
TAG	Technical Advisory Group
VA Costing Tool	Verbal autopsy costing and budgeting tool
VBA	Visual Basic Application
VS	vital statistics
WG	working group

Contents

Introduction

Welcome to the **Verbal Autopsy Budgeting and Costing Tool** ('VA Costing Tool') User Guide. This user guide provides program planners and managers with instructions for using the accompanying tool.

The purpose of the VA Costing Tool is to help planners and managers to determine the costs of implementing verbal autopsy systems. The specific objectives of costing VA systems are to:

    i.   Estimate the costs of verbal autopsy systems across countries.

    ii.   Identify key cost drivers and factors that impact the costs and efficiency of VA systems.

    iii.   Estimate total budget requirements for VA activities across countries.

    iv.   Compare the costs of VA systems across countries.

This Tool can be customized to the country's context and covers all aspects of a VA system, including start-up costs, training costs, community-level service delivery costs, as well as governance, supervision, and management costs at all administrative levels. Additionally, the Tool has a budgeting and a modelling component. The former can be used to estimate budgets for VA systems, whereas the latter can be used to model different VA implementation scenarios. This guide, however, focuses on the usage of the costing Tool to determine the cost of implementing VA systems.

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 will be used to:

    i.   Strengthen budget preparations and justifications in the annual budgeting and planning process; and

    ii.   Assist in VA system implementation - measuring efficiency while identifying inefficiencies.

The VA Costing Tool consists of 10 worksheets in a single Excel file (.xls). The Excel file is designed to function as a "master" blank. It is best to create copies of the Tool before using it (either by creating copies on your computer desktop, or by opening the Excel file and saving it under a new name before you start using it).

The Excel VA Costing Tool is formulated specifically to calculate the cost of VA activities at the health systems level.

Data entry should ideally be directly done into the soft-copy Excel sheet. Data collectors should be equipped with a laptop/notebook computer during the on-site data collection visits. The data entry forms are specifically designed as templates for the compilation of data related to financial and economic costs of VA activities that were incurred within the months for which the cost is being assessed (month included in the costing study).

Section 1 – Getting started with the Tool

This section provides instructions on how to enter some basic background data into the tool for costing VA activities, whereas section 3 describes how to understand results of the costing and section 4 covers how to model cost. The examples in this section of the user guide have been generated using a demo version of the tool provided as part of this guide. Use the blank version of the tool to start entering data.

Note: All directions in this User Guide are for use on PC computers

1.1 Main Menu
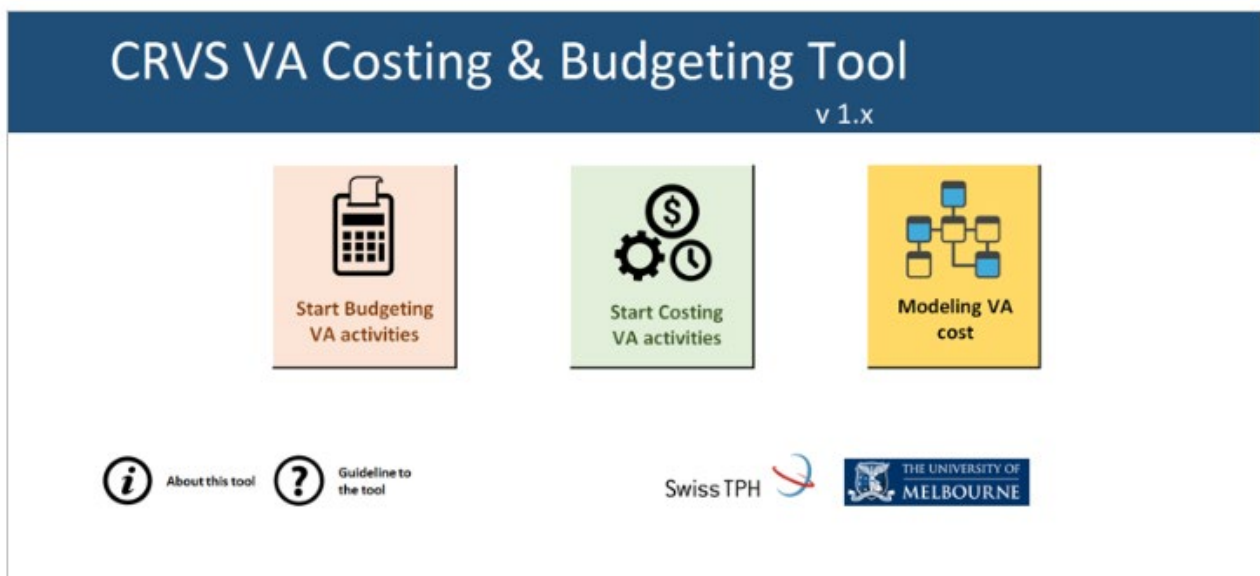
When opening the Tool, ensure that macros are enabled so that the Tool functions correctly. To enable macros, go to the Excel menu and select the following:

■ File – Options – Trust Center – Trust center settings – Macro Settings – Enable all macros; or

■ Select "Enable content" at the prompt.

The tool should automatically open to the main menu. Users can access the budgeting, costing and modelling components of the tool from this page.

■ To access the budgeting section, click on the **"Start Budgeting VA Activities"** button.

■ To access the costing section, click on the **"Start Costing VA Activities"** button.

■ To access the modelling section, click on the **"Modelling VA Cost"** button.

1.2 Costing

(Also applicable to the Budgeting Section).

To start the costing section, click on the corresponding item in the main menu ("Start Costing VA Activities") and the costing menu will open:

The costing (and budgeting) menu is the main navigation page for the costing section. Use this page to quickly navigate through the preparatory steps, the data entry worksheets and the results worksheets.

If you are starting a new costing data collection, click on the "Start Costing" icon. A pop-up window will appear to enter the preliminary data.

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Input the country name, the year for which the costing data are collected for (year of cost data), the year in which the costing assessment is done (year of data collection) and the main currency in which data will be entered into the tool (currency of the country).

Click on "Start costing". You will now be asked to save your file before entering the data. Ensure you save it as a different version as the original blank template.

If you want to continue entering data in a file that you already started, you will need to click on the "continue costing" icon under "Activities to be costed"

Note: Once you have saved the file with a new name you can start entering data.

1.3 Background Data

As a next step, you are now asked to enter the country's background information in the Background Datasheet, including baseline indicators, economic indicators, administrative structures, and funding sources for implementing VA activities.

Base Indicators

Enter the data on the following Baseline Indicators including the year this data corresponds to and the source of the data.

- Population: Enter the population of the country in millions
- Population growth rate (%): Enter the rate at which the number of individuals in a population increases in a year
- Median age (Yrs.): Enter the median age of the population in years
- Crude death rate (/1'000): Enter the total number of deaths per year per 1,000 people.
- Birth registration completeness (%): Enter the percentage of births that are registered within one month of age in a civil registration system
- Death registration completeness (%): Enter the percentage of deaths that are registered (with age and sex)
- Cause of death registration coverage (%): Enter the percentage of deaths for which a cause of death exists.

Economic Indicators

Enter the data on the following **Economic Indicators** including the year the data corresponds to and the source of the data.

- Gross domestic product (GDP) per capita
- Total health expenditures per capita, PPP
- World Bank income classification: Use the classification below in **Table 1**
- Average annual inflation rate
- Average annual salary growth rate.

Table 1 World Bank income classification[1]

Income Classification	GNI/Capita (current US$)
Low-income	< 995
Lower-middle income	996 – 3,945
Upper-middle income	3,946 – 12,195
High-income	> 12,196

Administrative structures

Introduce here the country's administrative structures. Begin with the first and highest level (National/Central) and go down to the lowest: Regional, District, Ward. The 5th level should be reserved for the lowest administrative level **to be sampled within the costing study,** e.g. ward even though there would be a lower administrative level (e.g. village). For each level, input the number of units involved in the implementation of the VA program for the year the costing data are collected for.

Note: You need to have 5 levels indicated. Where less than 5 levels exist, enter X in one of the name columns and use the quantity (number of units) of the above level.

Funding Sources for VA Implementation

In this section kindly indicate all the funding sources for VA implementation that exist nationally. If you need to add a source, later on, you still can go back to this section and do so.

After having completed this section, press "Next".

1.4 Define basic parameters and assumptions

General

Here confirm the general basic parameters entered at the very beginning:

- ■ Country: The country under investigation
- ■ Year of data collection: The year in which the costing assessment is done
- ■ Year of costing data: The year the costing data are collected for
- ■ Number of months included in the costing study.

Currency of the Costing

Input the main local currency by picking from the drop-down menu and enter the US$ to the main currency exchange rate. Use the average exchange rate for the period under investigation, meaning the months included in the costing study (e.g. www.ofx.com/en-au/forex-news/historical-exchange-rates or www.oanda.com). Add other currencies if needed.

Assumptions

Define the assumptions that will be applied to the entire costing. The assumptions with the "Value" column shaded in yellow are mandatory for the data collection process because they will be used in several formulas and calculations. Assumptions with the "Value" column shaded in white are just to keep a record of your assumptions but they will not be used by the tool. The information recorded here is required for the calculation of economic costs and is useful for making the results of the study more generalizable. This information can usually be obtained from the Central Economic Planning Office or the Ministry of Finance. For each input category enter the following:

- ■ Value or unit cost
- ■ Currency (If applicable)
- ■ Provide any comments, which may be useful for interpreting results.

The discount rate represents the rate at which investment's revenues and costs are discounted in order to calculate its present value. If this rate is unknown, it's usually set to 0.03 or 0.05.[2] The discount rate will be applied to all capital costs.

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2   Walker D, Kumaranayake L. Allowing for differential timing in cost analyses: discounting and annualization. Health Policy Plan. 2002;17(1):112-8.

Once done entering these values, press **"Next"**.

Note: For "Useful life years" enter 20 if items are only purchased once or activities will not be repeated.

Input category	Item/ detail (inputs)	Value	Currency (if apply)	Comments
General	Disccount Rate			
General	Useful life years of training			
General	Useful life years of buildings			
General	Useful life years of equipment			
General	Useful life years of vehicles			
Training	Room rental per day			
Training	Facilitator/ trainer cost per day			
Travel	Domestic air fare			
Travel	International air fare			
Travel	International (long haul) air fare			
Travel	Local travel per day			
Per diems	Hotel per person per day			
Per diems	Subsistence per person per day			
Equipment	Computer			
Equipment	Printer, scanner, photocopier and fax			
Equipment	Network server			
Equipment	Local area network (LAN)			
Communication	Internet connection			
Communication	Mobile telephone			
Consulting	National consultant daily fee rate			
Consulting	International consultant daily fee rate			
Personnel	Community key informants			
Personnel	Community outreach health workers			
Personnel	VA interviewers			
Personnel	VA regional supervisors			
Personnel	VA physician coders or signers			
Personnel	VA IT logistics and Help desk			
Personnel	VA Analyst			
Personnel	VA National Coordinator			
Personnel	Driver			
Infrastructure	Average monthly rental office building			
Vehicles	Replacement value			
Vehicles	Fuel cost per litre			

1.5 Number of units in the sample

The **Sampling Units** worksheet of the tool requires the user to enter the names of all administrative levels provided in the **Administrative Structures tab for each unit to be sampled for the costing study.**

Note: It is important to list only the units which will be sampled for the costing assessment and not all units involved in the implementation of the VA program countrywide.

The user also has to enter the total number of the VAs actual conducted within the lowest administrative unit during the number of months included in the costing study (this is the number of VAs done in the given time period and not necessarily the number of deaths occurred in the period under investigation).

See example below.

Name of Region	Name of Province	Name of District	Name of Village	Number of VAs per Village
Region 1	Province 1	District 1	Village 1	23
Region 1	Province 1	District 1	Village 2	21
Region 1	Province 1	District 2	Village 3	17
Region 1	Province 1	District 2	Village 4	35

In the above example from Country X, Village 1 conducted 23 VA interviews during the 6 months of costing study.

Section 2 – Entering cost data

2.1 Start-up activities
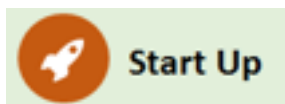
Start-up activities are those activities or resources required for the intervention design or for preparatory steps prior to implementation of the intervention. Such start-up activities like the translation of the VA questionnaire or the training of master trainers are only required at the beginning of the intervention and will not be repeated in a number of years. Consequently, all these activities are entered into the **Start-up Activities** worksheet.

Start-up trainings

Enter all initial VA training costs for the different type of staff. Start-up training costs include the initial costs of training key staff involved in VA activities. Training provided within the last 3 years related to VA that is not included, as part of the in-service training will be costed as part of this exercise. The Tool assumes that all new VA interviewers and supervisors added to the program (either for purposes of scaling-up, or to replace VA staff lost due to attrition) undergo the start-up training.

Note: The total cost of the refresher training will be part of the recurrent training and workshops costs. The Tool assumes that all VA staff currently deployed will receive the refresher training, at the frequency indicated by the user.

First, make a list of all trainings provided to VA staff and supervisors in column "Title of the training". The user can enter up to 21 trainings each. Enter the source of funding for the training in column "Source of funding". Next enter the administrative level in column "Administration level".

Note: The administrative level represents the level for which the total cost of this specific activity applies to. E.g. if the total cost of this activity includes the 10 sessions of training conducted nationally in 10 different wards, then the administrative level is "National". The administrative level would only be "Ward" if we were considering the cost of each training in each ward separately.

Input training costs which include: **Participants**: Fees, accommodation & subsistence, travel; **Trainers:** Fees; accommodation & subsistence, travel, venue costs, supplies and other training related costs.

	Number of days	Number of people	Unit Cost	Currency
Participants: Fees				
Participants: Accomodation & subsistence				
Participants: Travel				
Trainers: Fees				
Trainers: Accomodation & subsistence				
Trainers: Travel				
Total office materials & other supplies				
Venue				
Other cost				

Note: Personnel cost is not captured individually in the Start-up Activity worksheet. Thus, personnel cost should be added as a fee. E.g. 43 people spend 5 days in a training and their average daily salary is 30, then the fee per person and day would be 30.

If VA training is part of other training activities, enter the proportion of costs allocated to VA activities under "% for verbal autopsy". Enter the year in which each training was conducted in column "Year of training". Next input the useful life years of each training activity (this corresponds to the frequency of training sessions: e.g. if the next time this type of start-up training is provided after 3 years, enter 3 as the useful life years).

Note: Often the useful life years of start-up training is the time after which managers think they would need to train a whole new batch of staff (VA staff lost due to attrition).

Start-up workshops and meetings

Enter information for start-up workshops and meetings using the same instructions as for start-up training explained in the above section. Costs in this category may include meetings of CRVS/mortality committees and the launch of VA activities in the country.

Other Start-up costs

First, make a list of all other start-up costs for VA activities in Column B. The user can enter up to 20 cost items. Enter the source of funding in Column C. Next enter the administrative level in Column D. Input the total annual costs for each cost item. If the item or the activity is used or part of other activities, enter the proportion of costs allocated to VA activities. Enter the year the expense was incurred in column I. Next input the useful life years of each item (this applies to capital such as costs of servers etc.).
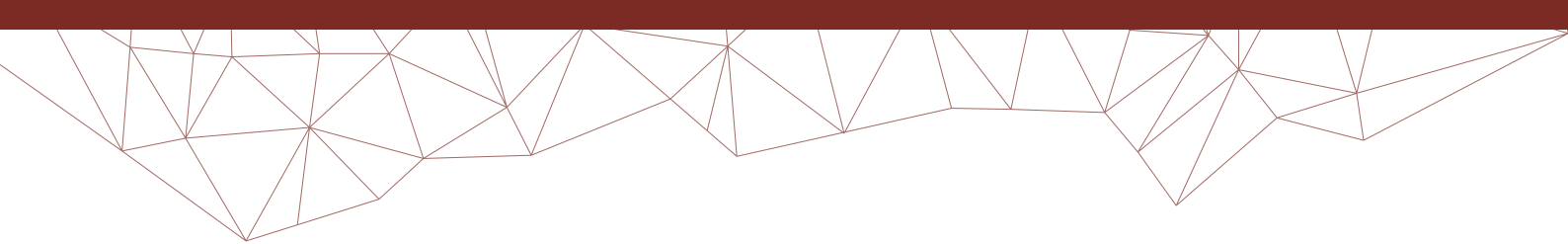
2.2 Governance Activities

Input all costs related to governance activities of VA implementation into the **Governance Worksheet.** Governance costs include costs of meetings and workshops to guide the steering of the overall VA implementation in the country. The costs of routine national and district level planning workshops related to VA implementation should also be included here. Meetings for VA Tool development and other activities related to the development stage of VA implementation should NOT be included here. They must be considered as start-up activities (see above).

First, make a list of all workshops and meetings related to governance of VA activities in Column B that were conducted within the months for which the cost is being assessed (month included in the costing study). The user can enter up to 20 workshops and meetings. Enter the source of funding in Column C. Next enter the administrative level in Column D (see note above under "Start-up activities"). Input meeting and workshop costs which include: **Participants** fees, accommodation & subsistence and travel; **Facilitator** fees; accommodation & subsistence, travel, venue costs, supplies and other workshop related costs.

Note: Personnel costs are not captured individually in the Governance Worksheet. Thus, personnel cost (time needed to conduct governance activities) should be added to the time needed within the program management section (see Program Management Worksheet).

Other Governance Costs

Input other governance-related costs in this section. First, make a list of all other governance costs of VA activities in Column B incurred within the months for which the cost is being assessed (month included in the costing study). The user can enter up to 20 cost items. Enter the source of funding in Column C. Next enter the administrative level in Column D. Input the costs for each cost item and the currency. If the item or the activity is used or part of other activities, enter the proportion of costs allocated to VA activities.

2.3 Program Management
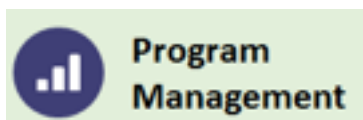
The **Program Management Worksheet** allows you to input all costs of staff and items related to the management of the VA program, such as salaries, communications, supplies and equipment. Data entered on this worksheet will calculate the total costs of management associated with the VA program.

Personnel

First make a list of all relevant managers who are involved in VA program management. Input the source of funding, and enter the administrative level the management is affiliated with from the drop-down menu. Next, the user must input the number of staff in this position per administrative level indicated. This is followed by the gross annual salary and annual allowances. Finally, enter the percentage of time spent on VA program management. This includes time spent for governance activities.

Communication

In this section, enter costs associated with communication for VA program management incurred within the months for which the cost is being assessed (month included in the costing study). Communication costs include data costs, telephone, internet and postage. Input for each cost category the source of funding, the administrative level, the cost incurred within the months for which the cost is being assessed (month included in the costing study), the currency of payment and the proportion of costs allocated to VA activities if the communication mean was shared with other activities.

Supplies, utilities and other recurrent costs

In this section, enter all costs of supplies, utilities and other recurrent costs incurred within the months for which the cost is being assessed (month included in the costing study). Input the source of funding, the administrative level, the cost incurred within the months for which the cost is being assessed (month included in the costing study), the currency of payment and the proportion of costs allocated to VA activities if costs were shared. This section of the worksheet allows the user to input any VA program costs that have not previously been addressed in the Tool. Typically, these costs include transport, electricity, and administrative or overhead costs such as office rental.

Equipment

In this section, enter the equipment provided for VA management activities, which was still in use during the period for which the cost is being assessed (month included in the costing study). This also includes equipment that was bought prior to the period for which the costing is done. Equipment can be defined as any materials that are used recurrently in the course of VA activities (as opposed to supplies which are used on a one-time basis). This can include tablets, computers, bicycles, motorbikes, and vehicles. For each piece of equipment, input the source of funding, the administrative level, the quantities used per administrative level indicated, the replacement value of one piece, the currency of purchase, the year of acquisition, and the useful life years. For shared equipment, enter the proportion of time the equipment is used for VA activities.

Consultants

Enter the costs of short-term consultants which have ever been used for program management in this section. This also includes consultancies that have been conducted prior to the period for which the costing is done. Consultancies may involve technical assistance from a variety of organizations, both national and international. Enter all costs of consultancy packages, which may comprise salaries or fees, international and/or local travel and subsistence and miscellaneous reimbursements. For each consultancy, input the source of funding, the administrative level for which the consultancy was conducted for, the fees, travel expenses as well as the accommodation and subsistence allowances. Also, enter the currency of purchase, the year of the consultancy, and the useful life years. For shared consultancies, enter the proportion of time the consultancy was used for VA activities.

2.4 Supervision
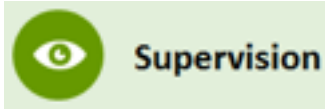
All costs for Supervision Visits and Supervision Meetings with VA interviewers should be entered in the **Supervision Worksheet**.

Note: Information should only be entered here for costs relating to direct CRVS Supervisors.

Supervision visits, workshops and meetings

Typically, direct supervision visits will comprise visits of VA supervisors to regional, district and ward levels to observe the VA interviewers in the field.

First, make a list of all relevant supervision visits relating to the VA program that were conducted within the months for which the cost is being assessed (month included in the costing study). These may typically include quarterly supervision visits to lower administrative levels. Select the source of funding through which the supervision visit is financed and enter the administrative level for which the total cost applies to (remember the note above; if you enter the cost of supervising all wards in the country the administrative level is "national" and NOT ward. The administrative level would only be "ward" if you were to enter the cost of each supervision visit to each ward. Use the cost entering section to enter the cost for all supervision meetings/visits for participants as well as supervisors through selecting "enter cost of supervision" (Participants fees, accommodation & subsistence and travel; supervisor fees; accommodation & subsistence, travel, venue costs, supplies and other related costs). Also, enter the proportion to which the supervision can be allocated to VA activities and enter the frequency of visits for the period for which the costing was conducted. The cost per meeting will then be multiplied by the frequency of visits per administrative level within the costing period.

Personnel

First make a list of all relevant stakeholders who are involved in VA supervision. Input the source of funding and enter the administrative level the stakeholder is affiliated with from the drop-down menu (Note: remember the note from above; 20 VA interviewers nation-wide are affiliated with the national level, whereas 2 VA interviewers per ward are affiliated with the ward level). Next, the user must input the type of contract (paid worker or volunteer), the number of staff PER SELECTED ADMINISTRATION LEVEL, the gross annual salary and annual allowances (Note: if you cost 6 months only the allowances must be multiplied by 2). Finally, enter the percentage of allowances or salary used for VA supervision.

Communication

In this section, enter costs associated with communication for VA supervision incurred within the months for which the cost is being assessed (month included in the costing study). Communication costs include data costs, telephone, internet and postage. Input for each cost category the source of funding, the administrative level at which the communication was used for, the cost incurred within the months for which the cost is being assessed (month included in the costing study), the currency of payment and the proportion of costs allocated to VA supervision if the communication mean was shared with other activities.

Supplies, utilities and other recurrent costs

In this section, enter all costs of supplies, utilities and other recurrent costs incurred within the months for which the cost is being assessed (month included in the costing study). Input the source of funding, the administrative level, the cost incurred within the months for which the cost is being assessed (month included in the costing study), the currency of payment and the proportion of costs allocated to VA activities if costs were shared. This section of the worksheet allows the user to input any VA supervision costs that have not previously been captured in the tool.
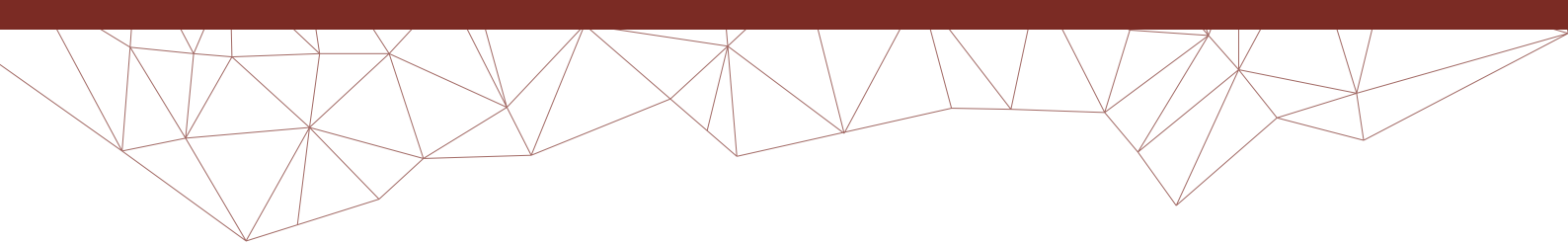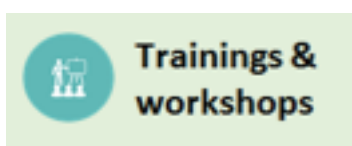
Equipment

As done in the equipment section within "Program management" kindly indicate the equipment costs in this case specifically dedicated for supervision.

Consultants

This section is filled following the same instructions described within the "Consultants" section within "Program Management" worksheet.

2.5 Refresher training and workshops

Unlike the training costs calculated as part of the start-up activities, refresher training occurs more frequently and therefore has a useful life of one year.

There is not a specific worksheet in the tool to record the information about refresher training and workshops. This must be recorded in the "VA Delivery and Analysis" worksheet.

2.6 VA delivery and analysis costs

VA delivery & Analysis
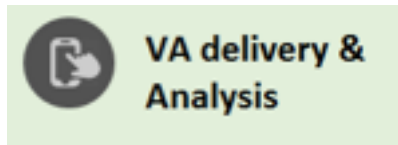
The **VA Delivery and Analysis** worksheet captures capital and recurrent costs associated with activities directly linked to VA. We should record here all resources used in capturing the vital event (including the notification of the death in some cases), setting up the appointment with the family, doing the VA interview, transferring the responses to the questionnaire and doing the analysis of these responses (either by a physician or by an algorithm). The entire range of activities can be seen in **Figure 1**.

Figure 1 Generic verbal autopsy processes in a CRVS system
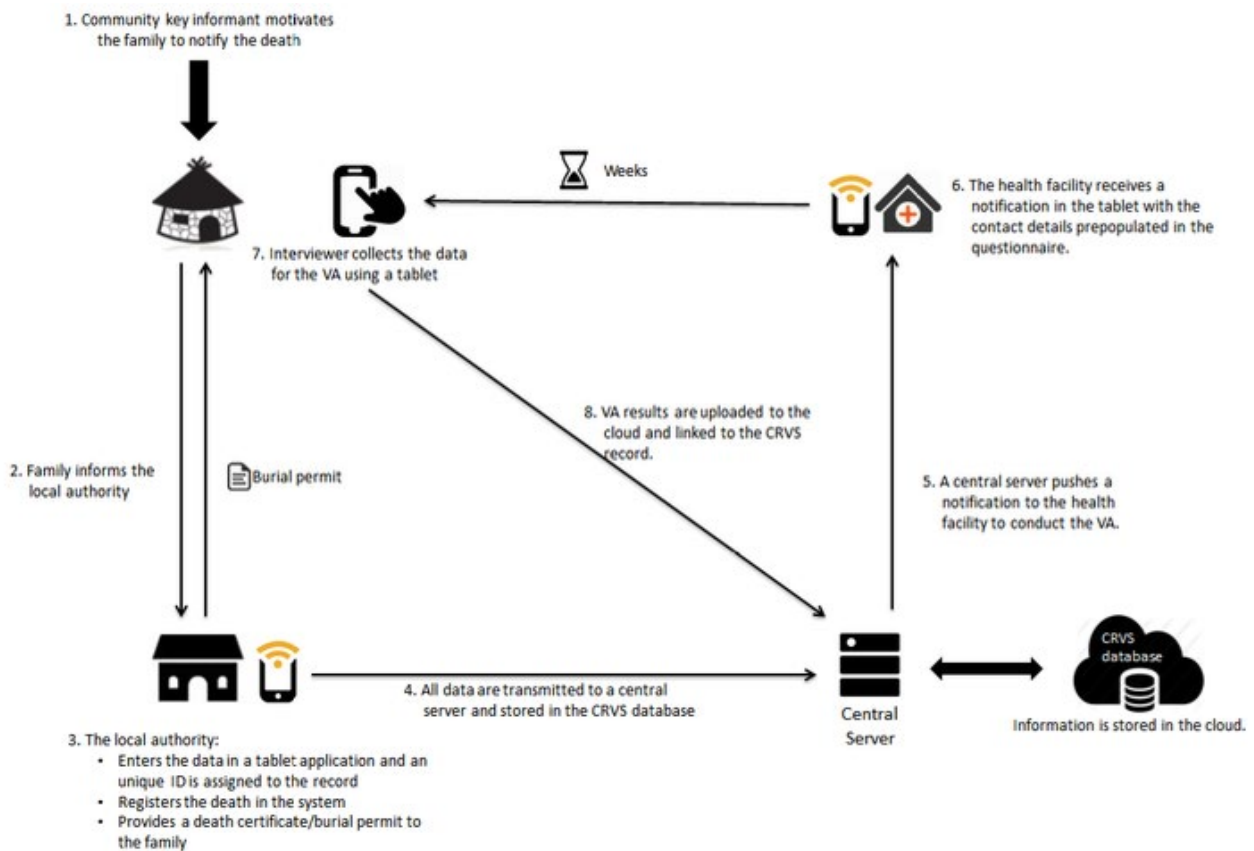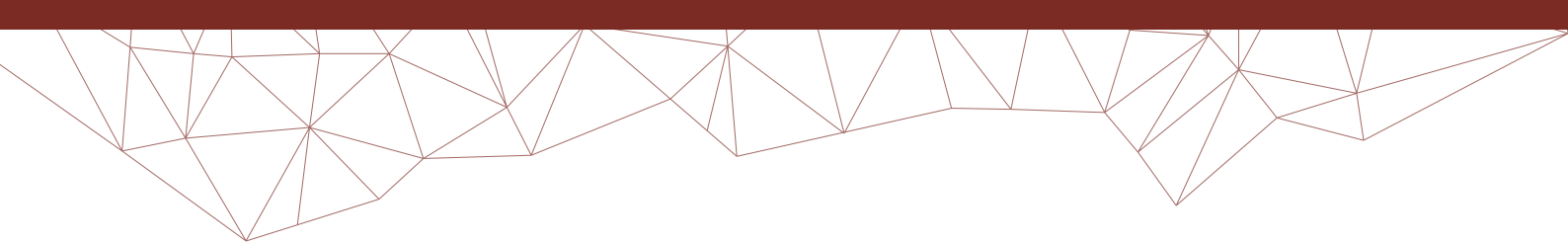
In addition to the direct cost related to VA delivery and analysis, users must collect the information about refresher training and workshops held in each sampling unit.

The user should ensure that the costs are entered for each sampling unit as indicated in the **Sampling Unit** worksheet.

Recurrent trainings, workshops and meetings

Unlike the start-up training costs calculated as capital costs, refresher trainings occur more frequently and therefore have a useful life of one year. Input all refresher trainings, workshops and meetings in this worksheet.

Make a list of all trainings, workshops and meetings attended by VA interviewers and supervisors that were conducted within the months for which the cost is being assessed (month included in the costing study) in Column A. The user can enter up to 20 trainings each. Enter the source of funding for the training in Column B. Next enter the type (e.g. training, workshop or meeting) in Column C. Input training costs which include: **Participants:** Fees, accommodation & subsistence, travel; **Trainers:**

Fees; accommodation & subsistence, travel, venue costs, supplies and other training related costs. If the VA training/workshop/meeting was part of other activities, enter the proportion of costs allocated to VA. Enter the number of participants for each training, meeting or workshop.

Personnel

The section collates data on personnel involved in VA activities. First input a description of the staff position in Column A. Select the staff profile from the drop down menu in the next column. In the next section, select the time allocation corresponding to each staff type from the drop-down menu. You can choose from either total estimates or per activity. If "Total estimate" is selected, the user must input an estimate of the proportion of time spent on VA activities. If "Per activity" is selected, enter the number of working hours per week for each staff member. Enter the number of VAs where the staff was involved during the period for which the cost is being assessed (month included in the costing study). The user must provide a breakdown of the number of hours per VA spent for each of the following VA activities: Identifying death and appointment, analysis and reporting, and other activities related to VA registration. Also, the user should enter the total number of hours in RECURRENT trainings (this does not include time spent in start-up trainings) and the total numbers of hours spent on other VA activities (e.g. community mobilization for death registration) for period for which the cost is being assessed.

In the second table on "Personnel" enter the funding source through which the staff is financed and the number of staff in this position within this administrative level. Afterwards, select the types of contract: paid worker or volunteer. Next enter the gross annual salary excluding benefits. Enter the annual allowances and benefits. Enter the currency of payments.

Communications

Enter costs associated with communication in this section. Communications costs include data costs, telephone and postage. For each item input the source of funding, annual costs, currency of payment and proportion of costs allocated to VA activities in case equipment is shared across activities.

Maintenance

Enter costs associated with maintenance of equipment in this section. Similar to communication costs, input the source of funding, annual costs, currency of payment and proportion of costs allocated to VA activities in case costs are shared.

Supplies, utilities and other recurrent costs

Enter all travel costs, costs of supplies, utilities and other recurrent costs in this section. Input the source of funding, annual costs, currency of payment and proportion of costs allocated to VA activities in case costs are shared. This section of the worksheet allows the user to input any VA delivery and analysis costs that have not previously been addressed in the Tool. Typically, these costs include administrative or overhead costs such as office rental as well as travel costs.

Equipment

Enter the equipment provided for VA delivery and analysis in this section. Equipment can be defined as any materials that are used recurrently in the course of VA activities (as opposed to supplies which are used on a one-time basis). This can include tablets, computers, bicycles, motorbikes, and vehicles. For each piece of equipment, input the source of funding, quantities used at the administrative level of the selected sampling unit, replacement value, currency of purchase, year of acquisition, and useful life years. For shared equipment, enter the proportion of time the equipment is used for VA activities.

Consultants

Enter the costs of short-term consultants used at the administrative level of the selected sampling unit in this section. Consultancies may involve technical assistance from a variety of organizations, both national and international. Enter all costs of consultancy package, which may comprise salaries or fees, international and/or local travel and subsistence and miscellaneous reimbursements.

Section 3 – Understanding results of the costing

3.1 Summary results

On the main page of the costing section, select the table icon in the results box under "Summary Results".
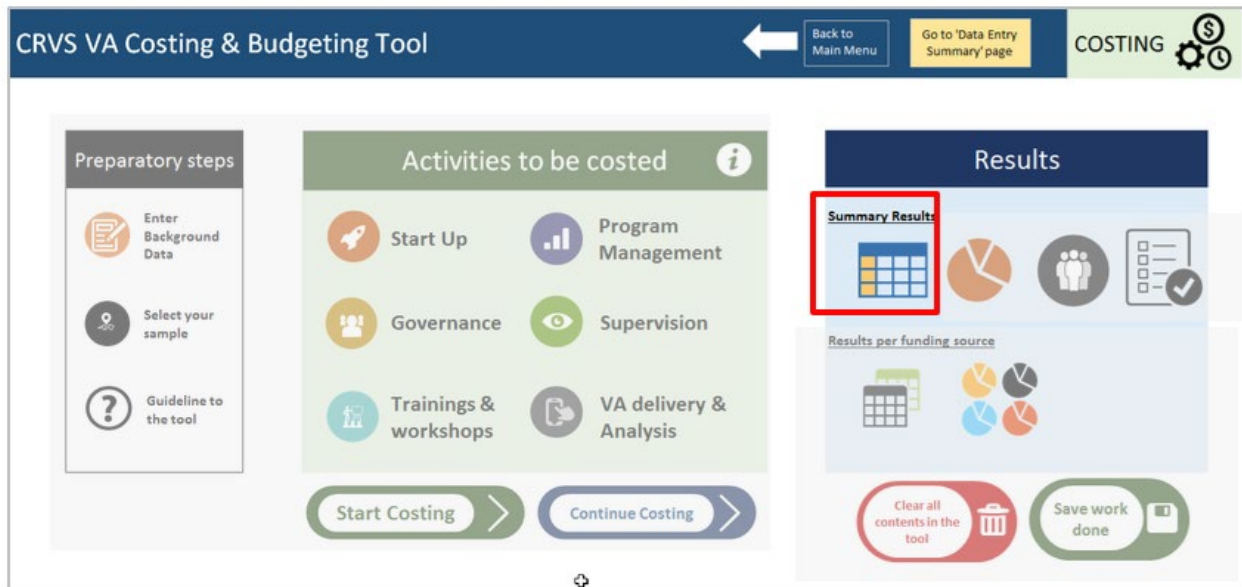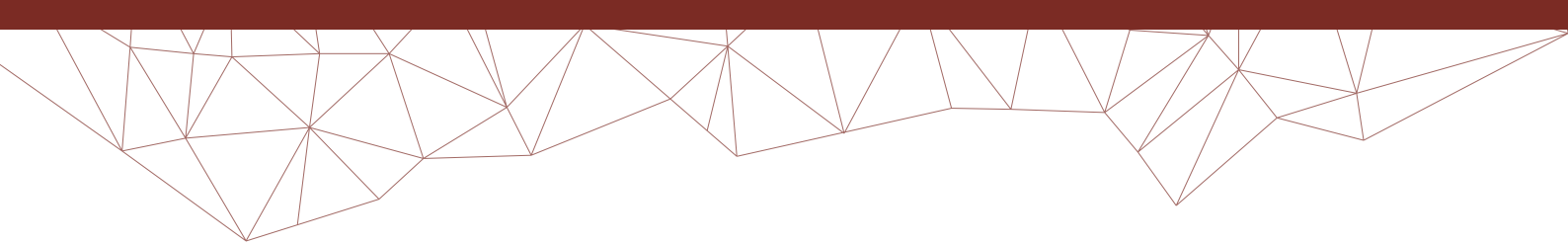

The **Results-Tables worksheet** will open and show the detailed, comprehensive results of the costing analysis, displayed in tables.

Results can be displayed in any currency included in the Background section of the costing section.

Select the currency in which the results ought to be shown.

Press **"Refresh results"**.

Note: No data are entered directly into these tables they are populated from the data entry worksheets. DO NOT change any formulas, add or delete rows or columns, or disrupt the calculation worksheets in any way.
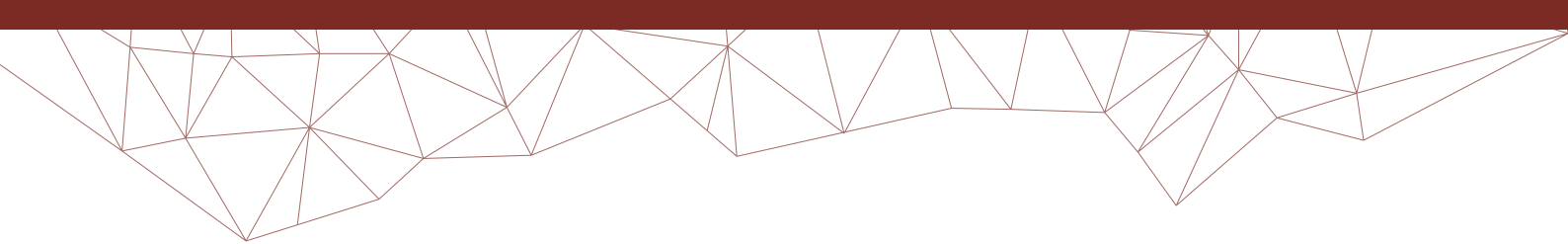
3.2 Total Cost per major activity

The summary of total cost by activity type provides a breakdown of Total VA implementation costs by activity type: start-up; governance, refreshment training/workshops, program management, supervision as well as Direct CRVS activities.

Total cost per major activity

	Total financial cost in 6 months (USD)	Total economic cost in 6 months (USD)
Start Up activities		
Governance activities		
Refresher training & workshops		
Program Management		
Supervision		
VA delivery & Analysis		
TOTAL		
Cost per VA (USD)		

Note: All results in the Tool are automatically generated and do not require user input. Any error messages in the results worksheets may indicate incorrect or insufficient data entered into the Tool.

3.3 Total Cost per Input

The summary of total cost per input type provides a breakdown of total VA implementation costs by input: training, workshops and meetings, equipment, consultancies, personnel, communication, maintenance, supplies and other recurrent costs.

| Input	Total financial cost in 6 months (USD)	% of financial costs	Total economic costs in 6 months (USD)	% of economic costs
Start-up costs				
Trainings, workshops & meetings				
Other start up				
Total start-up costs				
Recurrent costs				
Refresher trainings & meetings				
Personnel				
Communications				
Maintenance				
Supplies & other recurrent				
Total recurrent costs				
Capital costs				
Buildings				
Equipment				
Vehicles				
Consultants				
Total capital costs				
Total Annual Costs				

3.4 Average Cost Estimates

The following average costs are provided:

- Average cost per VA: Total Costs VA Implementation/Total Number of VAs
- Recurrent cost per VA: Total Recurrent Cost/Total Number of VAs
- Training cost per VA: Total Training Cost/Total Number of VAs
- Supervision cost per VA: Total Supervision Cost/Total Number of VAs.

3.5 Cost per funding source

The Tool also disaggregates the cost of each activity group by funding source. In order to do so, select the table icon in the main menu, within the results box under "Results per funding source".
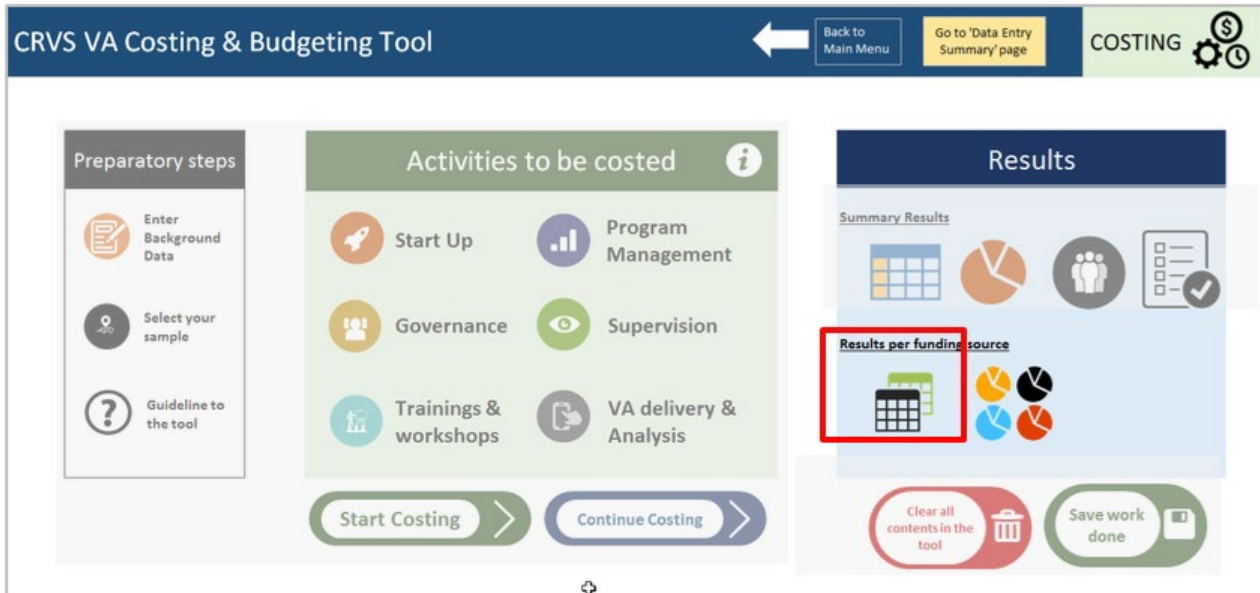

COST PER FUNDING SOURCE

Financial Cost in (SELECT)	Funding source 1	Funding source 2	Source not defined	TOTAL
Start Up activities	-	-	-	-
Governance activities	-	-	-	-
Refresher training & workshops	-	-	-	-
Program Management	-	-	-	-
Supervision	-	-	-	-
VA delivery & Analysis	-	-	-	-
TOTAL	-	-	-	-
% of the TOTAL	0%	0%	0%	0%

Economic Cost in (SELECT)			Source not defined	TOTAL
Start Up activities	-	-	-	-
Governance activities	-	-	-	-
Refresher training & workshops	-	-	-	-
Program Management	-	-	-	-
Supervision	-	-	-	-
VA delivery & Analysis	-	-	-	-
TOTAL	-	-	-	-
% of the TOTAL	0%	0%	0%	0%

3.6 Staff time

In order to visualize the time each staff member dedicates for VA activities, select the group icon in the results box under "Results per funding source" in the main menu.
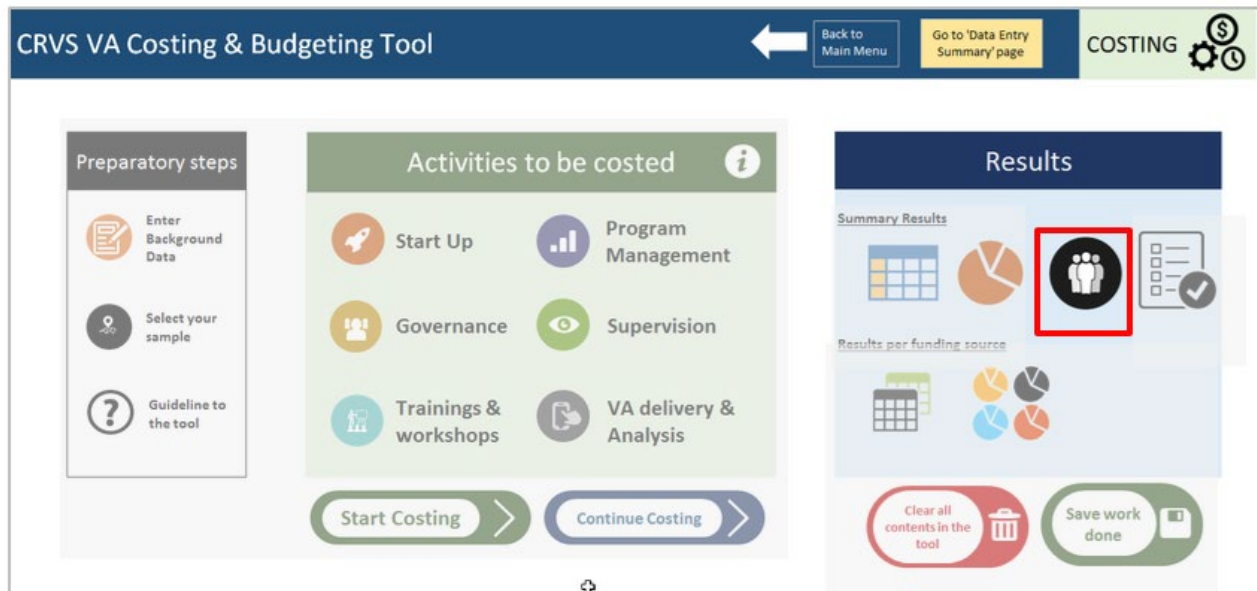
The Tool calculates the number of staff involved in VA implementation and all other activities linked to it (eg program management) according to pre-defined staff categories.

It also provides the total number of full time equivalents (FTE) required for each staff category to conduct the number of CRVS activities included in the costing. FTE accounts not only for the number of staff involved but also for the % of their time that they spent on VA related activities.

Staff requirements to implement VA in

	Total number involved	FTEs*
Community key informants		
VA interviewers		
VA supervisors		
VA physician coders or signers		
VA IT logistics and Help desk		
VA analyst		
National manager & supervisor		
Sub-national manager & supervisor		
Consultant		
Other		

*FTE: Full Time Equivalent

CRVS technical guide

Section 4 – Modelling cost

The results of either a costing or a budgeting exercise can be modelled for different implementation scenarios and time. Several factors can be modified to create different scenarios. These factors are:

■ Number of administrative units included in the model;

■ Population included in the sample'

■ Crude death rate (CDR);

■ Per cent of deaths registered;

■ Per cent of deaths outside of health facilities; and

■ Inflation rate.

Costs for each subsequent year are calculated applying a weighting factor to each cost category. The rationale for calculation each weighting factor are:

Table 2: Weighting factor used to model cost according to activity group and type of resource

Cost type	Factor
Start-up Start-up trainings and workshops Other start-up costs	Expected number of staff to be trained
Governance Governance workshops and meetings Other governance costs	Incremental number of sampling units at each administrative level
Program management Personnel Communications Supplies, utilities and other recurrent cost Equipment Consultants	National and sub-national level: incremental number of sampling units in the administrative level below, compared with previous year Local level: incremental number of sampling units in the same level, compared with previous year
Supervision Supervision workshops and meetings Personnel Communications Supplies, utilities and other recurrent cost Equipment Consultants	National and sub-national level: incremental number of sampling units at each administrative level, compared with previous year Local level: incremental number of sampling units in the same level, compared with previous year
Verbal autopsy delivery and analysis Refresher training and workshops Personnel Communications Maintenance Supplies, utilities and other recurrent costs	Expected number of full-time equivalent personnel needed to conduct the expected number of verbal autopsies in a given year
Buildings Equipment Vehicles Consultants	Incremental number of units delivering verbal autopsies

> **We hope this user guide has helped you navigate the VA Costing Tool.**
> **In case you have any questions or comments, don't hesitate to CONTACT US.**

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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