CRVS Fellowship report:

A strategy to improve death notification and community cause of death information in Lao PDR

August 2020

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 resouces 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.

Suggested citation

Hensman, D. *Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR.* CRVS Fellowship reports and profiles. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, Civil Registration and Vital Statistics Improvement, University of Melbourne; 2020.

Contents

CRVS Fellowship reports and profiles

CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01   3

Acknowledgements

Acronyms and abbreviations

CMIS	Civil Management Information System
COD	cause of death
CRVS	civil registration and vital statistics
DH	district hospital
DHIS2	District Health Information System
DHR	Department of Healthcare and Rehabilitation
DNF	death notification form
DOHA	District Home Affairs Office
HC	health centre
HMIS	Health Management Information System
ID	identification
MOH	Ministry of Health
MOHA	Ministry of Home Affairs
VA	verbal autopsy
WHO	World Health Organization

CRVS Fellowship reports and profiles

4   CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01

Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR

Between February and March 2020, Dilip Hensman, Technical Officer for Health Information Systems from the World Health Organization in Lao PDR, completed a CRVS Fellowship funded by the Bloomberg Philanthropies Data for Health Initiative at the University of Melbourne to develop a strategy for improving death notification and implementing a pilot rollout of automated verbal autopsy in Lao PDR. This report outlines a proposed strategy for the Ministry of Health in Lao PDR to receive notifications of deaths occurring outside of health facilities, and to integrate the use of automated verbal autopsy to improve cause of death statistics for community deaths.

Background

The civil registration and vital statistics system in Lao PDR

Lao PDR (Laos) has a population of about seven million (2018)[15], the majority of whom live in rural and isolated areas. The civil registration and vital statistics (CRVS) system of Laos is currently weak, with approximately 51 per cent of the births and 45 per cent of the deaths being registered as of 2019).[16] Civil registration functions were vested to the Ministry of Home Affairs (MOHA) in 2011, and through a recent World Bank-funded initiative, the national strategic plan (2016-2025) to strengthen CRVS is to be implemented. Other key stakeholders include the Ministry of Health (MOH) (primarily responsible for the notification of births and deaths with causes of death for those that occur within health facilities), the Lao Statistics Bureau (responsible for producing vital statistics), the Ministry of Law and Justice (responsible for the legal framework governing civil registration), and the Ministry of Public Security (responsible for the registration of persons through the 'family book')[17].

Each year, between 45 000 to 50 000 deaths occur in Laos, yet of these, only about 10 per cent are notified to the health sector.[18] Of these notified deaths, around 60 per cent occur within a health facility, comprising seven per cent of all deaths. The vast majority of deaths occur in the community outside of health facilities (93 per cent).[19] Even for deaths occurring within health facilities, there is currently no standard death notification form (DNF) used across all hospitals, and none of the existing forms being used conform to the World Health Organization's (WHO) international standards.

With WHO support, the MOH has initiated action to improve cause of death (COD) statistics for deaths within health facilities with a medical doctor. A new death notification and medical certification of cause of death form has been developed and is currently being piloted in all central hospitals in the capital, Vientiane. This initiative, however, can only improve mortality data for a fraction of the annual deaths occurring in the country. While there is a formal system of notification of community deaths to a village chief, these data are neither consolidated for national statistics nor formally exchanged with the health sector to extract any COD information for health policy or planning purposes.

Existing notification and registration activities

To establish CODs for the seven per cent of the deaths occurring in health facilities, these either need to be medically certified by a physician or followed up with a verbal autopsy (VA) (**Box 1**) in the absence of a medical doctor. For the remaining 93 per cent of deaths occurring outside of a health facility, notification takes place through the village chief. This current system means the process flow bypasses the MOH, and as a result, causes of deaths for these community deaths are unable to be established. To address this, a systematic approach needs to be developed to ensure community death notifications are shared with the MOH through existing structures in a timely manner.

15   https://www.lsb.gov.la/en/home/
16   Ministry of Home Affairs, 2020.
17   In the family registration law of 1992, a family book registration with the village chief refers to a record that certifies the domicile of the members of a family household of Lao citizenship, foreigner and stateless person (who is authorized to reside in the Lao PDR) in accordance with the laws and regulations.
18   Based on crude death rate estimates using 2015 Census data (see Annex 4)
19   Data obtained from Laos PDR's Health Management Information System, District Health Information System (DHIS2)

> **Box 1: 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 COD.[15]
>
> 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.[16]

The legal framework for civil registration in Laos is set out in the Family Registration Law of 1992 which was subsequently revised in 2018 (see **Annex 1**). As per Article 20 of the Family Registration Law of 2018, when a person dies in a hospital or health care facility, the facility issues the DNF within five business days of the date of death, with a family representative notifying the village administrative authority before registering the death. If a person dies outside of a hospital or health facility, the family notifies the village administrative authority where the person died within five business days from the date of death.

In keeping with the legal requirements, the MOH currently has no access to death notification data for community deaths, with notifications received by the village chiefs and forwarded to the MOHA thereon. Health facilities, however, record aggregate statistics of under-five deaths notified to them while on outreach visits and report these statistics through the District Health Information System (DHIS2), which is accessible by the MOH. These numbers are seemingly low though, and in 2019, just 1556 child deaths were reported, with a large proportion (86 per cent) of these infant deaths.[17]

Death registration

'Registration' in Laos is usually understood as registration/recording in the "family book". Since 2011, the MOHA has been the mandated authority to carry out civil registration in the country. Following amendments to the Family Registration Law in 2018, the registration function now extends beyond just registering a death on a family book, involving the MOHA for formal registration and certification. At present, most community deaths are notified to the village chiefs, who, through a new initiative of the MOHA and supported by the World Bank, are additionally required to complete a paper-based DNF. This form is transmitted to the District Home Affairs Office (DOHA) where, once development and testing is complete, will then be entered into the Civil Management Information System (CMIS).[18] This process, however, does not interface with the health sector (including the MOH) which requires this vital information for public health policy.

There is currently no evidence of formal health sector interaction with village chiefs. Establishing this formal exchange is a vital step in improving the death notification system in Laos.

15 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. Available at: https://crvsgateway.info/file/16363/51

16 Ibid.

17 Data obtained from Laos PDR's HMIS, DHIS2

18 The CMIS, an online information system for civil registration, is currently under development with the MOHA.

The role of village chiefs and the "family book" registration

The smallest administrative division in Laos is the "stamped" village, which is a group of hamlets led by a village chief who is an employee of the MOHA. As at 2018, there were 8447 stamped villages in the country.[15] Among the many administrative functions of the village chiefs, one of their key roles is to maintain the family books of residents in their villages. When a child is born, the family is supposed to inform their village chief in order to include the newborn in the family book. Likewise, in the event of a death, the village chief is informed of the death and the name is removed from the family book. Family books are primarily used for security purposes, and vital statistics are not generated from the registrations recorded in the books. Furthermore, although the coverage of family books is perceived to be high, at around 80 per cent, it is not universal, particularly among isolated communities.

Intervention rationale

As a result of weak collaboration and communication between stakeholders involved in the collection and recording of death notification and registration data, Lao PDR lacks reliable and up-to-date COD information to formulate sound health policies. One strategy that has been adopted increasingly by other countries to generate population level COD data is to administer VAs for community deaths. To address this, a pilot notification strategy within the current framework of notification through the village chiefs, coupled with the rollout of automated VA for community deaths is proposed and outlined in detail in this report.

This proposed strategy looks to collect information on causes of community deaths in three districts and provide a proof of concept to inform subsequent government action. The strategy is line with Target 3E of the country's 2016-2025 CRVS Strategy: to determine 30 per cent of deaths taking place outside a health facility without an attending physician through VA by 2020, and 60 per cent by 2025.[3]

CRVS Fellowship reports and profiles

CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01   7

Methods

This strategy has two main components: (1) a strategy for the notification of community deaths to the health sector within the current framework of notification through the village chiefs; and (2) a strategy to pilot automated VA in selected districts to generate causes of deaths for deaths without a COD certificate.

Strategy 1: Notification of out-of-facility deaths to the health sector within the current framework of notification through the village chiefs

In addition to the MOH, key CRVS stakeholders involved in the notification of deaths include the Ministry of Public Security, who are the main custodians of the family book system, the MOHA, to whom all village chiefs report to vital events, and the Lao Statistics Bureau, who are responsible for the production of vital statistics, shown in the stakeholder map in (**Annex 2**).

Once the CMIS rollout to all DOHAs is complete, the ideal way for the MOH to gain access to data on deaths notified to the MOHA will be through a data sharing interface between DHIS2 and the CMIS, governed through a data sharing agreement between both ministries. By doing so, the MOH will have access to community death notification data for its own use, including the necessary information to follow up on community deaths with an automated VA. While this remains a long-term goal, in the interim, a copy of the paper-based DNF completed by the village chiefs will need to be sent to the closest health facility. For health facilities with the capacity to directly enter the data into DHIS2, data entry will occur at the facility level. For health facilities without this capacity, notification forms will need to be physically sent to the District Health Office where data entry into DHIS2 will be carried out. Health facility staff will also need to retain sufficient information to follow the death with an automated VA during outreach visits, which are expected to take place on a quarterly basis to each village (see **Figure 2**). A detailed process flow map is included in **Annex 3.**

The success of this strategy is contingent on a high reporting rate of deaths to the village chief. In order to verify whether this is occurring, the MOH will conduct a house-to-house census which collects death data, among other information. In selected districts, the number of deaths obtained from this census and the number reported to village chiefs could be compared in selected districts to verify the completeness of death reporting to the village chiefs.

Figure 2: Proposed strategy to strengthen death notification for community deaths followed by automated Verbal Autopsies

CRVS Fellowship reports and profiles
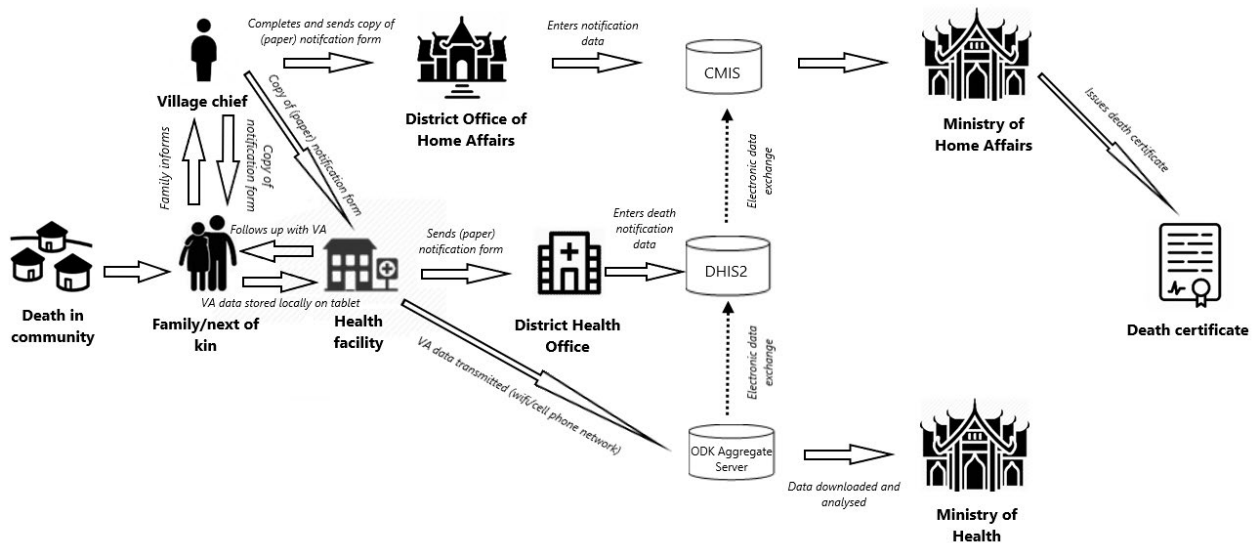
Filling of death notification form by the village chief

Once a family has notified the fact of death to the village chief and the fact of death has been verified, the DNF should be completed in triplicate colour-coded carbonised forms. One copy should be transmitted to the DOHA, one form to the closest government health facility, and one to the relatives of the deceased. The DNF will include the following essential components:

- Unique identification (ID) record number (each DNF will contain a serial number to use in the absence of a unique personal ID)
- Demographic details of the deceased (for statistical purposes)
- Relevant details of the death event (these should closely follow WHO standards)
- Details of the person notifying the authorities of the death event (i.e. the declarant or informant). This also includes information to follow up with VA.

CMIS access will be provided to DOHA staff who will enter the data into the CMIS for formal registration and certification. The copy received by the health facility will either be used to enter required information into DHIS2 or be transmitted to the DHO for entry into DHIS2. The unique record number will be used to link to data from VAs. Health facility staff will also retain necessary information to carry out an automated VA for the notified death.

Strategy 2: Piloting automated verbal autopsies in selected districts to generate cause of death for deaths without a cause of death certificate

Each village in Laos belongs to the catchment of either a health centre (HC) or a district hospital (DH). Once the village chief completes a death notification form and sends a copy of the same to the closest health facility, the health workers from the DH or HC will then conduct a VA within 90 days of the death. The VA needs to have the same unique number as the DNF in order to link the records. Currently, DH and HC staff conduct routine quarterly outreach visits to every village further than five kilometers away from a health facility.[15] This is an opportune time to also conduct VAs for all deaths reported from these villages. For a death reported from a village within five kilometers of the health facility, the health workers from the DH or HC could carry out the VA at any time of their convenience, between four and 12 weeks after death. This timeframe provides sufficient mourning time for the family of the deceased, within a window to ensure accuracy of symptom recall (which becomes increasingly impacted from twelve weeks).[16]

Given the geographical context of Laos, some villages are remote and difficult to reach, and subsequently do not regularly receive outreach visits. Conducting automated VAs for deaths from such villages is a possible challenge, however, it is not expected that 100 per cent of community deaths within the catchment area for this pilot will have a VA performed. Rather, a target of 80 to 90 per cent of causes diagnosed using VA is acceptable.

Selecting districts for piloting automated verbal autopsies

Initially, as this strategy will be tested as a proof of concept, just three districts will be selected to pilot automated VA. Given the wide geographical disparities seen in health across Laos, it is proposed to choose one district from the northern, central and southern regions of the country for the pilot. Districts which have an average population, where a sufficient number of deaths are expected to occur, and which are relatively easy to access, will be chosen for the initial pilot phase. **Figure 3** shows the three regions with the expected number of deaths in each district.

Figure 3: Map of the Northern, Central and Southern regions with the estimated number of deaths by district

Number of VAs to be administered

With 18 provinces and 148 districts in the country, on average, each district experiences approximately 28 deaths per month (estimating 50 000 deaths in the country across 148 districts in 12 months) (see **Annex 4**). On average, there are eight DHs and HCs in each district (135 DHs and 1055 HCs across 148 districts), with each facility needing to complete three to four VAs per month from their catchment villages. 30 tablet computers will be required to pilot automated VA across the three districts for each health facility to have one tablet for its exclusive use.

Scope for carrying out automated VA for different categories of deaths is shown in **Figure 4**, although this strategy primarily focuses only on deaths occurring outside of health facilities.

Figure 4: Scope of verbal autopsies in Lao PDR
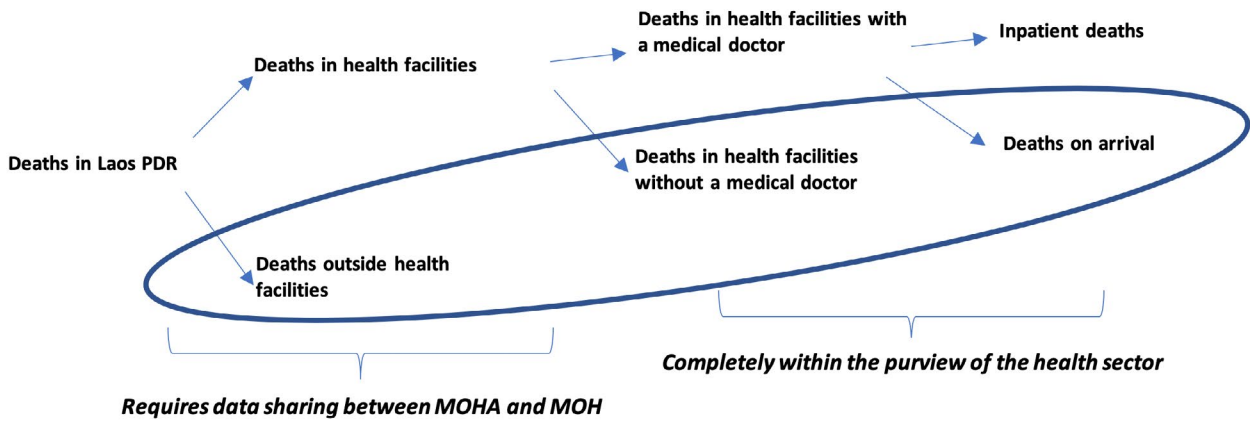
Choice of automated VA instrument

With cost-effective mobile devices increasingly being used for field data collection, several VA instruments are now available on tablet devices, including the two most widely used automated VA instruments; SmartVA and the WHO 2016 Verbal Autopsy Instrument.

Owing to Lao being the only and most widely spoken language in the country, the VA instruments will need to be translated. This needs to be done through a standard step-by-step process, which involves forward and backward cognitive testing. The electronic version on tablet devices will be programmed with the translated Lao version of the questionnaire to be used for the interviews.

Staffing and training requirements

Governance and stewardship

At the central level, wider consensus on the strategy to improve death notification between the Departments of Health Care and Rehabilitation, and Planning and Cooperation will be pivotal. The Health Information Unit, under the Department of Planning and Cooperation, will be responsible for overall oversight of data flows and IT support, while the Department of Health Care and Rehabilitation will be responsible for the oversight of health facility staff training, follow-up, and quality assurance. An inter-departmental CRVS working group will need to be established with the Deputy Directors General from both departments as co-chairs to steer CRVS initiatives within the health sector. Additionally, two to three technical staff from both departments will form part of the working group and be required to operationalise the CRVS workplan.

Data collection

At the health facility level, staff conducting outreach will be responsible for ensuring that they receive all DNFs from the village chiefs and that VAs are duly conducted in villages where deaths have occurred. Whilst the responsibility of data collection will be mainly with the health workers in DHs and HCs, regular follow-up will be required to ensure this function is properly supported, particularly at the initial pilot stage. Extensive initial training will be also required, with subsequent follow-up refresher trainings. Supportive supervision will need to be carried out across all levels (central, provincial and district). While support from the district and provincial levels will be mainly operational, the central level will provide overall oversight and hold responsibility for data analysis.

Data quality and management

At the provincial level, the HIS focal persons will follow up with the districts on the quality and completeness of death notifications. They will be responsible for monitoring the data on DHIS2, ensure completeness of death notification data on the system, and confirm that automated VAs are being performed for relevant deaths.

At the district level, the HIS Officer at the DHO will be responsible for entering death notification data into DHIS2 and following up with the district health facilities to ensure that DNFs are received from village chiefs, transmitted to the DHO and receive a VA in the selected pilot districts.

The use of social networking applications, especially WhatsApp, are widely used in Laos. A WhatsApp group could be created which includes automated VA users, and DHO and PHO support staff to be able to maintain constant communications and address issues spontaneously, as well as regularly track progress.

DHIS2 dashboards will be an easy and efficient way to keep track of deaths notified, notification forms received, and the number of VAs carried out. It is proposed that a tracker-based module be developed where death notification data could be entered and, from there, tracked for completion of automated VAs and assignment of a probable COD.

Data analysis and interpretation

Once the automated VAs are administered, the data will be stored on the tablet until there is internet connectivity to transmit the data to an aggregate server, which could either be the server currently hosting DHIS2 or a cloud-based server.

The data will then be downloaded by the statistics unit of the MOH and analysed using standard analysis tools such as SmartVA-Analyze which processes the VA interviews, assigns a probable COD and computes cause specific mortality fractions (CSMF). This will allow the leading causes of community deaths to be ascertained. The probable COD could also be assigned to the death record on DHIS2 using the unique record ID.

In order to periodically assess the plausibility and quality of the VA data, an automated tool developed by the University of Melbourne known as the Verbal Autopsy Interpretation, Performance and Evaluation Resource (VIPER) will be used.[15] Depending on the number of automated VAs conducted, CSMFs can be stratified by age, sex and district, with interpretation of the data carried out carefully according to the 'Guidelines for interpreting verbal autopsy data' document.[16]

Coordination between the MOHA and MOH

The National CRVS Steering Committee, which is chaired by MOHA and of which the MOH is a key member, needs to be revived and regular steering group meetings need to be held to continuously review progress. There is mutual benefit for both ministries in sharing data on births and deaths, a process which will need to be facilitated through a Memorandum of Understanding. It is anticipated that this agreement will include the arrangement of village chiefs sharing a copy of the completed DNF with the closest health facility, as well as health facilities sharing DNFs completed electronically with the MOHA.

Capacity building

Capacity building at various levels will be essential to sustain the strengthening of death notification and piloting of automated VA in selected districts. **Table 1** outlines the initial training required to begin implementing this strategy, conducted by a core joint CRVS strengthening team from the DPC and the Department of Healthcare and Rehabilitation (DHR). Subsequent refresher trainings will be required on an ongoing basis.

---

15   The University of Melbourne. Verbal Autopsy Interpretation, Performance and Evaluation Research (VIPER). 2020. Available at: https://crvsgateway.info/VIPER
16   The University of Melbourne. Guidelines for interpreting verbal autopsy data. 2020. Available at: https://crvsgateway.info/file/15478/3231

Table 1: Initial training requirements at the central, provincial, district and health facility levels

Training required	Central level	Provincial level	District level	Health facility level
Automated verbal autopsy (VA) instrument	Two to three personnel at the DHR			Health facility staff who conduct routine outreach
IT support for automated VA tool installation, uploading data to aggregate server, ODK Briefcase and SmartVA-Analyze	Two to three personnel at the Health Information Unit/DPC	Health Information Systems (HIS) focal person for backstopping support	HIS focal person to support health facilities	
Analysis and compilation of cause of death (COD) statistics	Two to three personnel at the Statistics Unit/Department of Planning and Coordination (DPC)			
Interpreting verbal autopsy cause of death using an electronic tool	Two to three personnel at the Statistics Unit/Department of Planning and Coordination (DPC)			
Data entry of death notification data on DHIS2			HIS focal person to be provided brief introduction	Health facility staff to be trained in the event of health facilities reporting directly on DHIS2

CRVS Fellowship reports and profiles

CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01   13

Discussion

Although the responsibility for increasing community death notification lies with the MOHA, this strategy seeks to ensure that there is a clear data sharing mechanism with the MOH in order to be able to collect and generate useful COD statistics. This will require good coordination between the two ministries, a data sharing agreement, and a clear plan to improve notification and generate COD statistics generated through automated VAs.

This report has detailed a draft strategy useful to improve COD statistics in Lao PDR.

Risks and assumptions

The success of this strategy is contingent on:

- The success and timeliness of the MOHA in rolling out the death notification form to all village chiefs
- The assumption that death notification completeness by village chiefs is high
- The MOHA agreeing to share copies of DNFs with the MOH
- Health workers having sufficient time to complete VAs while on integrated outreach visits.

Following implementation, this strategy will need to be evaluated and reviewed.

Expected outcomes

The proposed pilot will test whether the implementation of the notification and automated VA strategy in selected districts results in increased notification of deaths to the health sector and generation of improved mortality statistics. Results from the pilot can then be used as a proof of concept for further government action.

Key output indicators to be evaluated at the end of the pilot include:

- Functional coordination mechanism between different stakeholders established
- Processes and data flows are taking place as per the strategy, resulting in the required output
- VA is endorsed by the MOH as the official strategy for ascertaining probable CODs for community deaths
- Tools for automated VA are customised to local context including the VA questionnaire, the interviewer manual and standard operating procedures
- Supportive supervisory system established to ensure sustainability
- Staff capacity sufficiently built at all levels to sustain the initiative
- Sufficient number of community deaths are being notified to the health sector and verbal autopsies conducted for a sufficient number of those deaths
- The MOH has built sufficient capacity to analyse automated VA data and generate mortality statistics for health policy.

CRVS Fellowship reports and profiles

14   CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01

Annex 1 – 2018 Family Registration Law (for death registration)

The 2018 Family Registration law requires every death to be registered before burial

Article 20

When a person dies in a hospital or health care facility, the facility shall issue the death notification form within five business days of the date of death, and the family representative shall notify the village administrative authority before registering the death.

If a person dies outside a hospital or health care facility, such as at home or in the rice fields, the family representative shall notify the village administrative authority where the person died within five official days of the date of death.

Any professional who has provided health care or assisted in child birth and the person or child dies, the professional shall issue a death notification form.

Any person who has found a dead body shall notify the village administrative authority and a police officer in the nearest village, town, or city.

The village chief shall issue a death notification form within five days of notification of death. If the cause of the death is unclear or was from a communicable disease, the village chief shall notify a public health officer or a police officer immediately and suspend issuance of the death notification form until the officer reaches a conclusion regarding cause of death.

If the person who died is an alien, foreigner, or stateless person, the police officer shall immediately notify the Ministry of Foreign Affairs.

After receiving the notification of death, within 15 days, the family representative shall notify the Office of Home Affairs in the district where the family representative resides or is temporarily staying.

If the person who died has no relatives, the representative of the agency, organization, or similar person shall proceed to the death registration.
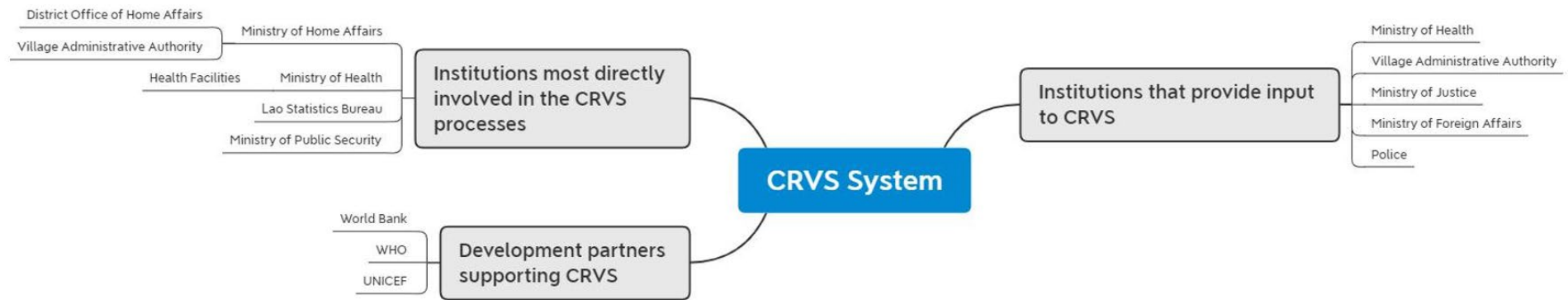
Article 21 (Amended)

Notification of Death According to Court Decision: If a person is declared dead in a court decision, the family representative shall notify the Office of Home Affairs in the district where the person resided or was temporarily staying within five business days of receipt of the court decision.

Article 22 (New) Registration of Death: Registration of death is important for the transfer of the inheritance, including the collection of information on the death of citizens.

The Office of Home Affairs shall process the death registration in the district where the person lived or the registration unit of the overseas representative office of Lao PDR, which shall record the death notification in the family registration book and the electronic database and shall issue a death certificate within five business days of receiving the death notification.
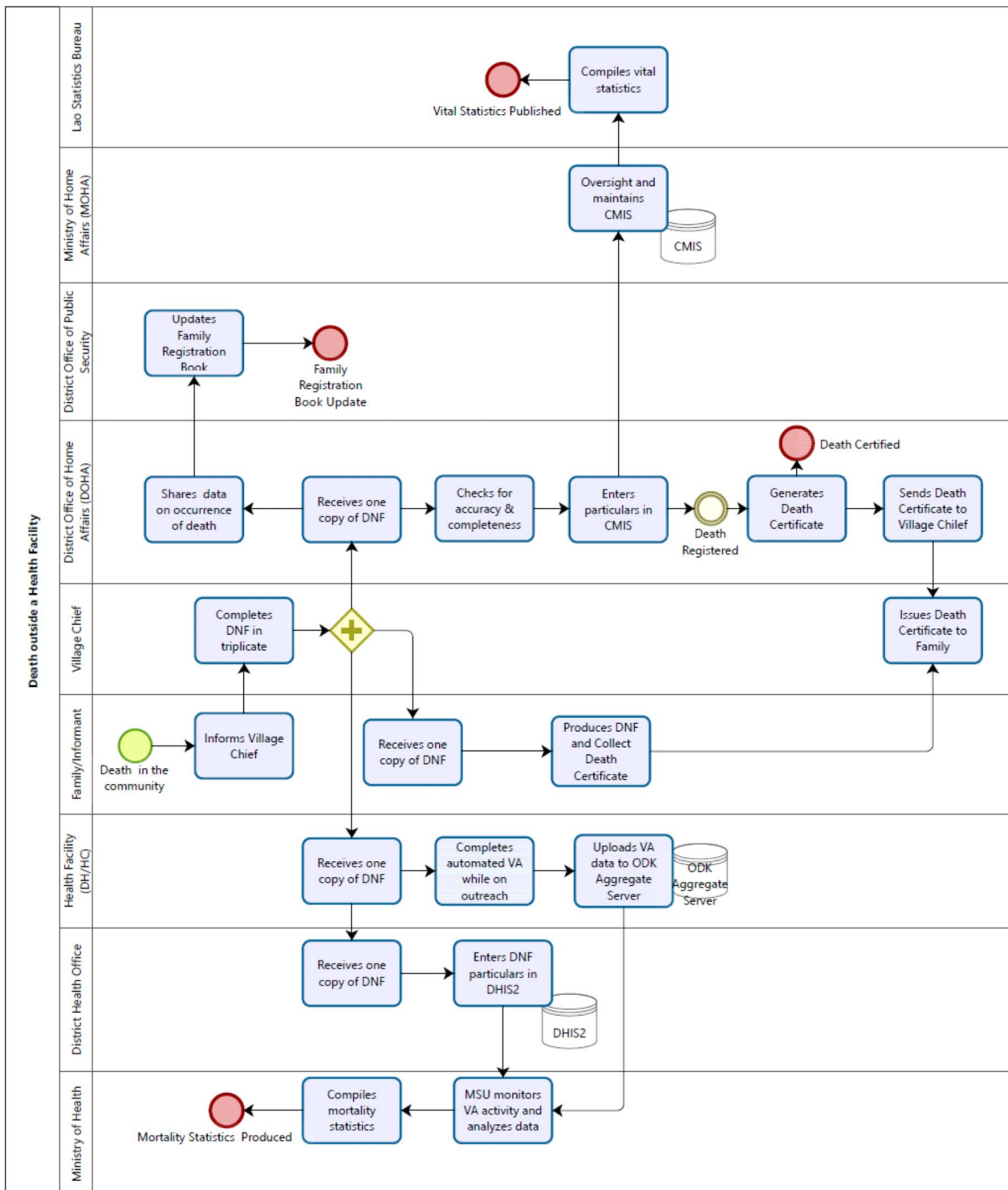
After receiving a death certificate, it shall notify the Headquarters of Public Security in the district where the person who died is registered so that they can change the family registration book.

CRVS Fellowship reports and profiles

CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01   15

Annex 2: Stakeholder map of the CRVS system in Lao PDR

Annex 3 - Business process map for the proposed strategy for notification, registration and certification of deaths in communities

CRVS Fellowship reports and profiles

CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01   17

Annex 4 - Estimating the crude death rate for Lao PDR by using data from 2015 Census

The below estimates were produced using the 'Adair-Lopez' method, developed at the University of Melbourne.[15]

Data inputs	Both sexes	Males	Females
Deaths	27,083	17,507	9,576
Mid-year population	6,492,228	3,237,458	3,237,458
Registered CDR (per 1000)	4.17	5.41	2.96
Registered CDR (per 1000) squared	17.40	29.24	8.75
% population 65+	4.24%	3.94%	4.56%
True under-five mortality rate	0.05357	0.05866	0.04823
In (under-five mortality rate)	-2.93	-2.84	-3.03

Model 2	Both sexes	Males	Females
Model equation	0.5833	0.901	0.160
Predicted completeness	**64.2%**	**71.1%**	**54.0%**

*Given that the "Registered under five mortality rate" is not available for Lao PDR, only estimates computed in Model 2, which is not dependent on this parameter, could be calculated.

The estimate using this method suggest a completeness of 64.2per cent for the 27,083 deaths reported at the 2015 census.

This would mean that the total deaths in 2015 should have been approximately 42,185.

42,185 deaths among a population of 6,492,228 would compute to a Crude Death Rate of 6.5 deaths per 1,000 population.

If 27,083 deaths amounts to 64.1 per cent of all deaths, the total estimated deaths would be – 42,185.

Hence the estimated crude death rate would be – 6.5 per 1,000 population.

CRVS Fellowship reports and profiles

18   CRVS Fellowship report: A strategy to improve death notification and community cause of death information in Lao PDR | Version 0820-01

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:

For more information contact:

CRVS-info@unimelb.edu.au
crvsgateway.info

unimelb.edu.au