Sample Vital Registration with Verbal Autopsy (SAVVY): An Overview

This overview booklet describes the rationale, methods, outputs, and uses of a sample vital registration system (SRS) that includes active follow-up of deaths in the community to determine their likely causes.

This system is called Sample Vital Registration with Verbal AutopsY, or SAVVY.

Taking Action to Improve Vital Statistics

Accurate statistics on births, deaths, and the causes of death generated by a well functioning vital statistics system are the foundation of rational health and public policy. Yet these are lacking for the vast majority of the world's poorest countries. In sub-Saharan Africa, for example, fewer than 10 countries have routine vital statistics systems that produce usable data. In particular, data on both the number and causes of death in developing countries are virtually non-existent. Reliable data on levels of adult death - let alone causes of death - simply do not exist for the majority of developing countries, where a large majority of deaths occur at home. Mortality estimates, particularly for adults, that are patched together and modeled from limited sources of information have not provided an adequate foundation for setting health sector priorities or for assessing program progress and impact.

The objective is to move from a situation in which knowledge of most events that take place in communities and households is lost (represented in Figure 1), to one in which information about those vital events is brought into the health information system (Figure 2).

While the preferred, long-range goal for vital events data is to achieve civil registration of births and deaths and medical certification of causes of death with high and representative coverage, it is widely accepted that attaining this objective for most countries is far in the future. Given the present inadequacies of current knowledge, what are the best ways to measure and monitor vital events and related socio-demographic information in the short- to medium-term?



Figure1. Current state of vital events information in most low income countries.



for use in national planning and development.

There are a variety of recommendations endorsed by the international community, including through the Health Metrics Network. While they cannot substitute for universal civil registration, complementary methods for vital events measurement such as those contained in the SAVVY library can fill this crucial void in the public health evidence base. The implementation of these methods should contribute to the goal of moving from a situation in which no reliable routinely collected vital statistics exist to a long-term goal of having vital statistics derived from civil registration with high coverage and reliable cause of death attribution.

This resource library provides all the necessary reference materials to establish a complete system capable of generating nationally representative vital events information, including information on causes of death, or strengthening existing sources of data. All materials included are the product of extensive field application and expert review, and are consistent with agreed international standards and best-practice.

What is a SAVVY Sample Registration System?

SAVVY stands for SAmple Vital Registration with Verbal AutopsY. The SAVVY resource library is a series of best practice manuals and methods for improving the quality of vital statistics where high coverage of civil registration and good cause of death data are not available. SAVVY methods are integrated into the Health Metrics Network's vision of "stepping stones" to better vital events monitoring, and are entirely harmonized to the WHO International Classification of Diseases (ICD).

SAVVY can be implemented in many ways. It can be put into operation as a complete system or, in many cases, specific SAVVY methods might be effectively implemented in various combinations or on their own. When implemented as a complete system, SAVVY can provide nationally representative vital statistics, including information about levels and causes of death which are not available from other sources. Other options include, for example, adapting the cause-specific mortality methods for use in stand-alone a data collection exercise, such as a household survey or post-census follow-up of reported deaths. Another potential use of SAVVY methodologies is to augment existing facility-based or administrative data sources. SAVVY includes resources to implement the following:

- **Demographic surveillance system (DSS)** DSS is a complete and continuous enumeration of births, deaths, and migration in a geographically defined population.
- Mortality surveillance system (MSS) MSS consists of the active reporting of deaths in a geographically defined population. Verbal autopsy (VA) interviews are used to determine the probable causes of death.
- **Death Certification and ICD Coding** This involves application of the tenth revision of the International Classification of Diseases (ICD-10) and WHO-approved procedures to certify deaths from verbal autopsy interviews and assign a probable cause of death.
- Nested surveys Nested surveys consist of focused sets of questions and are included in the census update rounds. Examples include surveys on poverty monitoring, reproductive health, health service coverage, and environmental and behavioral risk factors.

In establishing a full SAVVY system (shown in Figure 3), the first step is to select and define representative sample areas. Then a complete baseline census is conducted of all households and residents in those areas. The census information on the residents of each sample area is updated annually. Following the baseline census and continuously thereafter, a key informant notifies a verbal autopsy interviewer of all deaths occurring in the sample area. The VA interviewer then conducts an interview at the household where that death has occurred.



Figure 3. Chart of SAVVY system.

Most of the people who work to implement SAVVY are selected with community input and participation. The success and sustainability of SAVVY depends upon fostering community participation and ownership.

As part of a national vital statistics strategy, a SAVVY-type system requires a long-term commitment on the part of national and local government and the active participation of a country's national statistics office, ministry of health, civil registration authority, and other relevant partners. It is anticipated that several social sectors will join together to invest in the establishment and support the scale-up and sustained functioning of a SAVVY-type sample vital registration system. Over time, a SAVVY system should augment the civil registration system and can promote behavioral changes that make the registration of births and deaths more locally acceptable.

Manuals and Other Resources

As noted above, there are three phases of data collection that take place in SAVVY representative sample areas. Detailed manuals describing the different roles and responsibilities for all actors involved in these SAVVY system activities are available for translation and adaptation. Training materials, sample forms, job aids, electronic documents, spreadsheets, and software are also available or will be forthcoming.

Central office manuals:

Field office manuals:

Training guides and materials:

Data Processing Manager's Manual SAVVY Budget Manual Verbal Autopsy Certifier and Coder's Manual Census Interviewer's Manual Census Supervisor Coordinator's Manual Census Supervisor's Manual Census Update Interviewer's Manual Field Office Manager's Manual Key Informant's Manual Verbal Autopsy Interviewer's Manual Verbal Autopsy Supervisor's Manual Census Interviewer Training Guide Census Interviewer's Workbook Census Supervisor Training Guide Census Update Interviewer Training Guide Census Update Interviewer's Workbook Key Informant's Training Guide Verbal Autopsy Interviewer Training Guide Verbal Autopsy Supervisor Training Guide

SAVVY Information Outputs and Use

The census and mortality data in SAVVY can be used to produce "indicator packages" for reporting on, monitoring, and evaluating major programs at the national and international level. A fully implemented SAVVY system should also be capable of producing sub-national data. Indicator packages and disease burden profiles can be pre-defined for the needs of each country implementing the system. They include, but are not limited to, indicators for HIV/AIDS, malaria, and tuberculosis programs; child health and survival programs; poverty reduction; and social sector and local government reform. User-friendly reporting software also permits indicators to be produced separately for age, sex, or poverty groupings, and by geographic area.

The production of routine system outputs can be tailored to local planning and budgeting cycles. For example, an annually-updated profile can be produced consisting of:

- the proportion of the mortality burden that can be addressed by specific, locally available, and cost effective interventions;
- information on coverage of health services and use of health services in the period before death;
- 🕅 data on use of maternal or family planning services, and household interventions such as oral rehydration therapy or insecticide treated bed nets;
- fertility and reproductive health data; and
- socio-demographic information including education, occupation, housing conditions, food security and poverty levels.

SAVVY methods for verbal autopsy (including forms, certification, and cause of death assignment and coding) have been developed in collaboration with the WHO. The WHO publication Verbal Autopsy Standards: Ascertaining and Attributing Cause of Death is an essential resource for the application of SAVVY methods. This series of SAVVY mortality surveillance system manuals and guides, together with the WHO verbal autopsy standards publication and other documents, is available at no cost as a CD-ROM resource kit or as documents that can be downloaded from MEASURE Evaluation at:

http://www.cpc.unc.edu/measure/leadership/savvy.html

For more information, please contact:

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