Speakers

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Systems deliverables for SRS:

Essential process maps, Situational assessment

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SRS PROCESS-MAPs TOOLKIT

Essential Process Maps for Sample Registration Systems

A generic, adaptable view of how an SRS works end-to-end

THE CHALLENGE

Untangling the complexity

An SRS spans many actors, data flows and institutional roles — from community-level event identification to national data analysis and use. That complexity makes it hard to define responsibilities, spot gaps, or standardise workflows.

Process map

A simple, structured overview of how the system works end-to-end , a shared picture teams can read, question and improve.

USING THE MAPS

Generic by design meant to be adapted

Not country-specific

A generic representation of SRS operations, not prescriptive. It will vary across and within countries.

High-level by intent

The generic map shows the main flow, not every step, actor or decision point

Varies by context

Pilot vs scale-up, rural vs urban, and differences in resources, institutions and system maturity all shape it.

Use it as: **a reference model · a starting point for adaptation · a tool for discussion & refinement**

THE GENERIC MAP

Five core processes turn an event into usable data

Subprocess 1

Baseline Household Enumeration

Baseline surveillance population established and maintained

Subprocess 2

Event Detection and Notification

Event notification recorded

Subprocess 3

Verification and Registration

Event verified and recorded in SRS

Subprocess 4

Verbal Autopsy / Cause of Death Determination

Probable cause of death assigned

Subprocess 5

Data Management, Reporting and Use

Data analyzed and used for decision-making

MILESTONE (KEY OUTPUT)

Surveillance population established	Event notification recorded	Event verified & registered	Probable cause of death assigned	Data analysed & used for decisions

HOW THE MAPS ARE ORGANISED

Three types of processes

Core processes

The main flow through which a vital event is transformed into usable data, from occurrence in the community to analysis and reporting.

Support processes

The operational and technical foundation required for the system to function, including training, tools, logistics, systems, and community engagement.

Management processes

The oversight, coordination, monitoring, quality assurance, and feedback functions that support continuous improvement.

EXPLORE THE MAPS

An interactive, adaptable toolkit

- 5 SRS essential process maps
- Editable .bpm source files (Bizagi Modeler) as supplementary materials
- Interactive web version, the SRS Process Navigator

Practical toolkit · BPMN-based process maps

Essential Process Maps for Sample Registration Systems (SRS)

This toolkit provides generic process maps of essential SRS processes to help users understand, visualize, and structure the workflows involved in implementing and operating a Sample Registration System.

The maps are intended to make complex SRS operations easier to discuss and adapt. They show how vital events move from community-level identification through verification, registration, cause-of-death determination, data management, reporting, and use.

Open the process navigator

TOOLKIT CONTENTS

What this toolkit includes

Use the maps to explore the SRS workflow from a high-level overview to detailed subprocess guidance.

- **Process navigator** — Clickable subprocess icons leading to detailed BPMN-based maps.
- **Subprocess maps** — Detailed BPMN-based workflows for each process.
- **Operational guidance** — Key activities, support and management processes, and milestones.

EXPLORE SUBPROCESSES

Five essential core subprocesses

Select a subprocess icon to open its detailed map and guidance. Each icon links directly to the corresponding BPMN-based subprocess page in the navigator.

Subprocess 1	Subprocess 2	Subprocess 3	Subprocess 4	Subprocess 5
Baseline Household Enumeration	**Event Detection and Notification**	**Verification and Registration**	**Verbal Autopsy / Cause of Death Determination**	**Data Management, Reporting and Use**
Baseline surveillance population established and maintained	Event notification recorded	Event verified and recorded in SRS	Probable cause of death assigned	Data analyzed and used for decision-making

Toolkit methodology

The process maps were developed using Bizagi Modeler and are grounded in Business Process Management principles. They use BPMN-style workflows to present SRS processes in a standardized, clear, and adaptable format.

- **Core processes** — The main flow through which a vital event is transformed into usable data, from occurrence in the community to analysis and reporting.
- **Support processes** — The operational and technical foundation required for the system to function, including training, tools, logistics, systems, and community engagement.
- **Management processes** — The oversight, coordination, monitoring, quality assurance, and feedback functions that support continuous improvement.

HOW TO USE THE TOOLKIT

Use the maps as a reference model, not a prescription.

The maps are generic and not country-specific. They can be used as a starting point for adaptation, a discussion tool during workshops, or a structure for refining SRS workflows based on local institutional arrangements, resources, geography, and system maturity.

BPMN guide

The maps use common Business Process Model and Notation symbols to show where a process starts and ends, what activities occur, where decisions or parallel paths are used, and how the workflow moves from one step to the next.

- **Start event** — Where the process begins.
- **End event** — Where the process ends.
- **Task / activity** — A step or action performed in the process.
- **Exclusive gateway** — An empty diamond showing a decision point where one path is selected.
- **Parallel gateway** — A diamond with a plus sign showing paths that run in parallel or join after all incoming paths complete.
- **Sequence flow** — The direction and order of activities.

BPMN symbols follow standard notation. The maps in this toolkit were developed using Process Modelling Software - Bizagi Modeler | Bizagi.

Go to the interactive navigator

Select a subprocess to view its map, guidance text, practical notes, support and management processes, and milestone.

Open navigator

NAVIGATOR

Subprocesses

Search processes...

1. **Baseline Enumeration** — Baseline surveillance population established and maintained
2. **Event Notification** — Event notification recorded
3. **Verification** — Event verified and recorded in SRS
4. **Verbal Autopsy** — Probable cause of death assigned
5. **Data Use** — Data analyzed and used for decision-making

Process navigator

Select a subprocess on the left to view the detailed map and guidance.

Homepage | Save page as PDF

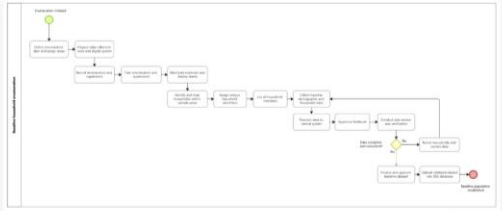
SUBPROCESS 1

Baseline Household Enumeration

This core process establishes the baseline surveillance population within selected sample areas, forming the foundation for continuous monitoring of vital events.

Figure 2. Baseline household enumeration generic process map

Map size | Show large map | Large view | Save map as PDF | Save map as PNG | Save map as BPM file



The BPM map is shown large for readability. Use the map size control, horizontal scroll, or Large view.

Core process guidance

Process description

The process involves identifying, listing, and documenting households within defined sample areas. It includes the collection of baseline demographic and household information necessary for surveillance.

Field activities are preceded by preparation steps such as tool configuration, team training, review of available population data sources, and logistical planning. Household listing and data collection are conducted systematically across all selected areas either to create a new baseline population frame or to verify and update an existing one.

Data are reviewed and validated to ensure completeness and accuracy. Where gaps or inconsistencies are identified, corrective actions such as revisits, data linkages, boundary checks, or data updates are undertaken. The finalized dataset is then integrated into the SRS system.

The baseline surveillance population should be maintained through regular updates, such as annual or periodic updates, to reflect demographic changes. These updates should include adding births and in-migrations and removing or marking deaths and out-migrations, ensuring that the surveillance population remains current over time.

Key activities

1. Prepare tools, teams, logistics, and review available population data sources
2. Create a new baseline population frame or verify and update an existing one
3. Review data for completeness and accuracy
4. Resolve gaps through revisits, data reconciliation, boundary checks, or record updates
5. Integrate the finalized dataset into the SRS system
6. Maintain the baseline through periodic updates for births, deaths, in-migration, and out-migration

MILESTONE / KEY OUTPUT

Baseline surveillance population established and maintained

Practical note

Depending on the country context and data availability, the baseline surveillance population may be established through a new household enumeration or by using a recent census or existing population register. Existing sources should be used only where they are sufficiently up to date, complete, and aligned with the SRS sample-area boundaries. Where a primary health care or other local population register exists, it may be used to cross-check the SRS baseline and resolve major discrepancies.

Support processes

Support processes such as training, logistics, and digital data collection tools are integrated into field operations. Support processes may also include access to census data, population register data, and coordination with primary health care or other administrative authorities.

Management processes

Management processes including supervision, monitoring, and quality assurance are applied throughout data collection and validation to ensure completeness and reliability.

CROSS-COUNTRY SYNTHESIS · SIX MORTALITY INFORMATION ECOSYSTEMS

Situational Assessments to Inform Sample Registration System Planning

Cross-country insights from six mortality information ecosystems

Senegal, Mali, Ghana, Kenya, Tanzania and Pakistan

Swiss TPH

SRS
is not a stand-alone fix,

it's part of a wider ecosystem

Incomplete CRVS

Deaths underreported , especially those occurring outside health facilities.

Weak cause-of-death data

Medically certified causes of death are limited and unevenly available.

Fragmented alternatives

Surveys, censuses, surveillance & disease platforms are infrequent and not interoperable.

WHAT WE DID

Six countries assessed their mortality information systems

- Senegal
- Kenya
- Pakistan
- Mali
- Tanzania
- Ghana

METHODS

A common, document-based qualitative synthesis

Qualitative, document-based synthesis inductive & interpretive thematic approach
Data collected across 2024–2025 using a shared approach, adapted to each country's context.

Key informant interviews
Ministries of health, CRVS authorities, statistics offices, surveillance units & partners

Stakeholder workshops
Validate emerging findings, identify system gaps, set priorities for strengthening

Field visits
Health facilities, civil registration offices & other reporting points

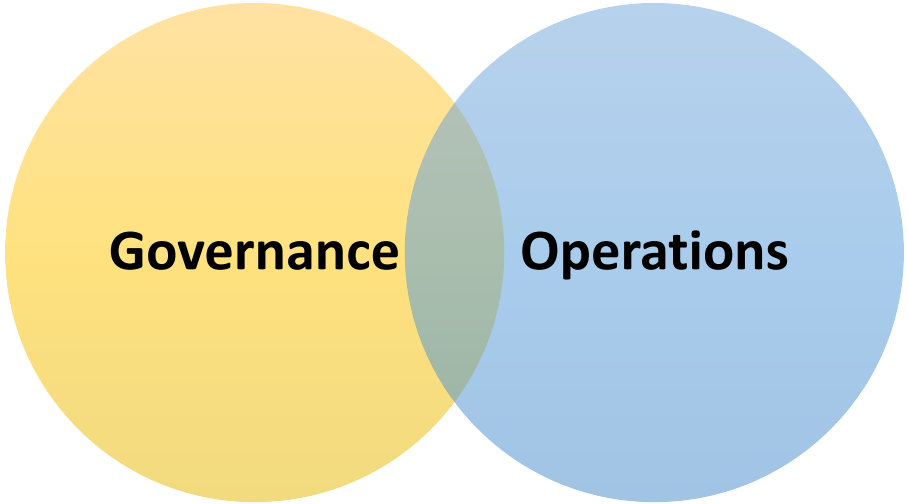
Document review
Laws & policies, CRVS strategies, HIS documentation & guidelines

CROSS-COUNTRY SYNTHESIS

1 Extract country-level findings → 2 Compare patterns across countries → 3 Interpret for SRS design

FINDINGS

Findings converged on two domains



Synthesizing lessons learned from situational assessment across 6 countries to inform global recommendations.

DOMAIN 1 · GOVERNANCE

Legal & institutional foundations

All six have death-registration laws, but they focus on formal registration — weakly enforced and often silent on community and non-medical actors.

Distributed responsibilities

Mandates split across many agencies; no single institution owns the full pathway from death to data use.

Health–CRVS fragmentation

Facilities certify deaths; registries hold the legal record — but routine, institutionalised linkage between them is weak.

Data governance & interoperability

Few clear protocols for data sharing, linkage, protection, joint analysis or ownership of mortality outputs.

Financing & sustainability

Recognised as important, yet reliant on external funding and vulnerable to donor and macroeconomic shifts.

The recurring gap: *not the absence of laws, but their limited translation into working roles and processes.*

DOMAIN 2 · OPERATIONS

Information architecture

Many sources, no coherent architecture. Deaths are recorded somewhere but not consolidated into complete national statistics.

Death notification

Passive and family-initiated. Community actors often know first but aren't formalised; geography & socio-cultural norms add barriers.

Death notification

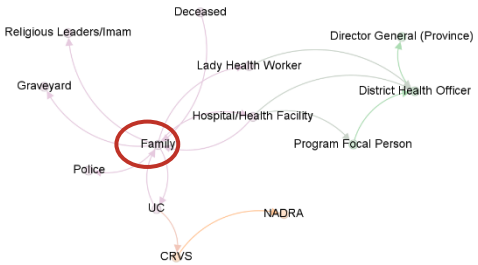
Domain: Operations

- **Families** and **informal actors** are **central**
- Reliance on families as the primary information brokers creates a **structural vulnerability**

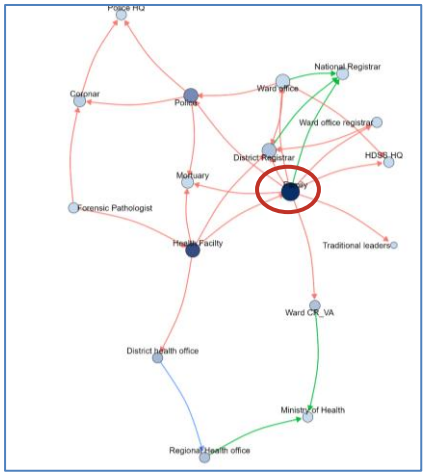
→*Notification remains one of the weakest links*

Families as Gatekeepers

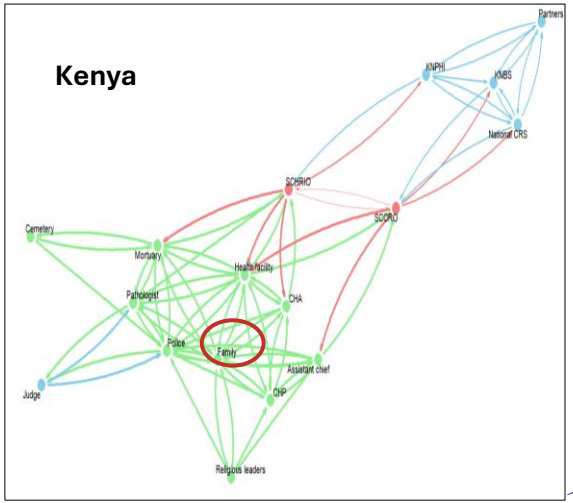
Pakistan



Tanzania



Kenya



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DOMAIN 2 · OPERATIONS

Data exist somewhere, but don't move into national statistics

Information architecture

Many sources, no coherent architecture. Deaths are recorded somewhere but not consolidated into complete national statistics.

Death notification

Passive and family-initiated. Community actors often know first but aren't formalised; geography & socio-cultural norms add barriers.

Data quality assurance

Incomplete — especially for community deaths and cause of death. QA is program-specific, not system-wide, with little feedback to reporters.

System capacity

Gaps in staff, skills, digital readiness and supervision — uneven across rural, remote & conflict settings.

THE CENTRAL INSIGHT

The problem is not the absence of data sources , it's the weak connections between them.

Mortality information is distributed across health, civil registration, community, administrative, statistical and medico-legal systems — but these do not form a continuous pathway from death occurrence to usable mortality statistics.

WHAT THIS MEANS FOR SRS

Design SRS for system fit , not as a parallel channel

A complementary component

Build on existing workflows and institutional relationships. Designed in isolation, SRS duplicates effort; designed for fit, it connects sources.

Context-sensitive by design

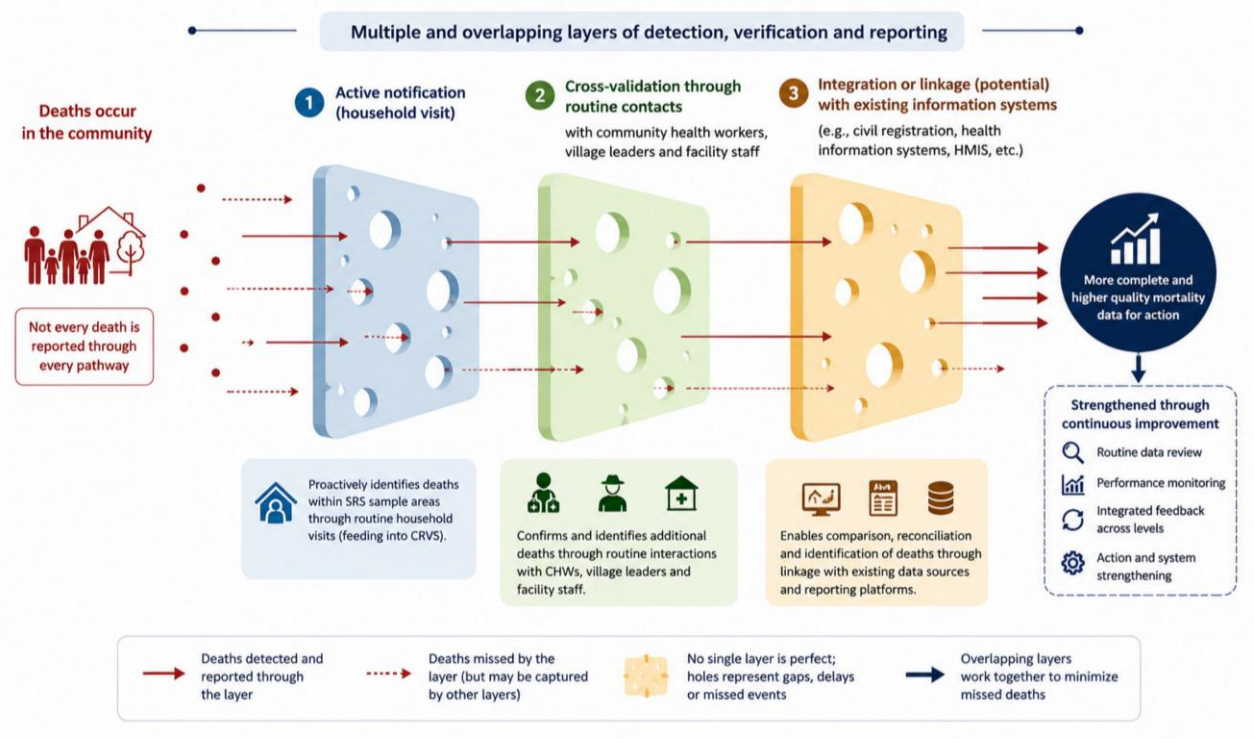
Geography, burial norms, stigma and public perceptions shape whether deaths are notified — treat these as design inputs, not background.

Fit-for-context cause of death

Choose MCCD, verbal autopsy or MITS by feasibility, acceptability and linkability — as a workflow, not a single default method.

A LAYERED APPROACH

Overlapping layers reduce the chance a death is missed



No single layer catches every death — but overlapping layers collectively close the gaps. (the "Swiss-cheese model")

CONCLUSION

Start with the ecosystem, then design SRS to fit

Gaps are about pathways, not just the outcome

Fragmented flows, weak community roles, limited cause-of-death and uneven capacity.

SRS adds most value as a complement

Part of existing health, CRVS, demographic & community systems , not a parallel one.

A systems-oriented approach is feasible

Build on existing assets and connect what each system already captures.

Each country can design SRS to fit

Country teams can use their own assessment findings as the system inputs for tailoring SRS to their context.

SITUATIONAL ASSESSMENT → SRS DESIGN

Findings become the inputs for SRS design

- → Existing assets & capacity
- → Contextual factors
- → Notification pathways
- → Source linkage
- → Cause-of-death workflows
- → Feedback & data use

With thanks to all whose work made this synthesis possible:

- Country teams in Senegal, Mali, Ghana, Kenya, Tanzania and Pakistan
- All Technical Assistance partners
- Gates foundation

Thank you for your attention

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