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RESEARCH ARTICLE

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# Ethical and emotional complexity of verbal autopsy implementation in South Africa: a preliminary trauma-informed practice framework

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## ABSTRACT

**Background:** Verbal autopsy (VA) is used in mortality surveillance and civil registration where deaths lack medical certification. Its ethical, emotional, and cultural challenges are recognised, but less is known about implementer experiences and organisational responses.

**Objectives:** To examine ethical and emotional challenges among those implementing and supervising VA across settings, identify available supports, and develop a preliminary trauma-informed practice framework.

**Methods:** We interviewed 13 VA implementers: 8 interviewers and 5 in supervisory, coordination or related roles, across three rural and urban South African Population Research Infrastructure Network (SAPRIN) nodes. Rapid qualitative analysis explored experiences and supports across roles and sites.

**Results:** Interviewers described repeated exposure to grief and traumatic deaths, guilt about prompting distress among bereaved respondents, and emotional impacts that extended into personal lives. Participants reported ethical tensions when they were unable to address bereaved households' needs and divergent views on respondent compensation. Supervisors described emotional demands arising from previous frontline experience together with responsibilities for supporting teams. Supports ranged from informal peer and supervisory discussions to structured debriefing and counselling with varied views on availability and adequacy. Drawing on implementer experiences and trauma-informed principles, we developed a preliminary framework outlining actions and organisational responsibilities to support VA implementers' wellbeing and the safe, respectful conduct of interviews with bereaved respondents.

**Conclusions:** The ethical and emotional demands of VA warrant organisational responses to support interviewer and supervisor wellbeing, alongside measures to protect bereaved respondents and ensure respectful interviewing. The framework requires refinement with bereaved respondents and communities, and testing in other settings.

## PAPER CONTEXT

- **Main findings**: VA implementers at three South African surveillance nodes described emotionally demanding and ethically complex work. Interviewers described direct emotional exposure, while supervisors reported emotional demands associated with previous frontline experience and their current responsibilities for supporting teams. Supports varied from informal peer and supervisory support to more structured debriefing and counselling.
- **Added knowledge**: This study identifies how these problems are distributed, sustained and potentially addressed across a VA implementation system. Extending research that has focused on interviewer-respondent encounters, our study shows that the emotional and ethical burdens of VA are distributed across roles and unevenly supported, and proposes a preliminary trauma-informed practice framework grounded in implementer experiences.
- **Global health impact for policy and action**: As VA expands within mortality surveillance and civil registration, institutions, funders and ethics committees should plan and budget for routine support for VA staff, so that mortality evidence is not produced at their expense.

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## Background

Verbal autopsy (VA) is an essential component of mortality surveillance where deaths occur outside health facilities or without medical certification. VA collects information on symptoms, signs, and circumstances before death through structured interviews with relatives or caregivers of the deceased, from which probable causes of death are assigned. As countries strengthen mortality surveillance and civil registration and vital statistics (CRVS) systems, VA has become an important source of population-level cause-of-death information for otherwise under-represented populations. Digital data collection, automated coding, and mobile technologies have increased the feasibility of implementing VA at scale [1].

A growing body of research has examined the ethical, emotional, and social dimensions of VA. Studies have highlighted cultural sensitivities around bereavement and mourning [2], confidentiality and reciprocity [3], distress among bereaved respondents [4], and emotional and moral distress among interviewers [5]. Research has also examined tensions between the population-level benefits of mortality surveillance and the burdens experienced by respondents and interviewers, particularly where poverty, stigma, and social vulnerability are common: interviewers have reported distress when unable to respond to needs encountered in the field and through repeated exposure to accounts of illness and death [5–8]. These findings highlight potential psychosocial occupational risks associated with VA interviewing, although the extent to which these experiences translate into recognised occupational health outcomes, and their implications for staff wellbeing, retention, and surveillance delivery, remain poorly understood.

Previous research has focused primarily on the interviewer–respondent encounter, including protecting bereaved respondents and recognising the ethical and emotional demands on interviewers [2,4,5,9]. However, less is known about how ethical and emotional challenges are experienced across the system in different VA implementation and supervisory roles, how organisational support is arranged and experienced in practice, and how implementer experience could inform practice and guidance. These questions are increasingly relevant as VA is integrated into routine mortality surveillance and CRVS systems.

Trauma-informed practice offers a framework for developing responses to these concerns. It recognises the potential effects of trauma and emphasises safety, trustworthiness, peer support, collaboration, empowerment, and cultural responsiveness [10–12]. In research, trauma-informed approaches seek to minimise distress and the risk of re-traumatisation through sensitive communication, informed consent, opportunities to pause or withdraw, and appropriate responses to distress, including referral where needed [13,14]. In VA, re-traumatisation may occur when an encounter reactivates previous traumatic experiences, whether through respondents recalling circumstances surrounding a death or interviewers being reminded of their own experiences of loss or trauma. Interviewers may also experience emotional distress through repeated exposure to others' suffering [2,4,5,9]. Applying trauma-informed principles to VA therefore involves attention to both the interview encounter and the organisational arrangements for supporting staff, including training, supervision, and psychological support.

We examined ethical and emotional dimensions of VA implementation in the South African Population Research Infrastructure Network (SAPRIN), with attention to variation across roles and sites. Our objectives were to: (i) examine ethical and emotional challenges experienced by those who implement and supervise VA; (ii) identify practices used to support implementers and respondents; and (iii) develop a preliminary trauma-informed practice framework for VA programmes.

## Methods

### Study design and setting

We conducted a qualitative exploratory study in SAPRIN, a national network of Health and Demographic Surveillance System (HDSS) nodes that conduct routine mortality surveillance. Three of SAPRIN's seven nodes took part (Figure 1): two rural nodes, the MRC/Wits Agincourt Unit (Mpumalanga) and the Africa Health Research Institute (AHRI) (KwaZulu-Natal), and one urban node, Gauteng Research Triangle-Inspired (Gauteng). The nodes provided a range of epidemiological, geographical, and socio-economic contexts.

### Participant selection and recruitment

The study population comprised staff with current or previous involvement in VA implementation, including interviewing, supervision, coordination, and related community engagement activities. We used purposive sampling to capture variations in role, site, and experience. Eligibility was based on current or previous VA implementation experience (Table 1).

Eligible participants were identified in collaboration with SAPRIN site coordinators, with site managers also assisting at some sites. Research team members approached potential participants directly, providing study information and consent materials at least 72 hr before participation, and allowing time for questions. Participants were assured that participation was

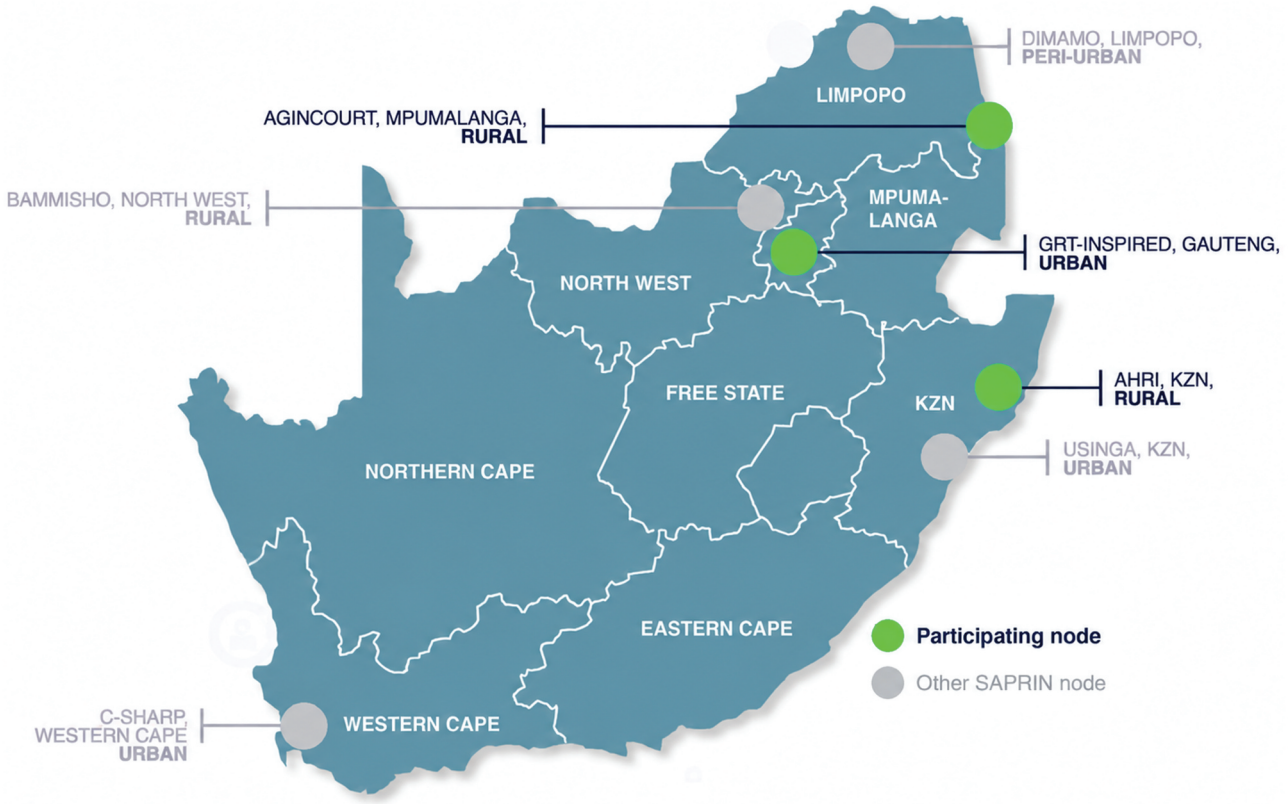


**Figure 1.** SAPRIN nodes with participating nodes (Agincourt, AHRI, GRT-INSPIRED) highlighted (source: SAPRIN https://saprin.mrc.ac.za/).

**Table 1.** Eligibility criteria.

| Inclusion characteristics | Exclusion characteristics |
|---|---|
| • Currently or previously engaged in VA implementation as an interviewer, supervisor, coordinator, or trainer.<br>• At least 6 months' experience conducting or overseeing VA within an HDSS.<br>• Affiliated with a participating SAPRIN node (Agincourt, AHRI, or GRT-INSPIRED).<br>• Provided informed consent for an audio-recorded interview.<br>• Reasonably conversant in English. | • Reasonable possibility of loss to follow-up (eg, inability to commit to the study due to personal or professional obligations).<br>• Holding a senior managerial or policy-making position that creates a conflict of interest with the study.<br>• Involvement in an ongoing disciplinary or ethical investigation related to VA work.<br>• Participation in another research study with overlapping objectives. |

voluntary and would not affect their employment or professional opportunities. None of the interviewers held supervisory authority over the participants they interviewed. Although site managers at some sites were aware of who participated, individual interview accounts were not shared with managers or supervisors outside the research team. No individuals approached by the research team were known to have declined participation, and no participants withdrew.

Data collection and analysis proceeded iteratively, with LD and AH reviewing emerging findings throughout recruitment. LD and AH jointly determined that thematic saturation had been reached when no substantively new themes relevant to the study objectives were generated from successive interviews and stopped recruiting at that point. Thematic saturation was assessed across the dataset as a whole, considering emerging patterns, similarities and differences across roles and sites, rather than establishing saturation separately within each role or site.

## Data collection

Semi-structured interviews were conducted by one male and three female researchers (AH, LD, DS, and PS) between July and October 2025. For GRT-INSPIRED, DS and PS conducted interviews in person in private rooms at the Wits RHI study site, with LD and AH supporting in-person training, data collection and storage, transfer, data entry, and preliminary analysis. The interviews at AHRI and Agincourt were conducted by AH and LD online using secure video conferencing. For the interviews conducted by AH, LD briefly joined to initiate the recording before leaving the call. DS and PS worked at the same institution as some of the GRT-INSPIRED participants. AH had no prior relationships with the individuals he interviewed. LD had longstanding institutional research links with Agincourt but no prior personal or professional relationships with the individuals she interviewed.

We used a semi-structured topic guide (Supplementary Materials 1) that included questions on participants' professional backgrounds and experiences of VA implementation, ethical and emotional challenges, perceived emotional impacts, training and support arrangements, and recommendations for practice. The guide included prompts about trauma-informed approaches and organisational responsibilities for supporting implementers. The topic guide was developed by the research team and pilot-tested internally to refine question wording and sequencing before data collection. Interviews were conducted in English, lasted approximately 45–90 min, and were audio-recorded with consent. Participants were informed that they could pause or stop interviews if necessary. All interviews were subsequently transcribed in full using Microsoft's automated transcription software. Transcripts were checked against the original audio recordings for accuracy and de-identified. No repeat interviews were conducted.

## Data analysis

We used rapid qualitative analysis, adapting the Rapid Research Evaluation and Appraisal Lab (RREAL) approach [15]. Initial analysis drew on structured interview notes and audio recordings. As soon as possible after each interview, the interviewer completed two RREAL sheets: one summarising substantive content aligned to topic guide domains, and a second capturing researcher reflections on the interview process, study participant wellbeing, and suggested refinements in the meaning and sequence of questions. LD compiled the RREAL sheets into a matrix organised by participant and domain to examine within- and between-group patterns. Emerging findings were discussed by the researchers. AH and LD reviewed and refined emerging themes across the study sites, with the wider team contributing to interpretation.

Analysis combined deductive and inductive approaches: the topic guide domains provided the initial analytical structure, with themes developed within and across domains from participants' accounts. Analysis was collaborative, with alternative interpretations considered through team discussion and comparison across participants' accounts. RREAL sheets were managed in Microsoft Word and the analytical matrix in Microsoft Excel. LD reviewed the audio recordings alongside the RREAL summaries and analytical matrix to support interpretation. Illustrative quotations were checked against

the original audio recordings to confirm accuracy and appropriate attribution before inclusion in the manuscript.

To develop the preliminary practice framework, we mapped findings onto the six trauma-informed principles set out by the US Substance Abuse and Mental Health Services Administration (SAMHSA) [16]. From this, we developed proposed actions and responsibilities for VA programmes responding to the issues identified.

### Reflexivity

The team included researchers and practitioners in VA, mortality surveillance, health systems, and implementation research in South Africa, Kenya, and the United Kingdom. Several were involved in VA research, implementation, or supervision within SAPRIN. This provided important contextual knowledge and insight but may also have influenced what participants were willing and comfortable to share, as well as how we interpreted these accounts. Throughout the study, we reflected on how our professional backgrounds, institutional relationships, and commitment to improving VA practice shaped interpretations and outputs.

### Ethical considerations

We conducted the study in accordance with the principles of the Declaration of Helsinki. Ethical approval was obtained from the University of Aberdeen School Ethics Review Board (SERB Ref. 6319648, 29 May 2025) and the University of the Witwatersrand Human Research Ethics Committee (Medical) (HREC Ref. 250613, 14 July 2025). Participants provided written informed consent and were reminded of their right to pause or withdraw without consequence. AH and LD provided training and support to DS and PS in trauma-informed interviewing, as well as data collection, transfer, and analysis. Interview procedures included prompts to recognise and respond to distress, offer breaks, and arrange follow-up support or referral where appropriate. Participants were also reminded not to disclose identifiable information about bereaved respondents or deceased individuals. Interview data were de-identified for analysis and stored on secure, access-restricted institutional systems in accordance with data protection requirements.

## Results

### Participant characteristics

Thirteen VA implementers participated: eight interviewers and five supervisors or coordinators (three supervisors and two participants in coordination or related roles) (Table 2). Five participants were based at the urban GRT-INSPIRED node and eight at the rural nodes of Agincourt ($n = 5$) and AHRI ($n = 3$). Participants brought diverse professional backgrounds, including counselling, psychology, clinical practice, social sciences, and research fieldwork. VA experience ranged from less than 1 year to more than 20 years, and several participants had worked across different implementation roles during their careers.

### Theme 1: emotional exposures for interviewers and supervisors

VA was described as emotionally demanding work, and interviewers described direct and repeated exposure to grief and hardship. Specifics varied by role, experience, and context. Many implementers described balancing empathy with professionalism and feeling guilt when their questions made respondents re-live painful memories.

> "I had to put myself in their shoes. I have to be patient—to understand their emotions. Even though sometimes— I myself get emotional." Interviewer, rural

**Table 2.** Participant characteristics, by VA experience ($n = 13$).

| Role | VA experience (years) | Sex | Training/ background | Context |
|---|---|---|---|---|
| Interviewer | <1 | Female | Counselling | Urban |
| Interviewer | <1 | Female | Psychology/education | Urban |
| Interviewer | 1–5 | Female | Clinical | Urban |
| Interviewer | 1–5 | Male | Counselling | Urban |
| Supervision, coordination or related | 1–5 | Male | Social science | Urban |
| Interviewer | 1–5 | Female | Clinical | Rural |
| Interviewer | 1–5 | Female | Clinical | Rural |
| Supervision, coordination or related | 1–5 | Male | Clinical, academic | Rural |
| Supervision, coordination or related | 1–5 | Male | Counselling/social science | Rural |
| Interviewer | 5–10 | Female | Research fieldwork | Rural |
| Interviewer | >10 | Female | Research fieldwork | Rural |
| Supervision, coordination or related | >10 | Male | Research fieldwork | Rural |
| Supervision, coordination or related | >10 | Female | Research fieldwork; supervisor | Rural |

Note: Roles reflect participants' positions at the time of interview. Professional backgrounds may reflect experience gained in previous roles. To reduce the risk of deductive identification within a small occupational network, some current roles were grouped for reporting.

> "I feel guilty because I'm the one who's asking — those questions that makes him cry." Interviewer, rural

Interviewers commonly held back their own reactions during interviews, so as not to add to respondents' distress, and dealt with them later, often alone. Interviewers described crying after interviews or thinking about respondents long after the visit. Deaths of children, suicides, accidents, violence, and severe poverty were repeatedly described as particularly difficult.

> "Listening to a mother crying for a child—. If it was me, it strains me— you can deal with it, you know, and move on—. But when you get back home, it comes back." Interviewer, rural

Effects extended into personal and home life. A long-serving implementer described years of fearing that deaths she heard about in the field would happen in her own family. One interviewer described discussing her experiences with her husband, who was supportive. Personal circumstances and loss also shaped experiences. An interviewer and a supervisor at one node described how cases resembling close relatives' final illnesses brought back strong memories. The supervisor shared how:

> " … sometimes it take[s] me back to the time where my mother she was fighting for her own life – sometimes it's really, really challenging to – talk about the deaths." Supervisor, rural

Supervisors' emotional exposure was distinct from that of interviewers. Most had previously worked as interviewers, and some described lasting memories of emotionally difficult cases. One supervisor recalled cases that had remained with him for years, including a murder and suicides by hanging. Supervisors also described emotional demands associated with supporting distressed staff, managing difficult household encounters, ensuring fieldworker safety, and meeting surveillance performance targets. We interpreted this as layered emotional exposure, in which previous experiences of frontline interviewing intersected with the ongoing emotional and organisational demands of supervision.

At one rural node, these emotional demands were reported as further shaped by VA staff members' connections to the communities they served. Staff were recruited from local villages and often interviewed neighbours or relatives. One supervisor described how 'it is not easy sometimes … to hear … if you know that person' (Supervisor, rural). Another supervisor reflected:

> "Sometimes we fail to understand that there is a connection between VA data collection and emotional distress that arises just through going through the process." Supervisor, rural

Across roles, participants described impacts as cumulative rather than episodic. One experienced implementer described distress recurring with successive interviews and memories of difficult cases persisting for years; another said that over time she had stopped crying during interviews, although particular deaths continued to affect her.

### *Theme 2: navigating ethical complexity in practice*

Participants described VA as more than simply administering a questionnaire and requiring continuous ethical judgements. Questions about illness, bodily functions, mental health, HIV, or the circumstances of death could feel intrusive, culturally difficult to ask, and not without risk of harm. One interviewer described using probes rather than asking questions directly when interviewing older men about symptoms such as blood in stool but still found these questions uncomfortable. Others described respondents becoming upset or angry. Participants emphasised that successful VA implementation depended on adapting communication styles while preserving the integrity of data collection.

Managing expectations was a common challenge. Participants described expectations of assistance, compensation, or services among bereaved households, particularly where the deceased had been the breadwinner or poverty was severe.

> "You come to them and you talk about the deceased — they [are] asking us: 'what are you going to give us?'" Interviewer, rural

Interviewers described arriving 'with bare hands'. A long-serving participant recalled a respondent describing the questions as 'rubbing salt on my wound' when asked to recount the illness, care seeking, and failures of care. A coordinator recounted a household requesting TB testing for family members as a condition of participation. Beyond referral, staff had little to offer: 'we just say OK, thank you for giving us the information and we don't give anything' (Interviewer, rural).

Participants often identified the social, psychological, or material needs of people in the households they visited. Participants described finding their inability to address these needs particularly difficult. One described interviewing a woman who appeared isolated and hungry, wanting to buy food for herself but being constrained by procedures and relying instead on referral to a social worker. Such encounters generated feelings of guilt and helplessness, particularly in child-headed households and where there was domestic violence, food insecurity, or untreated illness. One experienced interviewer described how staff discussed difficult situations with colleagues and

supervisors but often felt unable to find practical solutions.

There were different views on how programmes should respond. Several participants expressed preferences for a policy of small tokens or payment for bereaved households; others proposed snacks, tissues, or small practical gestures of appreciation. A supervisor explained that the no-payment policy at their node was intended to preserve voluntary participation, and that payment could be seen as 'buying the information' (Supervisor, rural).

Confidentiality and privacy presented further challenges. Interviews often took place in crowded households or close-knit communities where neighbours and relatives could overhear. Participants working in their own communities described tension between professional confidentiality and social familiarity, and some felt confidentiality limited their own ability to talk about difficult cases with colleagues.

Safety concerns were widely reported. Women interviewers described harassment, intimidation, and vulnerability during household visits. One described interviewing a widower living alone who repeatedly propositioned her and tried to prolong the visit after the interview had ended. A coordinator described a previous attempted sexual assault on an interviewer. Participants described ethical practice as extending beyond consent and confidentiality to personal safety, cultural responsiveness, relationship-building, and ongoing judgement in the field.

Interviewing conditions also differed by setting. While staff at one rural node described interviewing people known to them through their communities, urban participants described challenges associated with residential mobility, accessing apartment buildings, and concerns about violence, theft, and mugging in some buildings. Urban interviewers described the use of security escorts during household visits.

> " … you find that you approach the buildings that they are volatile or they are inaccessible in a way that there is violence in the buildings, there is theft or muggings in the buildings. So for our safety, we do move around with the escorts." Interviewer, urban

In navigating these ethical challenges, participants described measures to support bereaved respondents, including flexible scheduling, pausing or rescheduling interviews, explaining the purpose of VA, sensitive communication, and referral to social workers or statutory services where available.

### *Theme 3: support for VA implementers*

Reported support for VA implementers varied between and within nodes (Table 3). At the urban node, participants described initial VA training, peer debriefing after interviews, and line-manager support. Some had access to a psychologist through their employing institution. However, experiences of preparation for and recognition of emotional demands differed. One interviewer reflected:

> " … this is actually the first time that I'm asked, how has it affected you?" Interviewer, urban

At rural node A, participants described access to an in-house psychologist and social worker, monthly debriefing, trauma-informed communication training, and fieldworker safety measures. The coordinator described counselling as available confidentially when needed. However, an interviewer characterised it as

**Table 3.** Support arrangements reported by VA implementers across study nodes.

| Reported arrangement | Rural node A | Rural node B | Urban node |
|---|---|---|---|
| Debriefing | Monthly sessions; informal peer debriefing after interviews | Monthly debriefing described by a coordination participant; daily team debriefing recalled from earlier years; informal supervisory support | Informal peer debriefing after interviews; line-manager support |
| Psychological support | In-house psychologist available by appointment | Six-monthly social worker referrals encouraged by coordination participant; quarterly counselling described in earlier years | Access to a psychologist through an employing institution |
| Referral for respondents | Institutional social worker facilitated referrals to government and social services | Referrals to health and social services described when needed | Referral letters for counselling and other services |
| Safety | Panic buttons; practices including interviewing outside households or in vehicles | Withdrawal from difficult or hostile household encounters | Security personnel accompanying interviewers; reports of violence, theft, and mugging in some apartment buildings. |
| Training on emotional aspects | Annual VA training covering coping and safety; trauma-informed communication training | Emotional preparation described in earlier years | Initial VA training, including role-play exercises addressing respondent distress |

Note: Table summarises arrangements described by interviewed VA implementers, rather than independently verified institutional provisions. Accounts sometimes differed within nodes, and some referred to earlier implementation periods. The inclusion of an arrangement does not imply consistent availability or access for all staff.

optional and underused and called for more regular, scheduled support.

At rural node B, accounts varied markedly. A participant in a coordination role described arrangements including encouraging staff to access social worker counselling every 6 months, monthly debriefing, and an open-door policy. The participant reported that work quality had been maintained and that fewer concerns about staff behaviour had been raised following the strengthening of these arrangements. A long-serving participant also described regular team debriefing and counselling in earlier years. In contrast, three other participants, including those with frontline interviewing and supervisory experience, reported little or no institutional support and described relying primarily on colleagues, supervisors, or personal coping strategies. One interviewer said:

> "I usually talk to my supervisors." Interviewer, rural

These divergent accounts may reflect changes over time, uneven access to support, or differences in participants' experiences. Interviewers and supervisors in rural nodes described turning to colleagues, supervisors, spouses, prayer, and acceptance ('this is my job'); one had seen a psychologist privately, in their own time.

### Theme 4: learning from implementation

Implementers stressed that emotional labour should be recognised as part of the job. Interviewers described work that extended beyond administering a questionnaire, including grief and welfare support. One urban interviewer argued that VA implementers deserved greater recognition:

> "We need to give them credit and respect that the job that they are doing, it's over and beyond." Interviewer, urban

Participants described coping alone, crying privately, and distress that persisted for years, alongside accounts of limited structured support. Those reporting access to support also described emotional demands but identified ways of processing difficult experiences. Participants with counselling, psychology, or clinical backgrounds described drawing on emotional containment skills from their training in their VA implementation activities. Several suggested that VA interviewers should receive training in emotional regulation or basic counselling skills.

Participants recommended strengthening support arrangements, including psychological support, regular debriefing, peer support, preparation for difficult situations, fieldworker safety, and referral pathways for respondents. Some proposed extending and formalising practices described at nodes, such as brief but regular (eg, weekly 15–30 min) check-ins with managers, counselling every 3–6 months, and regular refresher training. One supervisor said managers should 'take care of the VA teams' (Supervisor, rural). Another participant recommended involving interviewers in data processing and analysis, so that they understand how their work is used.

Views differed on compensating respondents, on whether counselling should be optional or scheduled, and on how far training could prepare staff: one interviewer doubted that training could cover the range of situations met in the field, suggesting staff assessments before fieldwork. Some newer interviewers saw little need for support for themselves and focused their recommendations on respondents.

Participants highlighted gaps in distress protocols and support arrangements. Interviewers described pausing and/or rescheduling interviews; one reported that respondents who were offered a break usually chose to continue. An experienced interviewer described being trained to pause when a respondent cried, wait, and then ask whether they wished to continue or stop. However, she reported little training or support for addressing interviewers' own emotional wellbeing and described the emphasis on meeting daily and weekly data-collection targets. Other participants recommended more detailed protocols for responding to distress, including clear referral pathways and follow-up support. One interviewer also expressed concern that seeking psychological support might be perceived as an inability to cope with the job, potentially discouraging staff from accessing support.

## A preliminary trauma-informed VA framework

Across implementer roles, participants' accounts highlighted safety, trust, support, reflection, cultural responsiveness, and recognition of emotional labour. These concerns aligned with the six trauma-informed principles articulated by SAMHSA: safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice, and choice; and cultural, historical, and gender issues [16]. We used these principles to develop a preliminary VA-specific practice framework.

Mapping the findings onto these principles highlighted responsibilities beyond individual interviewing practices, particularly at team and institutional levels. Figure 2 accordingly places the VA encounter between the bereaved respondent and the interviewer at the centre, surrounded by the team and institution responsible for organising and supporting it. Table 4 links each principle to the challenges reported and sets out proposed actions across levels. Institutions have primary responsibility, including for safe and

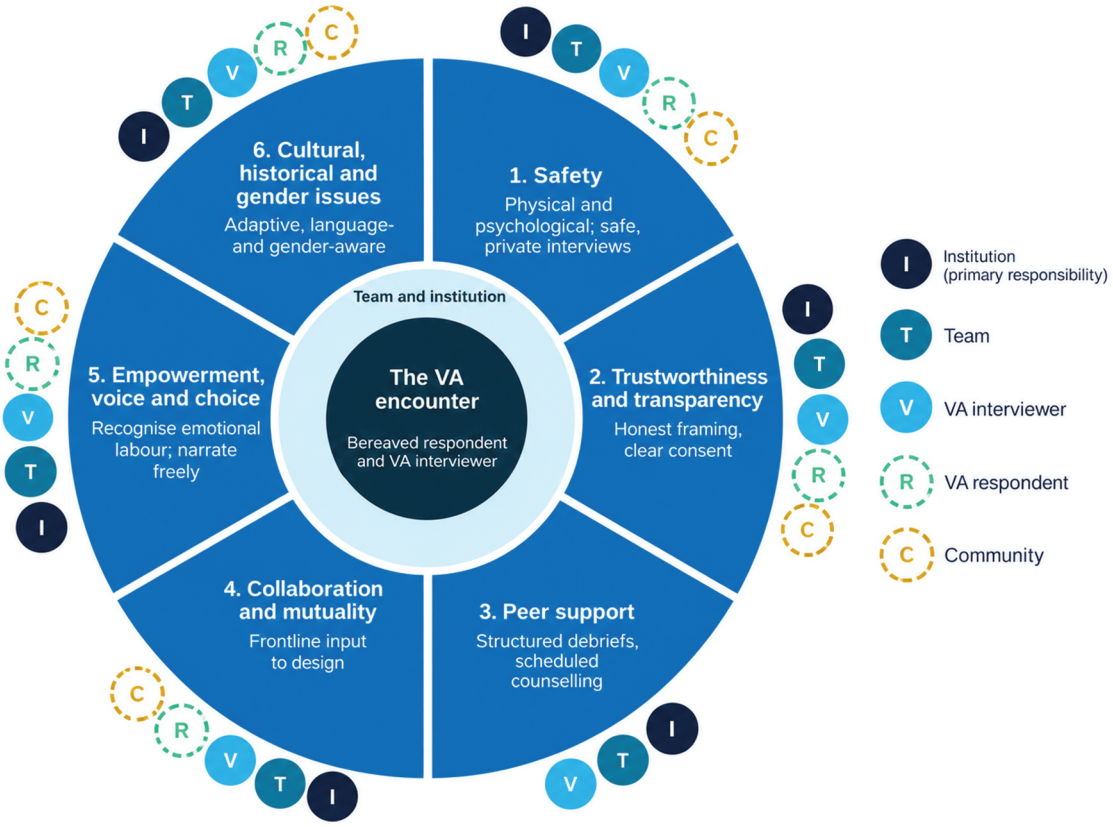


**Figure 2.** Preliminary trauma-informed verbal autopsy (TIVA) framework, developed from implementer accounts and informed by the SAMHSA trauma-informed principles [16]. Dashed markers denote proposed roles; they have not been validated with bereaved respondents or communities.

private interviewing conditions, while teams translate this into supervision, debriefing, and peer support. Interviewers apply the principles across household visits and interview encounters. Proposed actions concerning respondents and communities draw on implementer accounts interpreted through trauma-informed principles. These emphasise opportunities for voice and choice, rather than obligations, and have not been validated with these groups.

Considering the exposure risks and emotional impacts of VA, these principles should also extend to supervisors. Peer support should supplement, rather than replace, professional and organisational support. Supervisors' accounts highlighted the need to extend psychosocial support beyond frontline interviewers. Their responsibilities for supporting staff experiencing distress may compound the emotional demands associated with previous VA interviewing experience. Organisational support should therefore include supervisors themselves, through access to confidential psychological support, opportunities for peer reflection, and protected time for debriefing. Responsibility for supporting others should not be assumed to replace supervisors' own needs for support.

Recommended actions with direct support in participant accounts include structured debriefing, scheduled counselling, safety measures, referral pathways, preparation for difficult cases, language choice, and recognition of emotional labour. Recommendations developed through author synthesis, drawing on SAMHSA's principles, include community roles in design and governance, and respondents' involvement in shaping how their accounts are interpreted.

## Discussion

VA implementers at the participating SAPRIN nodes described emotionally demanding and ethically complex work that is essential to mortality surveillance but often poorly recognised and supported. Interviewers described direct and cumulative exposure to grief and hardship; supervisors described layered exposure, combining past frontline work with responsibility for teams. Support ranged from little or no structured provision to regular debriefing and counselling, and accounts sometimes differed between participants at the same node. Participants described ethical strain from being unable to respond to households' needs and disagreed about compensating respondents.

Our findings on the emotional and ethical complexity of conducting VA contribute to wider debates

**Table 4.** Preliminary trauma-informed verbal autopsy (TIVA) framework: principles, reported challenges, and proposed actions.

| Trauma-informed principle | Reported challenges | Institution *Primary responsibility* | Team *Holds mandate* | VA interviewer *Holds mandate* | VA respondent *Voice and choice (proposed)* | Community *Voice and choice (proposed)* |
|---|---|---|---|---|---|---|
| 1. Safety | Harassment and threats, especially to women; lone working; crowded households limiting privacy | Safe, private interviewing conditions; safety policy, panic buttons, location tracking | Paired working where needed, planned routes, safety procedures | Follow protocols; report risks and good practice | Choose where to be interviewed, within arrangements the programme provides | Help programmes identify safe, trusted interview spaces |
| 2. Trustworthiness and transparency | Expectations of help or results; unclear purpose of VA; distress from repeat visits | Community-engagement strategy; honest framing of what VA can and cannot offer | Consistent messaging in team briefings | Clear framing of the interview and its limits | Informed consent; ask questions; decline or postpone freely | Contribute to how VA is introduced and discussed locally |
| 3. Peer support | Coping alone; confidentiality concerns limiting debriefing; cumulative distress | Protected time; structured debriefing; scheduled, not only opt-in, counselling | Facilitate debriefs; guidance on debriefing without breaching confidentiality | Engage in peer support, as a supplement to professional support | – | – |
| 4. Collaboration and mutuality | Frontline staff see problems but lack authority to act; distance from how data are used | Channels for frontline input to programme design | Surface frontline insight to management | Contribute to protocol, tool and implementation design | Shape how their account is received and interpreted | Take part in feedback and programme improvement |
| 5. Empowerment, voice and choice | Emotional labour unrecognised; closed questions limit respondents' accounts; no formal distress protocol | Recognise emotional labour in workload and pay; distress protocol; feedback loops | Raise staff needs with management; regular check-ins | Voice concerns in safe forums for sharing and development | Narrate in their own terms; pause, decline or redirect | Receive aggregated findings; contribute priorities |
| 6. Cultural, historical and gender issues | Sensitive questions across age and gender; language; working in own community; gendered risk | Gender-aware safety; trauma- and culturally specific training; counselling skills for all interviewers | Match interviewers to contexts, including language, where possible | Adapt questioning sensitively; respect local practices | Choose language; explain cultural terms and meanings | Guide culturally appropriate implementation and interpretation |

Note: The six principles are adapted from SAMHSA [16]. Reported challenges derive from interviewed implementers' accounts. Proposed actions combine participant recommendations with author synthesis informed by these principles. Respondent and community actions are proposals that have not been validated directly with these groups.

on the ethics of public health surveillance in two ways. WHO guidance holds that surveillance should pursue legitimate public health purposes while minimising harm, engaging communities, and ensuring accountability [17]. The collective benefits of surveillance do not remove obligations to those who provide data or to those who collect it.

First, emotional burden. Previous studies have documented emotional distress among VA respondents and interviewers, and moral and emotional distress among interviewers [2,4,5,9]. Our findings extend this work in two ways. Emotional demands were reported across roles, including by supervisors who described lasting memories of frontline interviewing alongside the demands of their current responsibilities. Reported support arrangements also differed between nodes within the same national network, and accounts sometimes differed between those involved in coordination and frontline staff at the same node. Participants described repeated exposure to potentially traumatic material, including deaths by violence, suicide and accident, child deaths, and severe hardship; one interviewer described the work as 'really traumatising'. We did not assess psychological harm and use terms such as vicarious trauma and moral distress as concepts from the literature, not as diagnoses. Even so, participants' accounts point to foreseeable workplace risks requiring organisational prevention and support, rather than individual resilience alone. This is consistent with the WHO Healthy Workplace Framework, which recognises psychosocial wellbeing, supportive supervision, and access to support as components of healthy workplaces [18].

Supervisors' accounts highlighted the need to extend psychosocial support beyond frontline interviewers. Their responsibilities for supporting staff experiencing distress could compound emotional demands associated with their own previous VA interviewing experiences. This layered exposure can be considered in relation to literature on secondary traumatic stress and vicarious trauma, although these constructs were not formally assessed. Our findings suggest that those responsible for supporting interviewers also need access to confidential psychological support, reflective supervision, and opportunities to process their own experiences. Responsibility for supporting others should not be assumed to replace supervisors' own needs for support.

Three implications follow. First, emotional-containment and sensitive communication skills, which participants with counselling, psychology, or clinical backgrounds described drawing on, should be included in interviewer training rather than left to prior professional background. These skills should support interviewers in recognising and responding to distress without expecting them to undertake counselling roles. Second, support should be routinely offered and accessible, rather than dependent solely on staff requesting help. Where counselling was optional, one participant described it as underused; another expressed concern that seeking support might be interpreted as an inability to cope with the job. Third, nodes can learn from each other. Within SAPRIN, reported practices ranged from little structured support to regular debriefing and scheduled counselling. A joint SAPRIN meeting could share this learning and consider common minimum standards for supporting VA staff, with potential relevance for programmes elsewhere in the region. WHO VA training guidance already recognises interviewer distress and recommends scheduled debriefing, peer support, and access to counselling [19]. Our findings highlight the importance of implementing and resourcing such guidance consistently in practice.

Second, ethical burden. Interviewers described arriving to collect information from families experiencing significant hardship at a time of loss, often with little practical assistance to offer. Studies in Ghana and Papua New Guinea have described cultural norms around bereavement and the importance of reciprocity in VA encounters [2,3]. Interviewers' accounts of arriving 'with bare hands' raised concerns about reciprocity and the potentially extractive nature of VA encounters, although respondents' perspectives were not directly examined. Participants disagreed about appropriate responses: some favoured small tokens or payment, while others defended non-payment on the grounds of voluntariness. Research on benefits and payments in Kenya similarly highlights the ethical complexity of balancing reimbursement, appreciation, local expectations, and concerns about undue influence [20]. We suggest that VA programmes develop clear, locally appropriate policies on reciprocity and respondent assistance, informed by consultation with communities and ethics committees. These could include modest, non-coercive tokens of respect where appropriate, with resources allocated by institutions and funders. Programmes should also explain clearly what they can and cannot offer, rather than leaving interviewers to negotiate these expectations alone. Ethical and safety challenges were also shaped by context, with rural participants describing the emotional complexities of interviewing people known to them and urban participants reporting residential mobility, difficulties accessing apartment buildings, and exposure to violence and crime.

Ethical conduct in VA is therefore not confined to procedural ethics reviewed at approval. It extends into everyday decisions and organisational arrangements: minimising emotional harm, supporting staff, responding to distress, ensuring safe working conditions, and recognising the limits of extractive approaches to data collection.

The preliminary TIVA framework responds to a recurrent implementation gap. Frontline staff often identified practical solutions but lacked authority or resources to act, echoing participatory health systems research in which frontline actors hold detailed knowledge of problems but remain distant from decisions [21,22]. SAMHSA's trauma-informed principles recognise both interpersonal and organisational dimensions of practice [16]. Participants similarly emphasised sensitive communication and empathy alongside the organisational conditions needed to sustain them: training, supervision, referral, safe working environments, staffing, and opportunities for participation in programme decisions. Our adaptation places primary responsibility with institutions rather than individual interviewers and extends attention to supervisors' support needs. It is an implementer-informed synthesis of existing principles, rather than a framework derived entirely inductively or co-produced with all stakeholder groups. Bereaved respondents, communities, and senior managers were not interviewed, and co-design and testing with these groups and occupational-health stakeholders are important next steps.

### *Strengths and limitations*

A strength of our study is that it included participants in interviewer, supervisor, and coordinator or related roles across rural and urban SAPRIN nodes. This enabled us to examine ethical and emotional challenges across implementation roles and identify variation and divergent accounts of organisational support, including within individual nodes. The study also moves beyond describing these experiences to develop a preliminary trauma-informed practice framework identifying responsibilities across institutions and VA teams.

Our study has several limitations. It was a small, purposive, exploratory study conducted at three of seven SAPRIN nodes in one country, and the findings support analytical rather than statistical generalisation. Small numbers within some roles and sites limited the extent to which systematic differences between groups could be characterised. Thematic saturation was considered across the dataset as a whole, rather than independently within each participant subgroup.

Participants were identified in collaboration with site leadership, and managers at some nodes were aware of who participated. Some researchers also had prior institutional relationships with participating nodes. These circumstances may have influenced recruitment and what participants felt comfortable disclosing, including criticism of organisational practices. We sought to mitigate these risks through experienced qualitative interviewers, assurances of confidentiality and voluntary participation, and the absence of direct supervisory relationships between interviewers and participants. Nevertheless, the possibility of perceived professional pressure and social-desirability bias cannot be excluded.

The exclusion of staff involved in ongoing disciplinary or ethical investigations may have excluded critical perspectives. The English-language eligibility criterion may also have excluded some frontline staff, particularly relevant to a study concerned with cultural responsiveness. Interviews were conducted in person at one node and online at two, potentially influencing rapport and disclosure. Some accounts of organisational support referred to earlier periods, meaning that differences in reported arrangements may reflect changes over time as well as differences in participants' experiences.

Bereaved respondents and community members were not interviewed, so their perspectives are represented only through implementer accounts. Senior managers and policymakers were also not included. We did not clinically assess psychological harm or measure VA data quality, and relationships between staff wellbeing, organisational support, and data quality were not tested. The framework is therefore a preliminary, implementer-informed adaptation that requires refinement and validation with other stakeholders. Future research should examine its applicability in other VA, mortality surveillance, and CRVS settings and investigate relationships between staff wellbeing, institutional support, retention, and VA data quality.

## Conclusion

VA depends on interviewers and supervisors and/or coordinators who experience repeated exposure to grief and distress, alongside the ethical strain of collecting information from bereaved families facing hardship. These demands should not be left to individual resilience. Institutions conducting VA should provide routine access to confidential psychological support, structured debriefing, safety measures, and training in emotional containment, while recognising emotional labour in workloads and supervision. Principal investigators and programme managers should incorporate these arrangements into protocols and budgets, with funders providing appropriate resources. Ethics committees should consider how VA staff, as well as respondents, will be protected, and programmes should develop locally appropriate approaches to reciprocity and practical assistance for bereaved households. Within SAPRIN, nodes could share learning and consider common standards for staff support. The preliminary TIVA framework offers one way to organise these

responsibilities, but requires co-design with bereaved respondents, communities and managers, and testing in other settings.

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## Author contributions

CRediT: **Lucia D'Ambruoso:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Writing – original draft, Writing – review & editing; **Thesla Palanee-Phillips:** Formal analysis, Methodology, Project administration, Resources, Supervision, Writing – review & editing; **Alex Hinga:** Conceptualization, Formal analysis, Investigation, Methodology, Writing – review & editing; **Phumla Sibiya:** Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – review & editing; **Danisile Sambo:** Data curation, Formal analysis, Investigation, Project administration, Writing – review & editing; **Krishnaveni Reddy:** Project administration, Resources, Supervision, Writing – review & editing; **André Rose:** Conceptualization, Methodology, Project administration, Resources, Writing – review & editing.

## Abbreviations

| | |
|---|---|
| AHRI | Africa Health Research Institute |
| CRVS | Civil Registration and Vital Statistics |
| HDSS | Health and Demographic Surveillance System |
| HREC | Human Research Ethics Committee |
| RREAL | Rapid Research Evaluation and Appraisal Lab |
| SAMHSA | Substance Abuse and Mental Health Services Administration |
| SAPRIN | South African Population Research Infrastructure Network |
| SERB | School Ethics Review Board |
| TIVA | Trauma-informed verbal autopsy |
| VA | Verbal Autopsy |
| WHO | World Health Organization |

## Data availability statement

The dataset will be made available on reasonable request.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

During manuscript preparation and revision, the authors used Claude Fable 5 (Anthropic, 2026) and ChatGPT (GPT-6, OpenAI, 2026) to assist with language refinement, clarity, organisation, and editing of author-prepared text. The authors critically reviewed and verified the suggested changes. The authors take full responsibility for the content and the originality, accuracy, and integrity of the manuscript.

## Ethics and consent

The study protocol was reviewed and approved by institutional research ethics committees in each participating setting. In the United Kingdom, approval was granted by the University of Aberdeen School Ethics Review Board (SERB Ref. 6,319,648, 29 May 2025). In South Africa, approval was granted by the University of the Witwatersrand Human Research Ethics Committee (Medical) (HREC Ref. 250,613, 14 July 2025).

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