

Supplementary File 5

Protocol reporting, intervention description and reproducibility checklist

Version 1.4 - 17 August 2026

Companion to: *Implementing a competency-based Advanced Field Epidemiology Training Programme in Sierra Leone: protocol for a mixed-methods pilot evaluation*

1. How to use this file

This file maps the prospective protocol to implementation, intervention-description, mixed-methods and qualitative reporting requirements. It also states the release gate for the empirical article. Item wording is summarized rather than reproduced verbatim; users should consult the cited source for the complete checklist [30,31,40,41].

2. StaRI-oriented protocol map

Topic	Protocol provision	Location
Title/abstract	Implementation pilot, setting, design and outcomes identified	Title and Abstract
Rationale	Evidence-practice gap and implementation need	Introduction
Implementation strategy	Actors, actions, targets, dose and evidence	Methods; Supplement 1 section 14
Intervention	Core content, field products, research and publication requirements	Methods; Supplement 1 sections 7-13
Context	Sierra Leone, NPHA, field sites and policy setting	Methods; Supplement 1 sections 3-6
Objectives	Implementation, educational, service, cost, equity and sustainability aims	Introduction
Design	Prospective longitudinal mixed-methods pilot with an independent research and evaluation team	Methods: Design and reporting
Participants/sites	Eligibility, recruitment, field-site criteria and sample	Methods; Supplement 1 sections 5-6
Outcomes	One primary fidelity outcome; key feasibility outcomes; secondary educational, service, economic, equity and sustainability outcomes; non-negotiable safeguards.	Methods; Supplements 2, 7 and 8
Analysis	IRET governance, component-level fidelity analysis, quantitative, qualitative, integration, economic and sensitivity plans	Methods; Supplements 3 and 8
Fidelity/adaptation	Definition, dimensions, 20 components, source matrix, two-reviewer verification, adjudication, data locks and FRAME/FRAME-IS log	Methods; Supplements 1, 2 and 7
Ethics/harms	Consent, dual roles, safety, data and stopping rules	Methods; Supplement 4
Dissemination	Audience, output, timing, IRET lead, factual-review boundary, no-veto protection and repository record	Methods; Supplements 4 and 9

3. TIDieR intervention-description map

TIDieR topic	Specification	Location
Brief name	Competency-based Sierra Leone Advanced FETP pilot	Main Methods
Why	National advanced-tier workforce need and the distinction between curriculum quality and implementation readiness.	Introduction
Materials	Instructional package, datasets, rubrics, portfolio, logs, low-bandwidth packs	Supplement 1
Procedures	Sessions, exercises, field transfer, mentorship, assessment, research and publication	Supplement 1
Providers	Faculty, mentors, supervisors, assessors, examiners and specialists	Supplement 1 sections 4 and 12
Mode	In-person, virtual, ECHO, self-paced, workplace and offline alternatives	Supplement 1 sections 7 and 14
Location	Eight accredited national/subnational field sites and central programme hub	Methods; Supplement 1 section 6
Dose	24 months, at least 68 field weeks, 70 sessions, 36 exercises, monthly mentorship	Main Methods; Supplement 1
Tailoring	Bridging support, site rotation, specialist support and remediation	Supplement 1
Modification	Prospective adaptation log and protocol amendment rules	Supplement 1 section 17
Fidelity planned	Definition, fidelity dimensions, 20 component standards, I07 measurement package, registered evidence sources, independent dual review, adjudication and status rules	Main Methods; Supplements 1-3; workbook
Fidelity actual	Reserved for empirical paper	Future Results

The main manuscript includes a separate timeline (Figure 1) and logic model (Figure 2) connecting inputs, activities, implementation strategies, measured outcomes and the scale-up decision. Longer-term public health effects are presented as anticipated consequences rather than tested causal outcomes.

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4. Mixed-methods reporting map

Topic	Protocol response	Location
Rationale for mixed methods	Implementation requires estimates plus explanations of context, mechanisms, burden, adaptation and divergence.	Methods
Design	Longitudinal convergent design with embedded process and economic evaluation.	Methods; Supplement 3
Sampling	Census quantitative sampling and maximum-variation qualitative sampling.	Methods
Methods	Separate quantitative, qualitative and economic procedures.	Methods; Supplements 2-3
Integration	Joint displays, convergence/complementarity/dissonance/silence.	Methods; Supplement 3 section 12
Limitations	Small single cohort, role overlap, opportunity dependence and attribution limits.	Discussion

5. COREQ-oriented qualitative reporting plan

Domain	Empirical-report requirement
Research team and reflexivity	Report interviewer role, preparation, relationship to participants, independence from assessment, assumptions, field notes and reflexive practice.
Study design	Report sampling frame, invitations, refusals, setting, participant role, group composition, longitudinal reinterviews and information-power decisions.
Data collection	Report guide version, recording, field notes, duration, repeat interviews, interviewer training, distress procedures and transcript return if used.
Analysis	Report coders, codebook, framework, software, independent-coding proportion, negative cases, reflexive memos, trustworthiness procedures and audit trail.
Reporting	Use supported themes, varied quotations, role/site/time context, convergence and dissent; report credibility, transferability, dependability and confirmability while protecting identity.

6. Independent research and fidelity reporting map

Topic	Required protocol provision	Empirical-report evidence
Research independence	Conflict-screened IRET; no delivery, teaching, mentorship, assessment, examination or progression role	Named roles, affiliations, conflicts, training and any deviations
Fidelity definition	Delivery and receipt as prespecified while approved adaptations preserve core functions	Definition retained; version and approved adaptations reported
Measurement	Registered numerator, denominator, source, tool, timing and level for every component	Completed component matrix, evidence quality and missing/unknown status
Verification	Independent primary reviewer, second reviewer for every component and third adjudicator	Agreement, discrepancies, adjudications and factual-query record
Data locking	Signed quarterly and Month-24 read-only datasets with versioned corrections	Lock dates, correction log and reproducible rerun record
Dissemination independence	IRET-led reporting; factual/confidentiality review only; no unfavorable-result veto	Audience products, review comments, unresolved disagreement and publication status

7. Reproducibility release gate

Gate	Required evidence
Protocol integrity	Registered protocol, dated amendments, IRET terms and conflicts, deviation log and final analysis plan archived.
Fidelity integrity	Source-evidence register, independent two-reviewer files, adjudication log, signed quarterly and Month-24 locks, factual-query record and correction history archived.
Data structure	Data dictionary, identifiers, derivations, denominator rules and disclosure controls documented.
Intervention evidence	Delivery records, fidelity checklist, adaptation log, field-site and mentor evidence complete.
Analysis	Locked analysis datasets, executable scripts, software and package versions, analysis decision log, output log and final tables and figures reproduce from approved data.
Qualitative audit	Sampling log, transcript checks, codebook versions, framework matrices, memos and negative cases retained securely.
Costing	Resource quantities, valuation sources, allocation and sensitivity assumptions traceable.
Assessment	Rubrics, assessor calibration, double-rating sample, disagreements and final decisions traceable.
Disclosure	Small-cell, quotation, site and data-sharing review completed.
Authorship	Contribution statements, resident publication rights and conflicts confirmed.

Gate	Required evidence
Stakeholder interpretation	Residents, sites and NPHA receive results and factual corrections before publication.

8. Protocol amendment classification

Class	Example	Control
Administrative	Contact, formatting or non-substantive clarification	Version log; no ethics amendment unless required.
Operational	Schedule, site or modality change that preserves core function and outcomes	Adaptation log; notify oversight; ethics review if risk/data changes.
Substantive	Eligibility, intervention core, outcome, progression criterion, consent, risk or analysis change	Formal protocol amendment, ethics/NPHA approval and public registration update before implementation or analysis.
Emergency safety	Immediate action needed to protect people or data	Act first to contain harm, then notify, document, amend and reassess continuation.

9. Version record

Version	Date	Scope	Status
1.1	21 July 2026	Initial prospective protocol package for ethics, registration and journal review	No recruitment; no research data collected
1.2	17 August 2026	Reviewer-responsive revision: national rationale, outcome hierarchy, logic model, fidelity scoring, threshold rationale, workload and continuity, assessment validity, qualitative trustworthiness, costing and conflict controls.	No recruitment or research data collected in source record; reconfirm before upload
1.3	17 August 2026	Independent research/evaluation governance; operational fidelity definition, source matrix, dual verification, adjudication, data locks, analysis and dissemination independence.	No recruitment or research data collection in source record; corresponding author to reconfirm before upload.

1.1 - 21 July 2026: initial prospective protocol package. 1.2 - 17 August 2026: updated reporting maps for the logic model, outcome hierarchy, interviewer preparation, information power, qualitative trustworthiness, costing and continuity. No recruitment or research data collection is recorded in the source package; the corresponding author will reconfirm status before journal upload. 1.4 - 17 August 2026: final audit added separate Figure 1 and Figure 2 mapping and synchronized Supplements 7-9 with the independent measurement, analysis and dissemination architecture.

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