SUMBA SEPSIS STUDY 2026

Preliminary Technical Epidemiological and Health System Assessment Report

Infection prevention, reported severe illness
and access to effective care in East Sumba, Indonesia

1,001 household interviews
4,977 usual household residents recorded
162 healthcare-worker questionnaire submissions

Consolidated report | English v1.1, updated 12 November 2026
First published on 13 September 2026 | World Sepsis Day

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With the institutional participation of the Government of East Sumba

Fieldwork is complete. Epidemiological interpretation remains preliminary. This report does not present a validated sepsis risk model and has not undergone independent peer review.

PARTNERS

IN MEMORY

Lery Mardani ButarButar

Whose death reminds us that preventable infections still take lives too early.

The Sumba Sepsis Study is dedicated to the memory of Lery Mardani ButarButar. According to the account shared by study leadership, this young man died from sepsis following surgery for appendicitis in an East Sumba hospital. [17]

For those who knew him, this is not an abstract subject. It is the loss of a person and the absence left among family and friends. His memory gives a human meaning to the questions asked in this study: when does a family recognise danger, where can it turn, and can the health service respond in time?

This report honours that memory through work directed towards earlier recognition, safer care and reliable follow-up. Its purpose is to help make the next journey through illness less dangerous, from the home to the hospital and after treatment.

A person must remain visible behind every record.

Note: Clinical circumstances are reported by study leadership; no medical-record review was undertaken for this dedication. [17]

THE EVIDENCE AT A GLANCE

What requires action now

Months of preparation, fieldwork and data review lie behind these findings. Foundation teams and local contributors reached families at home, including where vehicles could not reach the houses. These are recorded findings, not an assumed number of sepsis cases. [3-5,17]

95.2%	66.7%	88.9%
950 of 998 households did not report a handwashing place with both water and soap available together, leaving basic infection-prevention conditions incomplete in most homes.	70 of 105 primary-care submissions reported that injectable antibiotics were only sometimes, rarely or never available, raising concern about reliable treatment at first contact.	144 of 162 healthcare-worker submissions reported no previous sepsis or severe-infection training, documenting a substantial gap in prior topic-specific training.
40.3%	**286 homes**	**97.5%**
401 of 996 households reported no toilet or open defecation, showing that basic sanitation remains out of reach for many families and continues to expose communities to preventable health risks.	Every household reporting at least one hour to the nearest formal health facility also lacked water and soap together at a handwashing place, combining prevention and access barriers in the same homes.	158 of 162 healthcare-worker submissions reported that patients arrive late in an advanced condition at least sometimes, making delayed presentation a near-universal concern among surveyed staff.

Sources: household responses [3] and healthcare-worker questionnaires [4]. Each figure uses the denominator shown. Staff percentages describe questionnaire responses, not patient-level rates or independently audited facilities. The 286-home overlap is descriptive, not causal.

The gaps occur at different stages of the same care pathway

A household needs the means to prevent infection. A sick person needs recognition of danger, a way to reach help and a service able to respond. The findings identify **serious gaps in prevention, physical access and reported treatment readiness**, alongside widespread staff reports of late presentation. The surveys describe different people, not linked patient histories; their complementary findings support action across several stages of care. [3,4]

These findings already justify action: make prevention practical, care reachable and treatment reliable, then document whether people received that care in time.

ABSTRACT

Scientific abstract

Introduction. The study examined conditions that may allow infection to deteriorate before appropriate care is reached: **household prevention, recognition of illness, timely help-seeking, transport, referral and reported service readiness.**

Methods. A cross-sectional survey included **1,001 households across eight localities in four subdistricts**, using geographically organised, non-probability quotas, locally guided routes, revisits and adjacent-household replacement. Healthcare-worker responses *(n=162)*, fieldwork records and two administrative workbooks were reviewed separately and compared thematically. Item-specific denominators were used; missing answers were not coded as negative. [1-5,10,21]

Results. Household-size data described **4,977 usual residents** in 992 households. **950/998 households *(95.2%)*** reported no handwashing place with water and soap together; **401/996 *(40.3%)*** reported no toilet or open defecation. All **286 households** reporting at least one hour to the nearest formal facility also lacked a reported water-and-soap handwashing place. Q23 identified 249/1,001 households *(24.9%)* reporting severe or frightening illness within six months, without clinical verification. Only **452/999 responses *(45.2%)*** described same-day outside help; episode linkage was incomplete. [3]

Among healthcare-worker responses, **158/162 *(97.5%)* reported that patients arrive late in an advanced condition at least sometimes**; this is a staff-reported concern, not a patient-level rate. **No previous sepsis or severe-infection training was reported in 144/162 responses *(88.9%)*.** Injectable antibiotics were **not reported as always available in 70/105 primary-care responses *(66.7%)*.** [3,4]

Administrative data audit. The infection return contained non-zero counts, but **232/308 entries for 2025 and 228/308 for 2026 were zero**. Seven diagnostic categories were zero throughout both columns; referral counts were provided for only **2/24 listed Puskesmas**. Undefined zeros, incomplete reporting and missing denominators prevented estimation of district severe-infection burden or infection-attributable mortality. A separate capacity return was incomplete and carried an unresolved date entry. [10,21]

Discussion and conclusion. The findings identify **serious gaps at several stages of the care pathway**: household prevention, timely access, reported first-contact readiness and outcome recording. These are not problems that health education alone can resolve.

A coordinated response should combine **material prevention, supervised clinical skills, reliable essential treatment, transport and referral support, and outcome recording**. The study documents needs that support targeted action and prospective evaluation; it does not estimate sepsis prevalence or demonstrate programme effectiveness. [3-5,10,21]

I. INTRODUCTION

Why this study was undertaken

The first task was to reach the household. Study leadership describes homes that vehicles could not access; the field records describe local-language contact and return visits when families were working in their fields. These were conditions of the investigation, not background scenery. They bring the study's central question into focus: when someone becomes ill in such a place, can the family obtain appropriate care in time? [5,17]

Sepsis is life-threatening organ dysfunction resulting from a dysregulated response to infection. It is not synonymous with any persistent symptom, any infection or a household's description of a frightening illness. Prevention and timely treatment of infection are therefore relevant, but this survey cannot diagnose sepsis retrospectively. This clinical distinction informs the interpretation throughout the report. [1,2,11]

Questions addressed

The household instrument examines the material basis for prevention, household vulnerability, a recalled severe-illness episode, access to care, medicines, referral, community support and trust. The professional instrument examines reported recognition, training, resources, referral constraints and priorities. These are complementary sources, not linked records of the same patients. [1,2]

The purpose is to identify **what must improve between the home and effective care**, and to establish a traceable baseline for that work. It is also to make visible what remains uncounted. For the foundations and the families who contributed, a completed report is not the end point: the findings need to guide practical improvements whose reach and results can be checked.

A completed field phase, not a final burden estimate

Household interviews began on 2 June 2026, as confirmed by local coordination, and the export contains submission timestamps through 17 August. Months of preparation, fieldwork, clarification and analysis underpin the original consolidated edition, deliberately published on 13 September 2026 to mark World Sepsis Day. It brings together survey records, fieldwork accounts, developer clarifications and the administrative material supplied to the study. [3,5-10,17,20]

"Preliminary" qualifies the epidemiological interpretation, not the commitment of the teams or the completion of the interviews. Clinical validation, some respondent reconciliation and facility reporting completeness remain unresolved. The recorded household needs and staff concerns can nevertheless guide targeted work without being presented as a district sepsis prevalence estimate.

How to read the report

Methods explain selection, fieldwork, instruments and data handling. Results distinguish what households reported, what staff reported and what administrative records contained. Discussion explains the implications and limitations. The operational annex will develop sites, responsibilities, budgets, clinical safeguards and measurable targets.

Reading route: Key findings p. 3; Abstract p. 4; Glossary p. 6; Methods pp. 7-12; Results pp. 13-24; Discussion pp. 25-28; Responsibilities and contributors pp. 29-30; Analytical notes p. 31; Sources and closing words pp. 32-33; November dashboard update pp. 34-37.

Reading the numbers: "83 of 137 *(60.6%)*" means 83 positive or selected answers among 137 relevant responses. Denominators can differ between questions. HH = household questionnaire; HW = healthcare-worker questionnaire; WASH = water, sanitation and hygiene; IV = intravenous.

GLOSSARY

Glossary of local and technical terms

A short guide to the Indonesian administrative, healthcare and technical terms used throughout this report.

Puskesmas *(Pusat Kesehatan Masyarakat)*. Public primary health centre serving a subdistrict and its surrounding communities.

Pustu *(Puskesmas Pembantu)*. Auxiliary health post linked to a Puskesmas and located closer to village communities.

Polindes *(Pondok Bersalin Desa)*. Village-level maternity post, primarily intended for maternal and childbirth-related care.

RSUD *(Rumah Sakit Umum Daerah)*. Regional public hospital operated by local government; a higher-level referral facility.

NAKES *(Tenaga Kesehatan)*. Umbrella term for healthcare workers, including doctors, nurses, midwives, laboratory staff and other health professions.

Kader Kesehatan. Community health cadre supporting health activities, education and local links with formal services.

Kawan Sehat. Community health agents working with Fair Future Foundation and Kawan Baik Indonesia on health education, early recognition and referral support.

Referral. Transfer or escalation of a patient to a more appropriate or higher level of care.

First-contact care. The first formal or organised healthcare contact reached by a patient, often a Pustu or Puskesmas.

Severe infection. Infection associated with substantial clinical deterioration or danger signs; it is not synonymous with sepsis.

Sepsis. Life-threatening organ dysfunction caused by a dysregulated response to infection.

Desa. Rural administrative village.

Kelurahan. Urban or semi-urban administrative village.

Dusun. Hamlet or sub-village settlement unit within a Desa.

Kecamatan. Subdistrict administrative level comprising several villages or Kelurahan.

Kabupaten. Regency-level local government. East Sumba is Kabupaten Sumba Timur.

RT *(Rukun Tetangga)*. Small neighbourhood administrative unit.

RW *(Rukun Warga)*. Administrative grouping of several RT units.

Dinas Kesehatan. Local government Health Office / Health Department.

Dinas Sosial. Local government Social Affairs Office.

BPS *(Badan Pusat Statistik)*. Statistics Indonesia, the national statistical agency responsible for official population and administrative statistics.

WASH *(Water, Sanitation and Hygiene)*. Public-health framework covering safe water, sanitation and hygiene conditions and practices.

Reading note. Definitions are practical reading aids for this report; local organisation and service availability may vary by place and over time.

II. METHODS | SETTING AND POPULATION

Who and where the study describes

The household export contains 1,001 unique Survey IDs across eight harmonised locality names and four subdistricts. The additional fieldwork table accounts for the same 1,001 interviews. The population summary cites BPS subdistrict publications issued in 2025; the statistical reference year of each population entry is not established in the supplied extract. [3,5]

Study locality	Population context	Households interviewed	With size data	Residents recorded
Kawangu	5,065	211	207	1,063
Kambatatana	2,403	90	87	406
Mbatakapidu	2,129	72	72	369
Pambota Njara	2,347	28	28	119
Mbatapuhu	1,264	200	199	1,060
Napu	1,040	99	99	485
Mbinudita / Praipaha	1,882	101	101	610
Pulu Panjang	1,387	200	199	865
Total	**17,517**	**1,001**	**992**	**4,977**

Table 1. Sources: HH-Q3 [3] and coordination population compilation [5]. Population figures provide context, not a sampling frame. "With size data" counts households reporting their usual number of residents. The source name "Desa Praipaha *(Desa Persiapan Mbinudita)*" was confirmed by coordination; Praipaha and Mbinudita are counted once.

Households are not individual clinical examinations

Usual household size was available for 992 households: mean 5.02 people, median 5 and range 1-16. Nine values were missing and were not imputed. The 4,977 residents are people represented through household reporting, **not individually interviewed or examined patients**. The 17,517 population total describes the supplied locality context; it does not establish random sampling or district representativeness. [3,5]

Administrative and healthcare geography

Kota Waingapu contributed 100 interviews, Pandawai 301, Nggaha Oriangu *(recorded operationally as Nggoa)* 301 and Haharu 299. Desa denotes a village, Dusun a sub-village settlement unit and Kelurahan an urban administrative locality. A Puskesmas is a primary health centre; a Pustu *(Auxiliary Health Center)* is an affiliated village-level health post. The referral network is reported separately from measured availability of services. [5]

Administrative distances to kecamatan or kabupaten headquarters in the population sheet were not substituted for travel time or distance to healthcare. The latter are household-reported variables HH-Q20 and HH-Q22. [1,3,5]

II. METHODS | RECRUITMENT AND FIELDWORK

How the households were selected

The coordination account describes the approach as "cluster quota sampling", guided by local leaders or village government. Enumerators first met village leaders, discussed settlement distribution and planned geographic routes to spread coverage between hamlets rather than concentrate only in village centres. Starting from the village office, teams followed main routes between settlements. [5, pp. 7-10]

For analysis, this is treated as a **geographically organised, non-probability quota and route-based sample**. The supplied account does not document random selection of clusters or households, a complete household sampling frame or known inclusion probabilities. Its stated aim of geographic coverage should not be confused with verified probability sampling. [5]

Absence, revisits and replacement

Coordination reports that many residents worked in fields during the day. Where a household was absent, enumerators noted the location and arranged a later visit, including afternoon or evening visits. If the household remained unavailable, an adjacent household on the same route and within the same hamlet could be substituted. This preserved the intended geographic quota; it does not establish that replacements had identical health or socioeconomic characteristics. [5]

Coordination described refusals as very uncommon; study leadership subsequently clarified that **no refusals were reported**. Local-language contact and support from village leaders and community agents facilitated participation. Counts of all households approached, absences, revisits and substitutions were not supplied, so a verified participation rate cannot be calculated. [5,17]

Planned allocation and completed work

The allocation plan lists seven village targets totalling 1,000 households. The completed survey covers eight locality labels, including 28 Pambota Njara households alongside 72 in Mbatakapidu within the 100-household Kota Waingapu allocation. Other completed counts differ slightly from their initial targets. The report uses completed records, not target numbers. [3,5]

Four subdistrict coordinators are described in the operational account. Sixteen distinct named survey operators appear in the household export, consistent with the developer's 16 enumerator-user accounts. A broader contribution roster lists 20 people. These counts describe different roles and are not added together as separate enumerators. The roster is acknowledged in Appendix A. [3,5,7]

Enumerators sometimes continued in a colleague's hamlet when their own area contained too few available households. The supplied three- and six-week allocations are planning periods, not verified dates for every individual. This overlap matters when interpreting village differences or possible interviewer effects. [5]

> **Reaching households, returning when families were absent and sharing coverage between colleagues were part of the method. These practical demands must remain visible alongside the sampling limitations. [5]**

II. METHODS | FIELD IMPLEMENTATION

The work behind 1,001 interviews

The dataset began with visits to people's homes, not with a dashboard.

Reaching the household

Some homes could not be reached by vehicle. Arriving in a settlement did not always bring the team to the household door. In the study lead's account, these access conditions made the operation exceptionally demanding. Reaching families required local knowledge and sustained coordination; it was not a routine sequence of easily accessible visits. [5,17]

Coordination records document meetings with village leaders, routes between settlements, allocation by Dusun and support between enumerators when coverage had to be shared. Teams sought to spread interviews beyond village centres. Some continued in a colleague's area when their own allocation could not be completed. The completed total records collective work across those routes, not simply the operation of an application. [5]

Making time for the family

Many residents were away working in their fields during the day. **An empty house did not automatically end the attempt.** The recorded procedure was to note the location and return later, including in the afternoon or evening, when a family could make time to speak. Substitution by a neighbouring household followed unsuccessful attempts to revisit, as described in the recruitment section. [5]

The training guide required patient listening, local-language communication and careful reconstruction of what had happened during illness. It asked interviewers not to interrupt, blame or pressure a family, and to give time when someone became distressed. The task was to understand an account of illness, not merely to obtain a completed row of answers. [8]

Months of work, including after the last visit

Study preparation, team coordination, questionnaire development, field visits, data checking and report preparation **extended over months**. Once interviews stopped, the work continued: reconciling entries, questioning inconsistent results, consulting enumerators and the developer, and comparing the surveys with the records supplied by services. [5-9,17]

Alex Wettstein undertakes his contribution to the study, data review and report preparation entirely on a voluntary basis. Alongside his contribution, the fieldwork depended on the foundation teams, coordinators, community agents, local health workers and families whose involvement is recorded in this report. [5,17]

Field context is drawn from coordination records [5], training instructions [8] and the study lead's account [17]. Precise walking distances, total working hours and interview duration were not measured. The voluntary-status statement concerns Alex Wettstein only.

II. METHODS | INSTRUMENTS AND ANALYSIS

What was measured, and how it was analysed

The household instrument, version 4.1 of 6 May 2026, contains Q1-Q58 and maternal sub-items. Its domains are household conditions, environment and access, recent severe illness, care-seeking/referral, community health activity and trust. The healthcare-worker instrument, version 2.2 of 30 April 2026, contains 30 questions on reported clinical experience and capacity. **Alex Wettstein drafted both instruments; clinical contributors subsequently reviewed and adapted them together**, as described in the digital-collection section and Appendix A. [1,2,5,17]

Definitions and time windows

HH-Q23 asks about an illness or infection becoming severe or frightening within the previous six months. Follow-up descriptions concern the most recent or most severe selected event, not every event in the household. HH-Q31 asks about a household death after illness, infection, childbirth problems or newborn illness within twelve months. Neither measure establishes an infection diagnosis or sepsis-attributable death. [1]

The guidebook prescribes local-language interviewing, chronological probing, confidentiality and roleplay. On 17 June 2026, study leadership issued additional Q23 guidance on familiar symptoms that families might not describe as severe. The memo and subsequent debrief document a concern about interpretation and probing; consistent adoption of the guidance was not measured. These accounts inform the Discussion. [8,9,17,18]

Reproducible descriptive calculations

Counts were calculated from the original survey worksheets rather than dashboard cards. Tables show counts, the relevant number of answers and one-decimal percentages. Blank answers are excluded; explicit unknowns are handled as stated. Conditional questions require the applicable parent response. **Data integrity: analyses used preserved source workbooks; original source files were not modified.** [3,4]

Final HH-Q23 = Yes is required for analyses of Q24-Q30 and Q32. Residual values in five Q23-negative records are retained in the source and excluded from conditional analysis. Although the written skip rule includes Q31, the export contains Q31 answers for all 1,001 households. It is analysed separately because it concerns deaths over twelve months, not the selected six-month episode. Multiple-choice answers are reported as selected options, not necessarily mutually exclusive rankings. [1,3,6]

Healthcare-worker strata use the explicit work-setting answer HW-Q2: primary care *(Puskesmas, Pustu or Polindes)*, hospital and health office. The analysis unit is a **questionnaire submission**, not an independently audited establishment. One repeated name/facility pair with differing answers remains unresolved and has not been silently deleted. [4]

Descriptive findings are reported without probability weights, population prevalence confidence intervals, hypothesis tests or intervention-effect estimates. Clinical fields skipped during collection were not imputed. Administrative workbooks were reviewed for completeness and internal consistency, not treated as verified clinical registers. The report follows **IMRAD** and draws on **STROBE reporting principles**; remaining data-quality and subgroup issues are detailed in Appendix B. [10,15,16,21]

II. METHODS | DIGITAL COLLECTION

The Sumba Sepsis Study application

Clinical development came before digital implementation. Alex Wettstein drafted the two questionnaires. According to study leadership, twelve healthcare professionals from hospitals, Puskesmas and clinical services then worked together for **more than eight hours**, reviewing each question for wording, clinical relevance and local feasibility. Their collective revisions formed the instruments used for the study. This was a clinical development process, not an independent validation of questionnaire performance. [1,2,5,17]

Gogon, the foundation's developer, translated the questionnaires into a purpose-built AppSheet collection system. Answers could be stored on the enumerator's phone without a live connection and synchronised when internet returned with auto-sync enabled. Mandatory fields, predefined choices and conditional paths were intended to reduce transcription errors and loss of paper records. Automated calculations supplied a lightweight web dashboard for phones and computers, deployed through GitHub. The post-fieldwork audit assessed how this implementation had actually behaved. [6,7]

Phone entry -> local storage -> synchronisation -> central records -> calculations -> dashboard

Metadata or control	What is documented
Record and operator identifiers	Unique Survey ID; enumerator user/profile associated with the submission.
Time	Submission timestamp only. No interview start time, end time or measured duration.
Location	Desa/Dusun and GPS latitude/longitude were described by the developer. The reviewed direct GPS field was populated in 374/1,001 records.
Photographs	Optional verification attachments were described. The export held photo references in 991/1,001 records; images were not individually validated.
Access and recovery	Registered email access with role-limited editing; Google restoration described by the developer. Independent backup schedules and recovery testing were not documented.

Table 2. Developer account [7], technical note [6] and direct export inspection [3]. Field availability does not establish accuracy or completeness in every record. Public results omit identifying images and coordinates.

Audit findings and analytical safeguards

The dashboard originally displayed **0% for Q23 because its code read Q24 instead of Q23**. The corrected observed value is **249 of 1,001 households *(24.9%)***. Separately, changing Q23 from Yes to No could hide follow-up fields without erasing old values. The analytical layer excludes these residual entries from conditional analyses while preserving the source. [3,6]

The original High/Critical Risk score was not used to derive this report's results. The later descriptive dashboard counts are discussed in Appendix D. The reported sex-based pregnancy skip requires reconciliation with a household-level question, so maternal coverage is not estimated. Access and restoration controls are developer-reported, not independently security-tested. Detailed audit notes are in Appendix B. [1,6,7]

Only submission timestamps are available. They do not establish interview duration or exact time from symptoms to treatment, especially when records were entered offline. [7]

Data governance, confidentiality and reuse

The Sumba Sepsis Study contains **sensitive household, health, geographic and operational information**. Fair Future Foundation Switzerland and Kawan Baik Indonesia jointly maintain custody and governance of the study records collected through the project. Access to identifiable working data is restricted to authorised personnel according to operational role.

Public outputs use **aggregated or de-identified information**. Household names, precise GPS coordinates, verification photographs and other directly identifying information are not included in the public report or public analytical outputs.

Source workbooks were preserved and read without editing for this analysis. Cleaning rules, analytical transformations and exclusions were applied separately so that original observations remain traceable.

The project-specific database structures, survey implementation, analytical datasets, study-specific workflows, dashboards, tables, figures and report materials developed for the Sumba Sepsis Study are managed as project assets of Fair Future Foundation Switzerland and Kawan Baik Indonesia. The custom application configuration, workflows and project-specific software elements are subject to the rights of the project organisations and to the underlying licences and terms of the technology platforms used.

Access to identifiable records and reuse of non-public study datasets or unpublished analyses require prior written authorisation from the study organisations and any applicable consent, ethical and data-protection safeguards. Reproduction or adaptation of protected project materials is subject to the relevant rights, agreements and platform licences. These conditions do not override participants' rights, third-party rights or uses permitted by law.

Administrative statistics, clinical records and other information supplied by government services, health facilities or external organisations remain attributable to their original sources. Inclusion in this report does not transfer ownership of those source materials.

Participant privacy takes precedence over publication, communication and fundraising needs.

III. RESULTS | HOUSEHOLD PREVENTION

Basic prevention is materially constrained

Only 48 of 998 households reported a handwashing place with both water and soap.

What households reported	Households / answers	Percent
No water and soap together at a handwashing place *(Q19)*	950 of 998	95.2%
No handwashing place at all *(Q19)*	752 of 998	75.4%
No toilet / open defecation *(Q18)*	401 of 996	40.3%
Open well/surface water or river/stream as main water source *(Q16)*	257 of 999	25.7%
No water treatment, with no other method selected *(Q17)*	406 of 995	40.8%
Smoking inside the home *(Q14)*	814 of 987	82.5%
Monthly household income below IDR 500,000 *(Q4)*	829 of 997	83.1%
No schooling or primary school only *(Q2)*	665 of 991	67.1%
At least one chronic condition reported *(Q9)*	300 of 1,001	30.0%

Table 3. Source: [3]. The middle column shows households reporting the finding out of households with a usable answer. Denominators differ where answers are missing or unknown. Q2 excludes six blanks and four unknowns; chronic conditions are self-reported.

What the figures mean

For handwashing, **197 households reported water only, one soap only and 752 no place**. The 95.2% figure does not mean that these families never washed their hands. It describes the absence of water and soap together at the reported place. Observation was encouraged, but not independently verified in every home. [1,3,14]

Simple pit latrines *(78 households)* are not classified as open defecation; construction details were not collected. Water-source categories are not microbiological tests. Forty-nine water-treatment answers combined "do nothing" with boiling or filtering and remain a separate contradictory category. The income band is not an official poverty classification. [1,3,9,14]

A health message does not supply water, soap or a usable toilet. The prevention gap is material as well as educational.

III. RESULTS | UNEQUAL ACCESS

Prevention and distance overlap

Across the sample, 286/997 households *(28.7%)* reported at least one hour to the nearest formal health facility, including 71 reporting more than two hours. Six households described strongly seasonal travel time and were retained as a separate category. These are usual first-journey times, not the time to definitive hospital treatment. [1,3]

Study locality	At least 1 hour to care	No toilet / open defecation	Water AND soap at handwashing
Kawangu	**1.4%** 3 of 211	**31.3%** 66 of 211	**15.7%** 33 of 210
Kambatatana	**0.0%** 0 of 90	**6.7%** 6 of 90	**13.5%** 12 of 89
Mbatakapidu	**0.0%** 0 of 72	**26.4%** 19 of 72	**4.2%** 3 of 72
Pambota Njara	**7.1%** 2 of 28	**85.2%** 23 of 27	**0.0%** 0 of 28
Mbatapuhu	**57.1%** 113 of 198	**74.6%** 147 of 197	**0.0%** 0 of 199
Napu	**71.1%** 69 of 97	**62.6%** 62 of 99	**0.0%** 0 of 99
Mbinudita	**0.0%** 0 of 101	**26.7%** 27 of 101	**0.0%** 0 of 101
Pulu Panjang	**49.5%** 99 of 200	**25.6%** 51 of 199	**0.0%** 0 of 200

Table 4. Source: [3], Q20/Q18/Q19. Each cell gives a percentage, then the number of households reporting the finding out of those answering that question. The last column describes a resource present, not absent. These are sample results, not population rates.

All 286 households reporting at least one hour to care also lacked water and soap together at a handwashing place.

These are the same household records: 282 reported no handwashing place and four water only. Prevention and access constraints overlap in those homes. This descriptive comparison does not establish causation or quantify sepsis risk; geographic clustering may contribute. [3]

The first journey is only part of access

In Napu, 69 of 97 households reported at least one hour to care, and all 95 with distance data reported more than 10 km. Overall, 308 of 993 households *(31.0%)* reported more than 10 km to the nearest formal facility. The usual journey does not include waiting for money, a vehicle or onward referral. [1,3]

Motorbikes were the usual means of reaching care in 924 of 999 responses *(92.5%)*; 40 reported walking, 33 no reliable transport and two shared/public vehicles. None selected an ambulance as the usual mode. This does not measure emergency ambulance availability. [3]

III. RESULTS | REPORTED SEVERE ILLNESS

What Q23 captured

249 of 1,001 households *(24.9%)* answered Yes to an illness or infection becoming severe or frightening in the previous six months; 752 answered No. This counts households reporting an experience, not individual sick people or clinically confirmed sepsis. [1,3]

Study locality	Yes / households	Percent
Kawangu	61 of 211	28.9%
Kambatatana	41 of 90	45.6%
Mbatakapidu	6 of 72	8.3%
Pambota Njara	0 of 28	0.0%
Mbatapuhu	43 of 200	21.5%
Napu	40 of 99	40.4%
Mbinudita	50 of 101	49.5%
Pulu Panjang	8 of 200	4.0%

Table 5. Source: [3], final recorded Q23. The overall value is 24.9%; 28.9% is the Kawangu result only. Zero of 28 in Pambota Njara does not establish absence of severe illness in that village.

Severity was a reported judgement

The questionnaire gave examples such as inability to walk, marked weakness, breathing difficulty, reduced responsiveness, and convulsions. The 17 June field memo warned that familiar symptoms might be accepted as normal and asked for more careful recall and probing before recording No. Later team accounts describe a similar concern. [1,9,17,18]

Any illness, severe or frightening illness, and sepsis are different outcomes. Persistent symptoms can require care without themselves establishing organ dysfunction or sepsis. The memo supports a concern about what Q23 may have missed; it does not identify which negative responses were inaccurate. [1,11,18]

How to interpret differences

The 0-49.5% village range may reflect morbidity, household composition, selection, recall, language or differences in interviewing. Additional prompting was introduced during fieldwork, but its consistent use and effect were not evaluated. These percentages must not be ranked as village sepsis risk. [3,5,9,18]

The implications of normalised illness are discussed in **"When illness becomes normal" *(p. 26)***, separately from the numerical result.

III. RESULTS | SELECTED EPISODE

Symptoms, recovery, and household deaths

These descriptions apply only to households with final Q23 = Yes. One recent or most severe episode was selected per household. Missing answers vary by item. [1,3]

Danger sign recorded *(Q28)*	Episodes / answers	Percent
Very high fever or strong shaking chills	105 of 240	43.8%
Very weak; unable to stand, eat or drink	73 of 240	30.4%
Rapid or difficult breathing	38 of 240	15.8%
Wound with smell, swelling or pus	13 of 240	5.4%
Convulsions	6 of 240	2.5%
Reduced responsiveness, confusion or abnormal behaviour	3 of 240	1.3%
Very little or no urine	2 of 240	0.8%

Table 6. Recorded danger sign, HH-Q28 [3]: 240 of 249 eligible households answered. The export effectively holds one selected sign per answer, although the paper questionnaire allowed several. An unselected sign is not proven absent.

The selected person was aged 15-49 in 120 of 249 records, 50 or older in 78, 1-4 in 23, 5-14 in 22 and 1-11 months in six. These are selected-episode descriptions, **not age-specific incidence**. [3]

Reported outcome *(Q32)*	Episodes / answers	Percent
Recovered after formal care	174 of 246	70.7%
Still ill or not fully recovered	54 of 246	22.0%
Permanent weakness or disability	9 of 246	3.7%
Recovered at home	7 of 246	2.8%
Died	2 of 246	0.8%

Table 7. Reported outcome, HH-Q32 [3]: 246 of 249 eligible households answered. These are reported outcomes without clinical or longitudinal adjudication.

63 of 246 selected episodes *(25.6%)* involved incomplete recovery or lasting weakness/disability.

That finding supports attention to follow-up, but it is not a diagnosis of post-sepsis syndrome. Separately, Q31 recorded **25 of 1,001 households *(2.5%)*** reporting a death after illness, infection, childbirth problems, or newborn illness over twelve months. This may concern another person or event; it is not an infection-attributable mortality rate. [1,3]

III. RESULTS | SEEKING AND REACHING CARE

Trust is not the same as timely access

Full or some confidence in formal care was reported by **993 of 995 households *(99.8%)***. For the usual first action, 664 of 999 *(66.5%)* chose a Pustu/Puskesmas or hospital. These answers describe trust and customary choices, not verified paths for a particular illness. [3]

Time before outside help *(Q34)*	Responses / answers	Percent
Same day	452 of 999	45.2%
Next day	422 of 999	42.2%
Two to three days later	92 of 999	9.2%
More than three days later	13 of 999	1.3%
No outside help sought	20 of 999	2.0%

Table 8. Time before seeking outside help, HH-Q34 [3]; two missing responses. The written starting point is when illness became serious. The same episode and starting point were not verified across all answers.

Fewer than half selected same-day help. The other 547 answers cannot be described as 547 confirmed patients with delayed severe-infection care: Q34 was answered by households with and without a Q23 event. The pattern is relevant to service planning, not a validated time-to-treatment distribution. [1,3,9]

Transport, cost and medicines before care

Distance or unavailable transport was mentioned in 686 of 969 Q56 answers *(70.8%)*, and transport/treatment cost in 665 *(68.6%)*. Multiple reasons were recorded despite the intended single main answer; these are overlapping mentions, not exclusive causes. [1,3]

Non-prescription medicine purchase before formal care was reported by **475 of 985 households *(48.2%)***. Drug class, dose and indication were not reliably established. This figure does not measure antibiotic misuse, resistance or the causal effect of self-medication on delay. [1,3]

A referral recommendation is not yet a completed journey

Q37 contains 414 referral recommendations, including 221 in households with final Q23 = No. Q38 is answered for all 414, but may concern other experiences. A pooled referral-completion rate for the selected severe-illness episode is therefore withheld. Future records need linked decision, departure, arrival and outcome information. [3,9]

III. RESULTS | HEALTHCARE-WORKER SURVEY

The workforce represented in the responses

The healthcare-worker workbook contains **162 submissions**. The profession totals supplied by coordination match the response file. The number eligible or invited was not supplied, so a survey participation rate cannot be calculated. [4,5]

Reported professional role	Questionnaire submissions
Nurse	90
Midwife	46
Doctor	7
Laboratory worker	4
Other role	15
Total	**162**

Table 9. Source: HW-Q1 [4] and matching coordination totals [5]. These are forms, not a facility census. The separate forum-contributor list is not added to this sample.

Using the explicit work-setting question HW-Q2, **105 responses concern primary care**: 94 Puskesmas, ten Pustu and one Polindes. Fifty-five concern hospitals and two health offices. A separate registration field has a slightly different distribution; HW-Q2 defines the groups used here. [4]

Training and confidence are different measures

144 of 162 responses reported no previous sepsis or severe-infection training. In primary care: 96 of 105 *(91.4%)*.

Confidence was full in 96 of 162 responses *(59.3%)*, partial in 57 *(35.2%)* and absent in nine *(5.6%)*. Self-confidence is not a skills assessment. These findings support practical, supervised training rather than an assumption of individual incompetence. [4]

Thirty-eight of 162 *(23.5%)* reported regularly seeing severe infection. Among these 38, five reported daily cases, eleven weekly, eleven monthly and eleven rarely. The other 124 did not report regular exposure. The questionnaire records professional experience, not case counts. [4]

Several staff may describe the same facility. One repeated name/facility pair remains unresolved; results are therefore reported per submission. The small doctor and laboratory groups do not support precise profession-specific comparisons. [4,5]

III. RESULTS | REPORTED READINESS

First-contact capability is uneven

Only 35 of 105 primary-care responses reported injectable antibiotics as always available.

Read each cell as the share of staff responses in that setting, followed by the count. **These are not percentages of health facilities.** "Yes" and "always" mean the answer categories specified in the first column. [4]

Capability reported	Primary-care responses *(105)*	Hospital responses *(55)*
Antibiotics, including oral, always available	**78.1%** 82 of 105	**94.5%** 52 of 55
Injectable antibiotics always available	**33.3%** 35 of 105	**90.9%** 50 of 55
Oxygen available: Yes	**87.6%** 92 of 105	**100.0%** 55 of 55
IV fluids available: Yes	**96.2%** 101 of 105	**98.2%** 54 of 55
Basic monitoring available: Yes	**90.5%** 95 of 105	**94.5%** 52 of 55
Laboratory access: Yes, not limited	**75.2%** 79 of 105	**83.6%** 46 of 55
Sufficient number of doctors: Yes	**64.8%** 68 of 105	**90.9%** 50 of 55
Blood-culture access: Yes	**12.4%** 13 of 105	**40.0%** 22 of 55
Basic haematology access: Yes	**30.5%** 32 of 105	**94.5%** 52 of 55

Table 10. Source: [4], HW-Q10-Q16, Q27-Q28; groups defined by HW-Q2. Two health-office submissions are excluded. More than one respondent may report on a facility; availability was not independently audited.

The other **70 of 105 primary-care responses *(66.7%)*** described injectable antibiotics as available sometimes *(48)*, rarely *(11)* or never *(11)*. These answers do not quantify stock-out days, but they identify a serious concern about reliable treatment at first contact. [4]

Build on existing capacity, then verify reliability

Most primary-care respondents reported oxygen, IV fluids and basic monitoring; all hospital respondents reported oxygen. Those resources matter. Their presence alone does not establish trained use, maintenance, shift coverage or availability when a specific patient needs them. [2,4]

Verification should cover trained staffing, stock and expiry dates, oxygen delivery, monitoring, accessible tests and sample transport before procurement. The objective is a functioning, level-appropriate response, not a universal ventilator or albumin target. Adult, paediatric and obstetric care require appropriate clinical oversight. [12,13]

III. RESULTS | LATE PRESENTATION AND REFERRAL

Almost all staff responses acknowledge late arrival

HW-Q21 asked: **"Do patients often arrive late *(advanced condition)*?"** The 162 recorded responses were: [2,4]

Answer selected	Responses out of 162	Percent
Yes	89	54.9%
Sometimes	69	42.6%
No	4	2.5%

Table 11. Source: [4], HW-Q21. The unit is a completed staff questionnaire, not a patient, visit or establishment.

158 of 162 responses *(97.5%)* acknowledged the problem at least sometimes. This does NOT mean that 97.5% of patients arrived late.

Among the 137 responses from staff who refer severe patients

These respondents answered Yes to HW-Q19. The table below shows which referral barriers they selected. One person could select several barriers. [2,4]

Referral barrier selected	Responses out of 137	Percent
Delay in decision-making	83	60.6%
Distance	71	51.8%
Receiving facility overcrowded	56	40.9%
Cost	48	35.0%
Lack of staff	26	19.0%
Weather or terrain	21	15.3%
No transport	11	8.0%

Table 12. Source: [4], HW-Q19 = Yes and Q20. Percentages are mentions, not shares of delay attributable to each cause, and need not sum to 100%. The intended maximum was three choices; some exceeded it. Listed rows are predefined barriers; free-text responses are not pooled into these categories.

Decision-making, distance, receiving-facility capacity and cost were most frequently selected. This supports investigating several stages of referral rather than one isolated obstacle. The question does not establish whose decision was delayed. The 8.0% selecting "No transport" does not show that transport was generally adequate: cost, distance and terrain may describe related difficulties. [4]

III. RESULTS | COMMUNITY CONTACT AND PRIORITIES

Local support must connect to working services

Kawan Sehat awareness was reported by **367 of 984 households *(37.3%)*** and help during the previous six months by **346 of 979 *(35.3%)***. These are household reports of recognition and support, not verified programme coverage or outcome effects. [3]

In Mbinudita, 99 of 101 households recognised Kawan Sehat and 97 of 101 reported support. In Napu, none of 99 recognised the programme and none of 98 reported support. This contrast describes the sampled households; it should guide local verification rather than be treated as proof of programme effectiveness or absence. [3]

Seventy-four households reported receiving help without recognising the programme name. They may recognise a person instead, or the questions may have been interpreted differently. The accounts need clarification, not automatic correction. [3,9]

What households asked for

Among **927 answers** to the question on the single action most likely to prevent deaths from serious illness, the most selected options were **community education *(385)***, **clean water and sanitation *(240)*** and **faster transport *(178)***. Other options account for the remaining answers. [3]

What staff asked for

Among **162 staff responses**, **training was selected 138 times *(85.2%)***, **better equipment 120 times *(74.1%)*** and **community education 93 times *(57.4%)***. Staff often exceeded the intended two-choice limit; these are priorities mentioned, not a strict ranking of each respondent's top two needs. [4]

A trusted person in the village is an essential contact. That contact still needs somewhere to send the patient, a way to get there and a service ready to receive them.

The findings support strengthening the connection between community agents and formal care. Recognition, advice and local trust should lead to assessment and transport when needed. They cannot substitute for a working vehicle, reliable treatment or a handwashing place with water and soap.

III. RESULTS | ADMINISTRATIVE EVIDENCE

What the supplied records cannot establish

The administrative workbook for infections, deaths and referrals lists **28 facilities: four hospitals and 24 Puskesmas**. This is the roster in the supplied file, not an independently verified count of every district facility. Its scope differs from the initial request referring to 22 Puskesmas. [10]

Completeness check	2025 column	2026 column
Infection count entries recorded as zero	232 of 308 *(75.3%)*	228 of 308 *(74.0%)*
Diagnostic categories zero at every facility in both years	7 of 11 categories	7 of 11 categories
Puskesmas with a referral count provided	2 of 24	2 of 24

Table 13. Source: [10]. There are 308 potential infection counts per year: 28 facilities x 11 diagnostic categories. The example referral row was excluded. The 2026 cut-off is unspecified; this is not a comparison of disease trends.

The seven all-zero categories were severe malaria; serious wound/skin infection; urinary infection; maternal/postpartum infection; meningitis/encephalitis; sepsis if coded; and other severe infections. Other categories contained non-zero values, but **reporting completeness could not be established.** [10]

Zero cases and missing information are not interchangeable

A zero may mean no cases, no diagnosis recorded, no report received or a default value. **The file does not distinguish these possibilities.** Definitions, reporting coverage, the 2026 cut-off and total consultation counts were not supplied. The repeated zeros therefore require checking against original registers. [10]

Clinician-reported coding concerns

Several clinicians reported that **sepsis may sometimes be recorded under alternative diagnoses rather than explicitly coded as sepsis**, citing perceived JKN/BPJS/KIS reimbursement constraints and concern about facility reputation. [17]

These accounts were **not independently verified against medical records, coding logs, claims data or formal BPJS policy**. They are therefore a qualitative signal, not evidence of systematic miscoding. If confirmed, this could contribute to under-recording and warrants review of diagnosis coding and claims procedures.

Some deaths are recorded, but attribution is unclear and categories may overlap. **All post-referral death entries are zero in both years, without evidence of complete follow-up.** No district mortality or infection-fatality estimate was calculated. [10]

Referral follow-up remains largely undocumented

Of 24 Puskesmas rows, five provide a destination, five transport information and four each a departure-delay and travel-time entry. None provides an entry on documented referral delay/failure. A blank does not mean the problem did not occur. [10]

The supplied records cannot show a complete, comparable account of severe illness, referral and outcome. That is a serious obstacle to reviewing care and directing resources.

This finding concerns the material supplied to this study. It does not establish that all relevant government registers are absent. [10]

III. RESULTS | ADMINISTRATIVE CAPACITY RETURN

What the capacity return can and cannot show

A separate health-facility capacity workbook lists **28 establishments**, including hospitals and Puskesmas. It contains workforce counts and notes on medicines, oxygen, diagnostics and transport, but many fields are unfilled. It is supplementary administrative evidence, not an independent audit of service readiness. [21]

Completeness check in the supplied form	Rows with entries
All four staffing counts: doctors, nurses, midwives and laboratory staff	11 of 28
Basic monitoring equipment field	1 of 28
Referral-transport quantity field	11 of 28

Table 14. Source: [21]. Counts concern completed fields, including recorded zeros, not staffing adequacy, available equipment or functional ambulances. The example row is excluded. Blank fields are not treated as absent resources.

The date needs clarification

The form carries the entry **"10/10/26"**, which is later than the original 13 September 2026 issue date. It cannot be silently changed to an earlier date. The intended recording date and reference period therefore require confirmation before these entries can be treated as contemporaneous with the fieldwork. [21]

Recorded issues to verify with facilities

Kawangu's transport row lists one unit with a note describing severe damage; Rambangaru's oxygen entry lists five cylinders, four described as good and one damaged. Nggoa has a transport quantity of zero alongside a note mentioning one mobile-service ambulance. These are **unverified entries in the supplied form**, not confirmed operational findings at the time of the survey. They identify specific questions for facilities, not district rates. [21]

Some medicine descriptions retain template-like wording and quantities use mixed units. The form therefore does not support a total inventory or a reliable comparison of facility readiness. Its entries were not used to change the staff-survey percentages or the six opening findings. [21]

Verify what works, where and when, before treating an equipment list as evidence of care.

III. RESULTS | LINKING COMMUNITY AND SERVICES

The reported referral network

Coordination supplied the following village-to-service map. It describes the intended or usual organisational linkage, not a verified patient-level referral or continuous staffing record. All seven mapped localities identify RSUD Umbu Rara Meha, Waingapu, as the main higher-level destination. [5, pp. 13-15]

Study locality	Village-level health post	Primary health centre *(Puskesmas)*
Mbatakapidu	Pustu Mbatakapidu	Kota Waingapu and Pambotanjara
Pulu Panjang	Pustu Pulupanjang	Nggoa
Mbinudita	Pustu Mbinudita	Nggoa
Kawangu	Pustu Kawangu	Kawangu
Kambatatana	Pustu Kambatatana	Kawangu
Mbatapuhu	Pustu Mbatapuhu	Rambangaru
Napu	Pustu Napu	Rambangaru
Pambota Njara	Not separately specified	Not separately specified

Table 15. Source: [5]. Mbatakapidu has two named Puskesmas in the source; responsibility requires clarification. "Putu" in the Kambatatana source is rendered as Pustu, matching its stated facility level. Pambota Njara has no separate row in the supplied service map.

What the supplementary information adds

The population compilation provides eight locality entries. Fieldwork records account for 1,001 interviews, explain household selection and document overlapping enumerator coverage. Profession totals match the 162 staff forms; the map identifies a usual service link for seven localities. [3-5]

Still outstanding are population reference years, counts of households approached or replaced, the staff-survey invitation denominator and direct checks of capacity. Delivered case and mortality statistics do not establish complete outcome reporting. [5,10]

A service map is not proof that the service was available

Coordination describes Pustu services and village-funded nurses. This organisational account does not verify opening, staffing, equipment or reception at the moment a patient needed help. The map is the starting point for assigning who assesses first, who arranges transfer and who confirms arrival. The missing Pambota Njara link and dual Mbatakapidu designation remain to be resolved. [5]

IV. DISCUSSION

What these findings require us to confront

Taken together, the findings describe serious gaps in the conditions for safe care: basic prevention is missing in many homes, reaching help can be difficult, first-contact readiness is unevenly reported, and the supplied records cannot reliably show outcomes. The sources concern different people and periods; they are not a linked clinical cohort. Their convergence nevertheless demands a coordinated response, not isolated activities. [3-5,10]

Prevention and access must be addressed together

For 950 household answers, water and soap were not reported together at a handwashing place. In 286 records, that deficit coincided with a journey of at least one hour to care. A family facing both barriers cannot resolve them through knowledge alone. These findings argue for material prevention and accessible care together, without attributing a particular infection to a particular household exposure. [3]

Recognition must lead to action, not a label

The field memo and later debrief suggest that living with repeated illness may raise the threshold for calling it severe. This is a reason to improve listening and assessment, not to blame families. The interpretation is developed on the next page. The separate high reported trust in services matters: wanting help is not the same as being able to reach it. [1,9,17,18]

Families may face costs or a lack of transport despite trusting the service. Staff reports of advanced presentation describe concern at the receiving end. The two surveys are not linked patient histories, but together they justify examining both the decision to seek help and the practical ability to reach and receive it. [3,4]

First-contact readiness is a chain, not one device

Staff and existing resources provide a foundation to build on. But reliable treatment requires the essential elements together: trained assessment, appropriate medicines, usable equipment and escalation when needed. The findings justify practical training and supply-chain verification, not attributing failures to individual staff. Adult sepsis guidance provides the clinical framework for timely assessment, infection treatment, reassessed support and source control. [4,12]

Counting and following patients is part of care improvement

An all-zero sepsis row cannot reassure when reporting completeness and definitions are unknown. The supplied data cannot reliably connect severe illness, referral and survival. The absence of usable counts does not establish the scale of missed illness. It is nevertheless a serious obstacle to accountability: services and funders cannot tell from these records where care failed or whether an intervention improved it. Counting defined cases and following outcomes must become part of the response. [10]

IV. DISCUSSION | RECOGNISING ILLNESS

When illness becomes normal

A symptom can become familiar without becoming harmless.

Study leadership and the post-fieldwork debrief describe families for whom **recurrent cough, diarrhoea, weakness and skin infection had become familiar parts of daily life**. In these accounts, "serious illness" could mean hospitalisation, extreme deterioration or death rather than symptoms endured for weeks. These are field observations, not a measured prevalence of beliefs across the population. [9,17]

The concern was documented during collection

A memo dated **17 June 2026**, issued from Rumah Kambera during fieldwork, asked enumerators to explore a negative Q23 answer carefully. It described familiar symptoms being treated as normal and prompted recall of prolonged cough with increasing weakness, persistent fever, severe diarrhoea or dehydration, inability to drink or walk, breathing difficulty, convulsions, reduced consciousness and infected wounds with fever. [18]

The memo documents a concern recognised during collection and an attempt to improve questioning. Its duration-based examples extended the original prompts. Consistent use and any effect on answers were not measured; differences in interpretation over time remain possible. [1,18]

Two different issues must remain separate

The former **0% on the dashboard was a calculation error**, caused by reading the wrong column. The recorded result is **249 of 1,001 households *(24.9%)***. Fixing the display does not establish how much illness may have gone unrecognised or unreported. [3,6]

Q23 measures **reported severe or frightening illness**, not all clinically important morbidity or diagnosed sepsis. The memo and debrief make under-recognition plausible, but do not quantify it or identify which negative responses would change. Persistent symptoms can warrant assessment without automatically constituting severe illness or sepsis. The 24.9% is not a comprehensive morbidity estimate. [1,9,11,18]

A public-health concern, not a label for the community

Normalisation may raise the threshold for seeking help. This is a public-health concern, not a reason to blame families. Concern for a child or relative, the words used to describe illness, and the practical ability to obtain care are different things. These data do not establish a causal link between normalisation and delay. [9,17,18]

Future assessment should ask about **symptoms, duration, deterioration and loss of normal function**, not rely only on the word "serious". Education should be paired with accessible clinical assessment and practical help when symptoms persist or worsen. A duration threshold alone is not a sepsis definition.

Families should not have to wait for hospitalisation or extreme deterioration before illness is taken seriously.

IV. DISCUSSION | STRENGTHS, SCOPE AND LIMITATIONS

What the evidence supports

The strength of this study is the breadth of direct field accounts: 1,001 household interviews, 162 staff submissions, documented local coordination and a post-fieldwork audit of the digital and administrative sources. The work brings household conditions and reported service experience into the same assessment. These strengths support a detailed description of the sample, within the limits below. [3-10]

Selection and scope. Locally guided routes, quotas and neighbouring-household replacement do not give known selection probabilities. Less accessible or repeatedly absent households may differ from participants. The staff invitation denominator is unknown. Sample percentages cannot be applied directly to all residents of East Sumba or Indonesia. [3-5]

Household reporting. One respondent describes household experience. Recall, language, social desirability and the perceived threshold for severity may affect answers. Q23 is interpreted as reported household experience, not a population estimate of sepsis. The memo and debrief document concern about under-recognition but do not quantify it. [1,3,9,18]

Instrument and subgroup limits. The audit identified response-format and conditional-field inconsistencies. These were documented, with eligibility rules applied in the analytical layer. Timing and referral accounts are not consistently linked to one episode. Vaccination, maternal, child-nutrition and older-person estimates are withheld where eligibility or coding remains unresolved. Details are retained in Appendix B. [1-4,6]

Service reports and outcomes. Several staff may describe the same facility; a possible repeat submission remains unresolved. Resources were not independently audited. There is no linked clinical record of sepsis, time to antibiotics or infection-attributable death. The administrative returns cannot supply these missing outcomes or a verified facility-readiness census. [4,10,21]

Ethics, consent and privacy. Study leadership reports that enumerators explained the study and obtained each respondent's verbal consent before every household interview, and that no refusals were reported. Participation was voluntary; the questionnaires required consent and confidentiality. Public results exclude household names, precise coordinates and verification photographs. Leadership considers the work consistent with Fair Future Foundation's ethical charter. **No separate independent ethics-committee review was undertaken**; participant consent and the internal charter are not presented as independent approval or exemption. [1,2,7,17]

Institutional perspective. The organising foundations provide services in the study area and seek funding to address identified needs. Observed findings are distinguished from programme ambitions; claims of improved access or survival will require prospective evaluation. Study leadership and support are disclosed separately. [17]

These limits restrict estimates of population burden and causation. They do not remove the documented household deficits or the staff-reported concerns. **Questions and service principles may transfer elsewhere; these sample percentages do not.** Another setting needs its own assessment before adopting targets.

IV. DISCUSSION | OPERATIONAL IMPLICATIONS

From evidence to practical improvement

The next step is a defined programme of work. The priorities below connect the evidence to first actions and measures; they are proposed responses, not interventions tested by this study.

Priority	First practical action	How progress should be checked
Material prevention	Verify and improve water-and-soap access, safe sanitation and household water practices in priority settlements.	Functioning handwashing place; water/soap availability; sanitation use.
Recognition and first contact	Develop supervised, locally understandable danger-sign assessment and practical skills training.	Demonstrated skills; appropriate escalation; missed deterioration on review.
Transport and referral	Agree contact/acceptance arrangements, available drivers or vehicles and support for families facing costs.	Decision, departure and arrival times; completed transfer and recorded outcome.
Treatment readiness	Verify a level-appropriate package of medicines, oxygen delivery, monitoring and trained shift coverage.	Stock-out days; functional equipment; supply replenishment; staff coverage.
Diagnosis and safe medicine use	Clarify accessible tests, sample transport and clinician-led prescribing review.	Usable results returned; treatment review; sample transfer failures.
Count and follow severe illness	Use defined categories, reporting periods and distinct codes for zero, missing and not reported.	Reporting completeness; reconciled severe episodes, transfers and outcomes.

Table 16. Study-derived priorities [3-5,10]. The separate operational annex will name sites, accountable teams, costs, clinical safeguards, maintenance and outcome measures. No survival benefit from these proposed actions has yet been demonstrated.

Community agents should recognise deterioration, act within their authorised competence and activate clinical contact and transport. A score is not a diagnosis and must not delay referral. Adult and paediatric pathways need different safeguards; a survey response of "same day" is not permission to wait when danger signs are present. [11-13]

Conclusion

This study does not describe communities that simply need more advice. It documents serious gaps in household prevention, access and reported treatment readiness, alongside records that cannot reliably follow severe illness through referral to outcome. These findings warrant coordinated investment and public accountability, without overstating what the surveys establish. [3-5,10]

The response must reach the home, support the first clinical contact, make transfer possible and record the outcome.

Its test will not be the number of activities delivered. It will be whether the necessary care became available, whether the patient reached it and what happened afterwards.

STUDY RESPONSIBILITIES AND ACKNOWLEDGEMENTS

The people and institutions behind the work

Responsibility	Attribution
Lead institutions	**Fair Future Foundation Switzerland** and **Kawan Baik Indonesia**
Government partner	**Government of East Sumba** *(Pemerintah Kabupaten Sumba Timur)*, including Dinas Kesehatan and Dinas Sosial
Local leadership	**Ayu Setia Wardani,** Director, Kawan Baik Indonesia; Alex Wettstein, Founder, Fair Future Foundation Switzerland
Medical study leadership	**Alex Wettstein**, Fair Future Foundation; **John Kevan**, Rotary Australia / Lab Without Walls
Overall field coordination	**Alyuprayitno Umbu Makaborang** - overall field coordination, enumerator deployment, local liaison and follow-up of household data collection.
Training and forum coordination	**Erwin Umbu Dangu Ela** S.Pd; **Annisa Yuniar** - Kawan Baik Indonesia / Fair Future Foundation
Application development	**Novi Tri Mujahidin** *(Gogon)*, foundation development team - development and technical implementation of the Sumba Sepsis Study application and dashboard.
Administration, finance and logistics	**Ni Luh Putu Paramashanti** - finance, accounting systems & logistics; Susanti Konda Ngguna - local admin, programme logistics, training & event organisation.
Visual documentation and media production	**Elthon Rinaldi Halawulang** - visual documentation, field media coordination and production of two films.
Funding/support named by leadership	Rotary Australia; Lab Without Walls; Fair Future Foundation; Kawan Baik Indonesia
Report development and authorship	**Alex Wettstein** - report conception, scientific synthesis, data review, interpretation, writing and final editorial development.

Study roles and support are attributed by Ayu Setia Wardani, Alyuprayitno Umbu Makaborang and Alex Wettstein. Government partnership and other contributions are distinguished from report authorship, independent scientific review and ethics approval. [17]

Government and local partners

The foundations acknowledge the **Government of East Sumba**, led by **Umbu Lili Pekuwali, S.T., M.T., Regent of East Sumba**, and **Yonathan Hani, S.Kom., M.A.P., Vice Regent of East Sumba**. Study leadership particularly recognises the vice-regent's support in facilitating and encouraging this work. Official names and titles were checked against government and BPS sources. [17,19]

The study also acknowledges the Province of Nusa Tenggara Timur, **Dinas Kesehatan**, Rambu M. R. K. Dimu, S.F., Apt., M.AP, **Dinas Sosial**, participating facilities and the Desa, Kelurahan, RT, RW and Dusun authorities named by study leadership. Their involvement supported local coordination. Findings and interpretations remain the responsibility of the report's author. [5,17]

Families and field teams

The families made time around work, received the interviewers and shared their experience of illness and care. Foundation teams, coordinators, community agents and health workers sustained months of demanding travel, listening, revisits and review. Alex Wettstein's contribution is entirely voluntary. Their collective effort creates a responsibility to return useful findings and pursue practical improvements. [5,8,17]

APPENDIX A | CONTRIBUTION RECORDS

Field and clinical contributors

The supplied field roster names 20 contributors. It is broader than the 16 distinct operators in the survey export. Names and functions below follow the roster; spelling and role differences between roster and submission records remain in the audit trail. [3,5]

Locality associated with the roster	Named contributors and recorded functions
Kawangu	Fian Sutor Lolo Managa *(Puskesmas staff)*; Matelda Loda Nangi, Jenetris Alu Riwu and Tiara Camar Mustika Balelay *(health cadres)*; Veronika Laka Ata Ambu *(Kawan Sehat)*.
Pulu Panjang	Andre Valentino Lede Tanggela, Yulius Tamo Ama, Onesius Ronaldo Bili and Marthen M. Djawa *(Puskesmas staff)*; Longa Ana Moki *(Kawan Sehat)*.
Mbatapuhu	Joice Kale Dju and Arlon Hudu Ndima *(Puskesmas staff)*; Arce Paji Maji *(Kawan Sehat)*; Pratika Hanja Amah *(PAUD educator)*; Servian H. Lakimara *(village official)*.
Mbinudita	Florida Ndena Nggaba and Yusmira Day Anawulang *(Kawan Sehat)*.
Mbatakapidu	Theresia Min *(Puskesmas staff)*; Desianti Dembi Tamar and Adriyana Jera Pay *(Kawan Sehat)*.

Twelve clinical contributors to questionnaire development

Alex Wettstein initially drafted both questionnaires. Study leadership reports that these twelve professionals then reviewed every question during a multidisciplinary working session of **more than eight hours**. Doctors, nursing and laboratory professionals from hospitals, Puskesmas and clinical services discussed clinical relevance, wording, feasibility and local applicability and revised the instruments together. This collective development is distinct from the 162 healthcare-worker survey submissions, formal instrument validation and independent review of the final report. [5,17]

Facility	Contributors
Puskesmas Kawangu	Dr Stephanie Untono *(general practitioner)*
Puskesmas Nggoa	Ivonsiani Natalia Amd.Kep *(nurse)*
Puskesmas Rambangaru	Dr Christofel A. U. Hapat *(general practitioner)*
Puskesmas Mahu	Dr Meirlin Rambu Kaita Riwa *(general practitioner)*
Puskesmas Kota Waingapu	Dr Erinda Rambu Moha *(general practitioner)*
RSUD Umbu Rara Meha	Dr Desideriana Dina Mamo, Sp.PD *(internal medicine)*; Gregorius Jeraman *(laboratory head)*; Dr Yeni Kula Awang, Sp.A and Dr Hendriana Elisabeth Situmorang, SpA *(paediatrics)*.
RSK Lindimara	Dr W. Eko Radityo, Sp.PD *(internal medicine)*; Joni P. Tanya, A.Md.Kep *(laboratory head, as listed)*.
Klinik Pratama Sumba Medika	Dr Stefanus Raditya Purba *(general practitioner)*.

APPENDIX B | ANALYTICAL NOTES

Data-quality rules behind the tables

This appendix retains the technical detail behind the main findings. The analytical unit, eligibility and denominator are stated in the relevant table. None of these rules changes the original source workbook. [1-4,6]

Household answers and denominators

Missing counts in the prevention table are: Q19 three, Q18 five, Q16 two, Q17 six, Q14 fourteen and Q4 four. Education excludes six blanks and four explicit unknowns, leaving 991 known answers. Q17 has 49 contradictory combinations of "do nothing" and treatment; these are not assigned exclusively to either practice. [3]

Clinical descriptions use final Q23 = Yes. Five Q23-negative records retain at least one old conditional answer; these values are excluded from the eligible Q24-Q30/Q32 analyses. Q31 is analysed separately over twelve months because all 1,001 households answered it, despite its inclusion in the written Q23 skip instruction. [1,3,6]

Subgroups not estimated

Q5 identifies 400 households with a child under five. Among them, 102 lack Q6 and four have unknown vaccination status; two Q6 answers occur outside confirmed eligibility. The 300 completed Q6 cells therefore do not provide a clean denominator for household vaccination coverage. No such estimate is published. Maternal, child-nutrition and older-person estimates also await eligibility/coding checks. [3]

Response formats and clinical episodes

Some intended single-answer questions contain several selections. Conversely, some clinical multi-answer questions effectively retain only one. The danger-sign table therefore describes the recorded selection, not the absence of other signs. Some staff responses exceed selection limits. Multiple-choice percentages are mentions and need not sum to 100%. [1-4]

Q34 and Q37-Q38 may refer to general experience rather than the selected Q23 episode. These accounts are not used to calculate verified time-to-treatment or severe-infection referral-completion rates. The original endpoint and denominator remain visible wherever results are described. [1,3,9]

Staff responses and administrative data

HW-Q2 defines work setting. A possible repeated staff name/facility pair has not been adjudicated; no record was silently dropped. Referral barriers use the 137 submissions with HW-Q19 = Yes. A trailing comma was removed from one "Biaya," response for matching the cost option; free-text synonyms were not silently recoded. [4]

The administrative audit excludes example rows and separates zeros from blanks. Unknown definitions, completeness, overlapping death categories and the missing 2026 cut-off prevent district burden or infection-attributable mortality estimates. The capacity form's date and selected inconsistent entries require confirmation; it is not a validated readiness census. Public outputs exclude household names, precise coordinates and photographs. [7,10,21]

APPENDIX C | STUDY SOURCES

Sources and traceability

Household and staff files underpin the survey results. Coordination records, developer notes, the June memo and two administrative returns provide different kinds of evidence. Original village summaries were cross-checked, not treated as independent observations or substituted for source cells. Duplicate copies and earlier report drafts are not additional evidence. [3-10,21,22]

- [1] Fair Future Foundation / Kawan Baik Indonesia. East Sumba Sepsis Study: Household Questionnaire. FFF-SSS-HHQ-2026, version 4.1, 6 May 2026. Q1-Q58, maternal sub-items and field guide.
- [2] Fair Future Foundation / Kawan Baik Indonesia. East Sumba Sepsis Study: Healthcare Staff Questionnaire. FFF-SSS-HWQ-2026, version 2.2, 30 April 2026. Q1-Q30.
- [3] Database Sepsis for FFF Report_.xlsx. Supplied household workbook, Sepsis Survey worksheet: 1,001 records. Preserved source for descriptive calculations and eligibility checks.
- [4] Kuesioner Tenaga Kesehatan - Infeksi Berat dan Sepsis di Sumba Timur *(Responses)*.xlsx. Form responses 1 worksheet: 162 submissions. Work-setting groups use HW-Q2.
- [5] Study coordination. Data Desa Sepsis Study.docx. Supplied 13 September 2026, 16 pages: population pp. 1-3; field roster/forum pp. 3-6; selection pp. 7-8; allocations pp. 9-13; service network pp. 13-15; profession totals p. 16. Consolidates the separately supplied population, enumerator-roster and NAKES forum-participant text files. Population entries cite BPS Kecamatan Dalam Angka 2025 editions; statistical reference years remain unconfirmed.
- [6] Gogon. Technical Clarification: Sepsis App Logic & Dashboard Calculation Audit. Developer note, 5 pages. Conditional-field persistence, column mapping, answer matching and date sorting.
- [7] Gogon. Why the Sepsis App was developped.txt; metadata clarification by WhatsApp, 11 September 2026. Developer-reported AppSheet/offline workflow, account access, identifiers, locations, attachments and submission-only timestamps.
- [8] Kawan Baik Indonesia / Fair Future Foundation. Modul Pelatihan dan Pengambilan Data Sumba Sepsis Study 2026. IND guidebook v1.2, May 2026, 35 pages. Medical author: Dr Stefanus Raditya Purba; cover/layout: Annisa Yuniar. Used as evidence of the intended training and interview process, not as an independent epidemiological source.
- [9] Study team. Data Clarification Meeting; Discussion Points for the Four Subdistrict Coordinators; coordination/debrief communications supplied by Alex Wettstein. Accounts of interpretation, question eligibility and field practice, not household-level clinical adjudication.
- [10] Rekap_Data_Infeksi_Kematian_Rujukan_Sumba_Timur_2025_2026.xlsx. Supplied administrative workbook, reviewed 13 September 2026; Drive version modified 12 September 2026. Worksheets: Kasus Infeksi, Data Kematian, Data Rujukan. Diagnostic definitions, reporting completeness and 2026 cut-off were not supplied.
- [21] Dinas Kesehatan Kabupaten Sumba Timur. Form_Pendataan_Kapasitas_Faskes_Sumba_Timur .xlsx. Supplied capacity return, Kapasitas Faskes worksheet: 28 facility rows, excluding the example. Reviewed 13 September 2026. The date entry "10/10/26", incomplete fields and inconsistent transport entries remain unresolved; contents are not treated as a verified contemporaneous readiness census.
- [22] Study team. Eight village recap analyses, filename prefix 20260818 Database Sepsis - Sepsis survey-Recap Data: Kawangu, Kambatatana, Mbatakapidu, Pambotanjara, Mbatapuhu, Napu, Mbinudita and Pulu Panjang; Analisis Global Sementara 8 Desa.docx. Preliminary interpretive working documents. Final descriptive figures were recalculated from [3,4].

Data integrity: analyses used preserved source workbooks; original source files were not modified. Identifiable working records are not part of this public report.

APPENDIX C | CLINICAL AND CONTEXTUAL SOURCES

Clinical standards and contextual evidence

External sources inform terminology, clinical safeguards and reporting. They do not supply missing survey answers or local incidence estimates. Field accounts and the June memo are cited separately from clinical guidance.

- [11] World Health Organization. Sepsis. Fact sheet, 3 May 2024; online version checked 13 September 2026. Clinical definition, prevention and urgency.
- [12] Prescott HC, Antonelli M, Alhazzani W, et al. Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock 2026. Critical Care Medicine. 2026;54(4):725-812. doi:10.1097/CCM.0000000000007075. Official SCCM recommendations checked 13 September 2026.
- [13] Society of Critical Care Medicine / Surviving Sepsis Campaign. International Guidelines for the Management of Sepsis and Septic Shock in Children 2026. Official paediatric recommendation summary checked 13 September 2026.
- [14] WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene. Topic guidance on hygiene, drinking water and sanitation. Used to distinguish reported facilities/source types from verified service or microbiological classifications.
- [15] von Elm E, Altman DG, Egger M, et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement. PLoS Medicine. 2007;4(10):e296. doi:10.1371/journal.pmed.0040296. Official STROBE checklists consulted.
- [16] International Committee of Medical Journal Editors. Recommendations: Preparing a Manuscript for Submission to a Medical Journal. Online guidance checked 13 September 2026. IMRAD: Introduction, Methods, Results and Discussion.
- [17] Wettstein A. Firsthand study-lead communications, September 2026: field-access constraints; months of work; voluntary contribution; institutional support; Lery's reported circumstances; illness normalisation; initial questionnaire authorship and an eight-hour-plus clinical workshop; systematic verbal consent, no refusals reported and the internal ethical charter; clinician-reported coding and claims concerns. These are attributed accounts, not independently audited measures.
- [18] Wettstein A. Sumba Sepsis Study 2026: Panduan dan Catatan Lapangan untuk Enumerator - Pembaruan dan Penguatan Kuesioner. Memo signed and dated Rumah Kambera, Waingapu, 17 June 2026, 2 pages. Supplied file: 2026-14-06 - Sepsis Study - Q23 Update.pdf. The date used here is the date inside the signed document.
- [19] BPS Kabupaten Sumba Timur. Pelantikan Bupati dan Wakil Bupati Sumba Timur Periode 2025-2030. Official notice, 20 February 2025: Umbu Lili Pekuwali, S.T., M.T. and Yonathan Hani, S.Kom., M.A.P. Names checked 13 September 2026; 2026 government notices also identify them in these roles. Institutional support is attributed to study leadership [17].
- [20] Global Sepsis Alliance. World Sepsis Day 2026. Annual observance on 13 September. Official campaign information accessed 13 September 2026.

WHO [11] | SCCM [12-13] | BPS official names [19] | World Sepsis Day [20]

A final word

To the families who welcomed us, the teams who reached their homes, and the partners who supported this work: thank you. Months of listening, travel and review have brought these findings together. Our responsibility now is to turn that effort into practical improvements in prevention, access and care, and to check whether they help. This report ends here. **The work continues with the people whose lives it describes.**

Document No. FFF-RAP-SSS-2026-20260913-01 | Version 1.1 | Updated: 12 November 2026
Original issue: 13 September 2026. Appendix D records the post-publication additions.
Correspondence: Alex Wettstein, Founder and Medical Programmes Lead - Fair Future Foundation Switzerland

APPENDIX D | NOVEMBER 2026 UPDATE

Making the findings easier to use

The interviews ended in August. Our responsibility to the families did not. A report records what we found; an interactive dashboard can help a village team, a health service or a partner find the information it needs and ask what should happen next.

This update adds a guide to the dashboard and clearly identified **post-fieldwork descriptive analyses**. It does not add new interviews, diagnose sepsis, or demonstrate that care has improved. The original six headline findings and analytical table values are retained. The main report remains an IMRAD assessment of the September evidence. [1-4]

Explore the household findings

dashboardsumbasepsisstudy2026.netlify.app

The dashboard gives readers another way to explore the household survey, including locality comparisons, water and sanitation, travel to care, reported illness and conditions related to household smoke. Its explanatory notes and data-quality information should be read alongside the figures, not treated as optional small print. [23]

One study, different sources of evidence

The **1,001 household records** and **162 healthcare-worker submissions** answer different questions. A village filter on the household data must not imply that the staff results describe that village unless the facility linkage and denominator have been established. The 4,977 residents are represented through household reporting; they were not 4,977 individual examinations. [3-5]

The report remains the source for the three staff findings: **144/162** ***(88.9%)*** reported no previous sepsis or severe-infection training; **70/105** ***(66.7%)*** primary-care responses did not report injectable antibiotics as always available; **158/162** ***(97.5%)*** reported late presentation in an advanced condition at least sometimes. These are proportions of staff submissions, not patients or independently audited facilities. [4]

What changed after the first edition

The original weighted 13-point score is not adopted as a clinical measure. The later dashboard approach counts specified household conditions instead. The new counts below were recalculated from the preserved household workbook on **12 November 2026**. They describe the same surveyed households at the same fieldwork period, not a trend or a new survey. [3,24]

Use the dashboard to find a documented need. Use field and clinical assessment to decide the response.

Scope of this update: a dated analytical supplement, not a certification of every dashboard display or a new assessment of clinical outcomes. Interface descriptions refer to the review record listed in [23].

APPENDIX D | PREVENTION CONDITIONS

Counting conditions, not predicting sepsis

The proposed **Household Prevention Gap Count *(0-4)*** replaces the idea of low, moderate or high clinical sepsis risk. One point is counted for each of the four responses below. Equal points are a transparent counting rule; they do not mean equal biological effects or validated medical weights. [1,3,24]

Question	Response counted as one condition
Q16 | Water source	Open well/surface water, or river/stream, as the main source.
Q17 | Water treatment	No treatment reported, with no treatment method selected alongside it.
Q18 | Sanitation	No toilet / reported open defecation. Simple pit latrines are not included in this category.
Q19 | Handwashing	No reported handwashing place with both water and soap together.

Table 17. Definitions used for this exploratory count. Source: questionnaire and preserved household workbook [1,3]. The full response profile remains more informative than the total alone.

All four questions must be usable for this complete-record analysis. **939 households** meet that requirement. The other **62** remain unclassified because at least one response is missing or contradictory; they are not assigned zero. [3,24]

Number of counted conditions	Households	Share of 939
0-1	298	31.7%
2	333	35.5%
3-4	308	32.8%

Table 18. New descriptive grouping, not clinical thresholds. Exact counts from 0 to 4 are 17, 281, 333, 258 and 50. The three groups total 939; 62 of 1,001 households are not classified. [3,24]

Read the count alongside the actual conditions

The **308 households with three or four counted conditions** provide a concrete reason to examine overlapping household needs. However, a household with zero or one condition is not proven protected. Source type is not a water-quality test; reported treatment is not proof of effective treatment; and the survey did not establish the construction or safety of every toilet. [1,3,14]

In particular, **no household water treatment is not, by itself, proof that the water is unsafe**. This count records a practice; it cannot determine whether treatment was needed. Q16 and Q17 also describe related aspects of water provision and should not be interpreted as independent risk increments. [1,3,14]

The useful question is not “How dangerous is this household?” It is “Which conditions need to be checked and improved here?”

APPENDIX D | HOUSEHOLD SMOKE

Smoke in the same living environment

The survey asked about cooking fuel, kitchen location and smoking indoors. These questions can identify conditions that coexist in a home. They do not measure inhaled smoke, ventilation, exposure duration or a respiratory diagnosis. [1,3]

Recorded response	Responses	Percent
Q12 | Firewood selected among cooking fuels	974/994	98.0%
Q13 | Mixed export label: “inside main house / less than 5 m”	593/996	59.5%
Q14 | Someone usually smokes inside the home	814/987	82.5%

Table 19. Q12 and Q13 are post-fieldwork descriptive additions; Q14 was already reported in Table 3. Each denominator counts populated responses, not proof of exposure or questionnaire eligibility. [3,24]

Do not translate kitchen proximity into measured indoor exposure

The written questionnaire separates “inside the main house” from a separate kitchen less than 5 m away. The export instead contains the single label **“Dapur Di dalam rumah utama kurang dari 5 meter”**. Its 593 selections cannot establish that all 593 kitchens were inside the home. Q12 also contains multiple fuels in 67 records despite its single-main-fuel instruction. Original answers are retained. [1,3]

The combined numerator is clear; the denominator needs a shared rule

501 records contain all three positive entries: firewood, the mixed Q13 label and indoor smoking. There are 980 records with all three fields populated. Among these, one selects firewood but says no firewood in Q13; ten select no firewood in Q12 yet provide a kitchen-location answer to the firewood follow-up. [3,24]

Removing only the first inconsistency gives **501/979 *(51.2%)***, the denominator shown in the recorded dashboard review. Removing both types gives **501/969 *(51.7%)***, used in the earlier proposal. The ten-record difference is reproducible; it is not a change in the 501 positive records. [23,24]

The ten non-firewood records may contain out-of-scope follow-up answers rather than contradictory fuel histories. The correct handling must be agreed against the original question logic and the implementation. **No single combined percentage is promoted as a settled new headline in this edition.** Both calculations are shown to make the remaining decision visible. [1,3,24]

The indoor-smoking finding stands on its own. Its interpretation does not depend on settling the combined indicator.

APPENDIX D | ACCESS, CONSISTENCY AND RECORD

Keep the evidence behind the display

Access is kept separate from prevention. One obstacle is counted for a reported journey of at least one hour *(Q20)*, and one for no reliable transport *(Q21)*. Distance *(Q22)* is not added as another point for the same journey. This is a description of two barriers, not clinical triage. [1,3,24]

Access obstacles counted	Households	Share of 991
0	681	68.7%
1	301	30.4%
2	9	0.9%

Table 20. Complete, non-seasonal records only. Ten households remain unclassified, including six whose travel time varies strongly by season. Zero means neither of these two recorded barriers, not easy or reliable access in every circumstance. [3,24]

Rules that must remain the same in both formats

Episode descriptions: Q24-Q30 and Q32 use final Q23 = Yes. For example, Q25 has 253 populated answers but only 249 eligible records; four residual answers do not belong in the selected-episode analysis. Q31 remains separate because it covers deaths over twelve months. [1,3]

Referrals and vulnerable groups: a reported completed referral is not a verified outcome of the selected severe-illness episode. The published report therefore does not adopt 399/414 as a severe-infection referral-completion rate. Vaccination, maternal, nutrition and older-person estimates retain the eligibility limits described in Appendix B. [1,3]

Public use: show the numerator, relevant denominator, data period and missing answers. Retain unknown and seasonal categories. Publish aggregated results, not household names, exact coordinates or photographs. Any corrected display needs a dated explanation; it must not silently rewrite the source answers or the original report. [3,7,23]

Sources and status of the November update

[23] Kawan Baik Indonesia / Fair Future Foundation. Sumba Sepsis Study 2026 interactive dashboard. Address supplied by the study lead; interface review recorded in the project on 12 November 2026. https://dashboardsumbasepsisstudy2026.netlify.app/ . The interface was reviewed in the project on 12 November 2026. Later website changes are not covered by this edition.

[24] Post-fieldwork descriptive recalculation, 12 November 2026, using the preserved household workbook [3]. Definitions and aggregate checks cover Q12-Q14, Q16-Q21 and final-Q23 eligibility. No source answer was changed. The smoke denominator comparison is a sensitivity check, not validation of either rule.

Publication record: prepared from the corrected English v1.0 Word archive and compared against the original 33-page English PDF published on 13 September 2026, supplied by the study lead on 12 November 2026. The original results, tables and conclusions are preserved; Appendix D adds dated post-fieldwork analysis. The unresolved combined-smoke denominator rule is disclosed on page 36. French and Indonesian versions have not yet been updated.

Our next task is practical: return to the recorded needs with local teams, agree what can be improved, and record what happens afterwards. Better visibility is useful only if it helps people obtain better prevention and care.