A1. Purpose in one paragraph

Nzwisiso (Shona: “understanding”) is a community digital health tool for mental distress interpretation and non-specialist intervention initiation in Zimbabwean primary care. It is built for the reality of the setting it serves: roughly 26 psychiatrists for fifteen million people, the overwhelming majority of them in Harare, and a mental health treatment gap estimated at 82–98 per cent. The people who actually meet a person in distress first are community health workers, lay counsellors, general nurses and clinical officers — not specialists. Nzwisiso equips that frontline layer to listen in the patient's own language, to interpret distress against validated instruments and local idioms, and to initiate a documented, appropriately urgent intervention or upward referral. It does not replace clinical judgement at any point.

A2. Design principle

The governing principle across every workflow is “AI suggests, the clinician decides.” Every machine-generated output is labelled as a suggestion requiring clinical review, carries a confidence indication, and cannot be finalised into the clinical record without an identified human approving it. No medication dosages are generated under any circumstances.

A3. Who uses it

Persona	Scope of use	What is deliberately withheld
Community Health Worker / lay counsellor (Friendship Bench model)	First port of call. Registers a client, records and transcribes the encounter in local language, administers PHQ-9, runs up to five appended sessions per client, closes or refers upward to a named nurse, psychiatrist, clinic or emergency centre.	Diagnostic formulation, ICD-11/DSM-5 coding, treatment planning, the extended screening battery, Ask-AI
General nurse / clinical officer	Receives upward referrals with the full session record, transcript, PHQ-9 and CHW concerns attached.	Specialist-only functions per role assignment
Psychiatrist / clinician	Full clinical surface: narrative processing to Mental Status Examination, full screening battery, differential diagnosis with ICD-11/DSM-5 codes, mhGAP-aligned treatment formulation, crisis pathways, case summary export, facility registration.	Administrative user management
Principal Investigator / Safety Monitor	Study oversight; sole roles able to play back retained clinical audio, via audited signed links.	Routine clinical editing
Administrator	Team invitation, role assignment, suspension and revocation, activity log oversight, facility directory management.	—
Member of the public (self-assessment)	Anonymous structured self-assessment with geolocated routing to a chosen facility, clinician or emergency service.	The machine-generated diagnostic suggestions are never shown to the person themselves — only to the receiving clinician

A4. Clinical outputs produced

- Mental Status Examination — structured MSE derived from unstructured spoken narrative.
- Screening scores — automatically scored PHQ-9, GAD-7, PCL-5, MMSE, PSQ and PRIME-R-5, with severity banding and interpretation.
- Differential diagnosis — candidate formulations mapped to ICD-11 and DSM-5, with reasoning and supporting evidence, held in draft until a clinician approves.
- Treatment formulation — WHO mhGAP-aligned, evidence-referenced, explicitly excluding medication dosages.
- Crisis intervention pathway — six protocol types, triggered by PHQ-9 Item 9 ≥ 1 or PSQ ≥ 3, with a persistent alert that must be acknowledged and, for CHW sessions, an emergency referral that must be completed before the session can be closed.
- Case summary — exportable clinical record (PDF) and FHIR R4 resource set for onward systems.

A5. Languages

English, Shona, Ndebele, isiZulu, Xhosa, Sotho and mixed-language code-switching are supported for clinical narrative capture and transcription. The public self-assessment interface is additionally localised into Afrikaans, French, Portuguese, Swahili, Arabic and Urdu, with right-to-left layout support for Arabic and Urdu. A curated cultural idiom lexicon (for example kufungisisa — “thinking too much”) is applied during interpretation, and clinicians can submit newly encountered idioms for curation.

A6. Maturity

The system is past proof of concept and is nearing structured clinical validation. A convergent mixed-methods study (n = 25, purposive) is in preparation across five clinical cadres, measured on acceptability (AIM ≥ 4.0/5), feasibility (FIM ≥ 4.0/5), usability (SUS ≥ 68) and fidelity against a consensus gold standard (≥ 80 per cent concordance, Cohen's kappa ≥ 0.70).